



Immunization highlights 2015

Report of the WHO
Regional Office for Europe



**World Health
Organization**

REGIONAL OFFICE FOR **Europe**

Immunization highlights 2015





Abstract

The WHO Regional Office for Europe annual report on its immunization activities in 2015 provides an overview of the support provided to Member States of the WHO European Region in pursuing the goals and objectives of the European Vaccine Action Plan 2015-2020 (EVAP). It covers both the accomplishments of 2015 and the challenges that lie ahead to meet the Region's immunization targets. In 2015, protection from more vaccine-preventable diseases was provided through the introduction of new vaccines in several countries. Thirty-two countries demonstrated interruption of measles and/or rubella transmission - a significant achievement for such a large and diverse Region, but far short of its potential. Through concerted efforts, the Region maintained its polio-free status, but was also dramatically tested by a vaccine-derived poliovirus outbreak in Ukraine that put millions of un- or undervaccinated children at acute risk of contracting the disease. National immunization programmes, evidence-based decision-making and disease surveillance were strengthened and tools were introduced to address vaccine hesitancy through better communication. In the context of competing public health priorities and a complex global market, the Regional Office contributed to innovative methods to achieve sustainable access to funding and vaccine supplies.

Keywords

IMMUNIZATION PROGRAMS
VACCINES
PROGRAM EVALUATION
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Abbreviations

BCG	Bacillus Calmette-Guérin
DTP	diphtheria-tetanus-pertussis
EIW	European Immunization Week
ESPID	European Society for Paediatric Infectious Diseases
ETAGE	European Technical Advisory Group of Experts on Immunization
EVAP	European Vaccine Action Plan 2015–2020
Gavi	Global Alliance for Vaccines and Immunization
HPV	Human papillomavirus
IBD	invasive bacterial diseases
IHR	International Health Regulations
IPV	inactivated polio vaccine
LDMS	Laboratory Data Management System
MR NRL	Measles and Rubella National Reference Laboratory
NHS	National Health Service
NITAG	National Immunization Technical Advisory Group
OPV	live attenuated oral polio vaccine
POSE	polio outbreak simulation exercise
Regional Office	WHO Regional Office for Europe
RCC	European Regional Commission for the Certification of Poliomyelitis Eradication
RVC	European Regional Verification Commission for Measles and Rubella Elimination
SAGE	Strategic Advisory Group of Experts on Immunization
SIA	supplemental immunization activity
SIVAC	Supporting National Independent Immunization and Vaccine Advisory Committees
TIP	Tailoring Immunization Programmes
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
US CDC	United States Centers for Disease Control and Prevention
VPI	Vaccine-preventable Diseases and Immunization programme of the WHO Regional Office for Europe
WPV1	wild poliovirus type 1

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Foreword

I am pleased and proud to welcome you to the 2015 annual report of the Vaccine-preventable Diseases and Immunization programme of the WHO Regional Office for Europe (VPI). Just 15 months since adoption of the European Vaccine Action Plan 2015-2020 (EVAP), we are well on our way: Member States of the WHO European Region are clearly advancing towards their joint vision of providing equitable protection from vaccine-preventable diseases.

Progress in the area of immunization is fundamental to achieving the newly established Sustainable Development Goals 3 and 10 aimed at promoting health at all ages and reducing inequality. As you will see in this report, the Regional Office has committed great efforts to achieve progress in 2015 through an innovative and inter-sectoral approach that is at the core of the Region's overall Health 2020 strategy.

Technical support for the introduction of new vaccines is helping to tackle diseases that threaten life at all ages, from pneumonia in infancy to cancer in adulthood. Immunization system strengthening efforts contribute to increased government budgets for immunization and self-sufficiency in procuring vaccines in the Region's middle-income countries. Three years into the verification process for measles and rubella elimination, we can proudly say that 32 countries have interrupted endemic transmission of measles (21 of which have eliminated the disease) and 32 countries have interrupted rubella (20 of which have eliminated the disease). In the midst of urgent preparations for the global oral polio vaccine (OPV) switch and poliovirus containment, VPI managed to coordinate a massive response to detection of circulating vaccine-derived poliovirus in Ukraine. With many lives and the Region's polio-free status at stake, this effort has been both exemplary and absolutely vital.



The WHO Regional Office for Europe is dedicated helping Member States fulfil their EVAP commitments. Their progress will be assessed in 2016 through the EVAP monitoring and evaluation framework. I trust the outcome will confirm that we have come a long way together in a short period of time. I expect it will also be a sobering reminder of the efforts, and high-level political commitment, needed to maintain this momentum.

Dr Zsuzsanna Jakab
Regional Director
WHO Regional Office for Europe

Guided by the vision of "a European Region free of vaccine-preventable diseases, where all countries provide equitable access to high-quality, safe, affordable vaccines and immunization services throughout the life course",

... the activities of the Vaccine-preventable Diseases and Immunization programme of the WHO Regional Office for Europe supports Member States to...



Fig. 1. The European Vaccine Action Plan 2015–2020 (EVAP) is the operational framework for the Vaccine-preventable Diseases and Immunization programme of the WHO Regional Office for Europe.

Introduction

The WHO Regional Office for Europe (the Regional Office) works with Member States and partners to achieve the vision of "a Region free of vaccine-preventable diseases, where all countries provide equitable access to high-quality, safe, affordable vaccines and immunization services throughout the life course." These guiding principles of equity and good health at all ages are reflected in both the European health policy Health 2020 and the global Sustainable Development Goals.

In 2014, WHO and the 53 Member States of the WHO European Region set out to translate these guiding principles into action. Together they adopted the European Vaccine Action Plan 2015–2020 (EVAP) as a roadmap to achieve six central immunization goals for the Region:

- sustain the European Region's polio-free status;
- eliminate measles and rubella;
- control hepatitis B infection;
- meet regional vaccination coverage targets at all administrative levels throughout the Region;
- make evidence-based decisions about introduction of new vaccines;
- achieve financial sustainability of national immunization programmes.

This annual report looks back at the successes and challenges of 2015, focusing on the many ways the Regional Office contributed to EVAP implementation at country level.

EVAP proposes innovative strategies to meet these goals, through five operational objectives, priority action areas and a framework to evaluate and monitor progress towards them.

This annual report looks back at the first year of this journey, focusing on how the Regional Office supported Member States in addressing challenges and moving forward in 2015.

Sharing ideas and solutions: case stories across the Region

Case story

European Immunization Week in the Republic of Moldova
(page 42)



Case story

Immunization Programme Mangers' meeting in Belgium
(page 34)



Case story

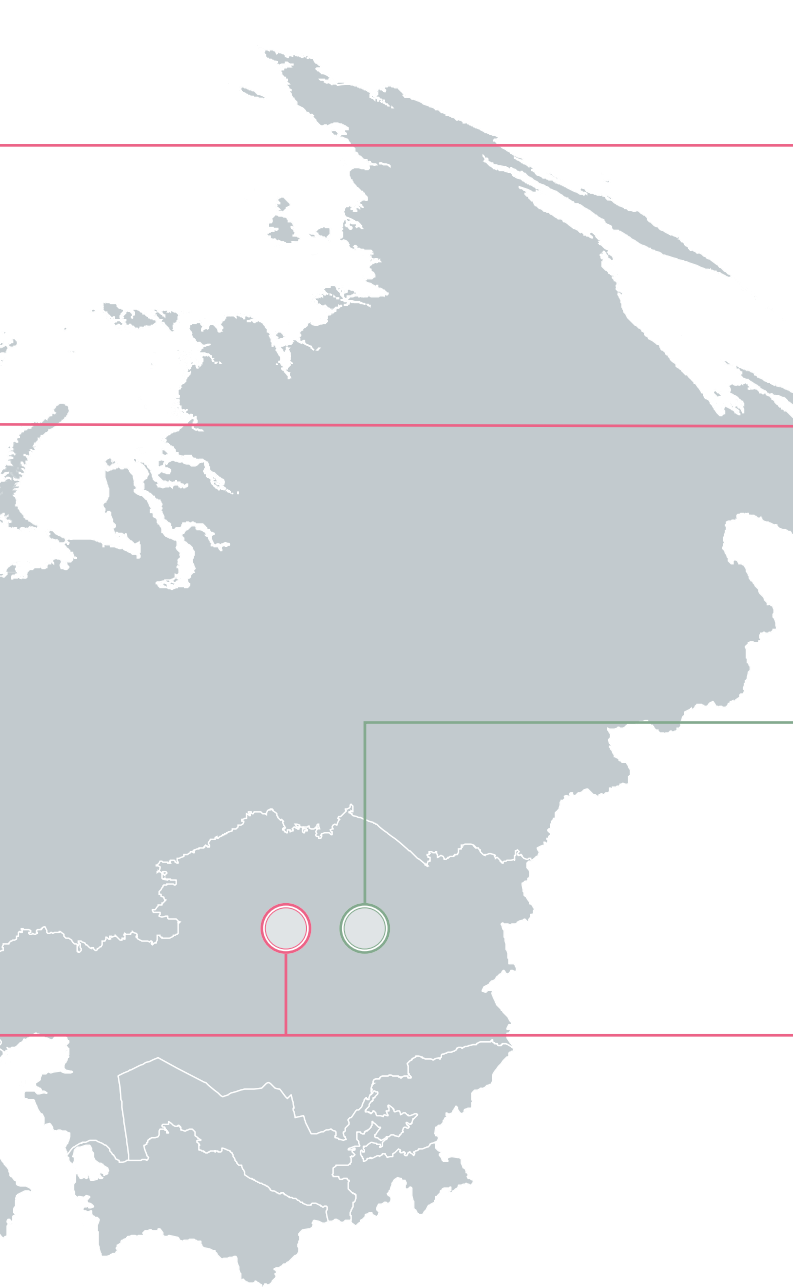
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Case story

Coping with migration crisis in Europe
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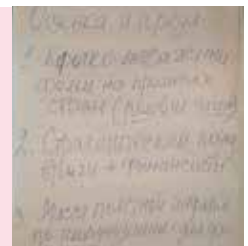
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Case story

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Case story

Polio Outbreak Simulation Exercises in Romania and Kazakhstan
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The year in review

Polio

2015 was an historic year in the global effort to eradicate polio: following global eradication of type 2 poliovirus, a 3-year absence of type 3 poliovirus was celebrated in November 2015¹. Wild poliovirus type 1 is now cornered in only two remaining endemic countries – Afghanistan and Pakistan. However, for the European Region 2015 was also a crisis year, in which two cases of circulating vaccine-derived poliovirus were detected in Ukraine, necessitating an immediate and large-scale response to protect the 4.75 million children at acute risk of contracting the disease. As global eradication of all wild polioviruses nears, maintaining the WHO European Region's polio-free status and preparing for the post-eradication period are more critical than ever. The Regional Office therefore continued to support Member States in all aspects of polio prevention, outbreak preparedness, poliovirus containment and implementation of the Polio Endgame Strategic Plan.

Measles/rubella

Since 2013, WHO and its Member States have accelerated efforts to eliminate measles and rubella – with positive results: the Regional Verification Commission (RVC) concluded in October 2015 that over two-thirds of Member States had successfully interrupted endemic measles and/or rubella transmission by the close of 2014. While several countries have lagged behind in reaching this goal, the verification process led by the Regional Office has in itself facilitated critical steps forward. Improved surveillance and reporting have revealed not only which countries have interrupted transmission, but also where the remaining obstacles to elimination are, thus enabling a more targeted response. With continued momentum, including a mandatory rapid and thorough response to all outbreaks, regional elimination of measles and rubella is well within reach.

¹ Three years with No Wild Poliovirus Type 3, Global Polio Eradication Initiative, 10 November 2015 <http://www.polioeradication.org/mediaroom/news-stories/Three-Years-with-No-Wild-Poliovirus-Type-3/tabid/526/news/1312/Default.aspx>

All of these activities and more are described in this Report within the context of the EVAP goals and objectives.

Hepatitis B

Through EVAP, the Region committed itself to developing a programme and action plan for the control of hepatitis B infection and to identify targets for 2020. In consultation with Member States, the Regional Office developed regional hepatitis B control targets, priority activities and indicators in 2015 and established a collaboration agreement on this issue with the United States Centers for Disease Control and Prevention (US CDC). The targets and activities will be incorporated into a Regional Action Plan on Viral Hepatitis to be endorsed by Member States at the WHO Regional Committee for Europe in September 2016. The next steps include establishing a Regional Verification Commission and defining the verification process.

New vaccines

Advances in access to new or underused vaccines continued in 2015. The Regional Office assisted several countries in preparing for and evaluating the introduction of vaccines against pneumococcal disease, rotavirus and human papillomavirus (HPV). In line with the Global Polio Endgame Strategy, we also helped several countries prepare for introduction of inactivated polio vaccine (IPV) into their routine schedules and begin the process of laboratory containment of polioviruses in advance of the global switch from trivalent to bivalent oral polio vaccine planned for April 2016.

Capacity building

Strong immunization programmes and disease surveillance systems are critical pillars in the effort to control vaccine-preventable diseases. The Regional Office continued to provide technical assistance and tools to Member States to build in-country capacity and ensure a high level of proficiency in evidence-based decision-making, communications and advocacy, multi-year planning, vaccine pricing and laboratory surveillance.

Working towards EVAP goals



Protecting polio-free status as global eradication approaches

47 of 48 laboratories passed WHO external quality assurance testing in 2015.

The European Region was declared free of endemic polio in 2002. Consistently high immunization coverage in all countries is crucial to keep the Region polio free, but it is not enough. Countries also need sensitive surveillance systems and must be prepared to respond if a virus is detected.

With technical support from the Regional Office, laboratories of the Polio Laboratory Network in the European Region have performed consistently well over the past years. In 2015, 47 of 48 laboratories once again passed the WHO external quality assurance testing and were successfully accredited.

Priorities for 2015 included implementation of a newly developed algorithm for poliovirus isolation and intratypic differentiation that will provide quicker laboratory results and adaptation of the Region's Polio Laboratory Data Management System (LDMS) to the new algorithm. With VPI support, a new web-based management system, including the possibility to generate laboratory accreditation reports and annual reports, was successfully tested in 2015, and is expected to be implemented by all laboratories in 2016.



Family in a Roma settlement in Darnytsa, Kyiv oblast, Ukraine visited by a Roma health mediator as part of the polio immunization campaign.



Circulating vaccine-derived poliovirus in Ukraine

In June 2015, the European Regional Commission for the Certification of Poliomyelitis Eradication (RCC) reassessed the European Region's polio-free status based on country reports for 2014. And although the Region was still considered polio free, the RCC classified three countries in the Region as high-risk for importation and circulation: Bosnia and Herzegovina, Romania and Ukraine.

Just two months later, in August 2015, two cases of circulating vaccine-derived poliovirus were reported in Zakarpattia Oblast in southwest Ukraine, close to the border with Romania. After several years of conflict and interrupted immunization services in Ukraine, millions of under-immunized children in the country were at acute risk of infection.

This event was met with an immediate large-scale response by WHO and partners in support of national authorities. WHO experts in surveillance, epidemiology, communications, vaccine safety and logistics provided support to:

- plan three large-scale rounds of immunization, together targeting over four million children;
- strengthen surveillance for cases of acute flaccid paralysis;
- improve environmental surveillance;
- train health workers to answer questions about the vaccine and to administer it;
- engage Roma health mediators in raising awareness among Roma communities.

WHO also conducted an assessment to determine the risk and potential routes of transmission of the virus within and beyond the borders of Ukraine, and together with the United Nations Children's Fund (UNICEF) prepared weekly situation updates.

By the close of March 2016 no new cases had been reported, and three immunization rounds had been completed. An outbreak assessment will take place in April 2016.

The future is now: preparing for a post-polio world

While remaining vigilant for possible importations, countries have to start preparing for a time in the near future when wild polioviruses will no longer be circulating anywhere in the world. Preparations include a globally synchronized switch from trivalent to bivalent oral polio vaccine (OPV) in April 2016. The Regional Office worked closely throughout 2015 with each of the 20 countries in the European Region that use OPV to help them: prepare to introduce at least one dose of inactivated polio vaccine (IPV) into their routine schedules, secure sufficient and timely supply of IPV and bivalent OPV vaccines and destroy all doses of trivalent OPV directly following the switch.

After the planned global cessation of all vaccination against polio, laboratories and vaccine production facilities will be the only remaining source for potential re-introduction of polioviruses into the human population. To reduce this threat, the poliovirus containment initiative is advocating that Member States destroy the remaining virus stock or relocate it to facilities with the highest level of containment. The Regional Office provided technical support to Member States in 2015 to prepare for this step. Once containment is complete, only the designated poliovirus essential facilities will be allowed to work with live polioviruses. This presents a major challenge for all other laboratories that currently type enteroviruses (including suspected polio cases) using the traditional cell-culture-based method. To support these labs, the Regional Office successfully teamed up with scientists at the US CDC to produce state-of-the-art guidelines on enterovirus surveillance. These guidelines instantly became a much sought-after resource by the Member States within and beyond the European Region looking to modernize their enterovirus surveillance systems.

“The fight against polio is a global WHO priority, and the time to end this dreaded disease is now.”

*Dr Nedret Emiroglu, Director,
Division of Communicable Diseases and Health
Security, WHO Regional Office for Europe*

Polio outbreak simulation exercises in Romania and Kazakhstan

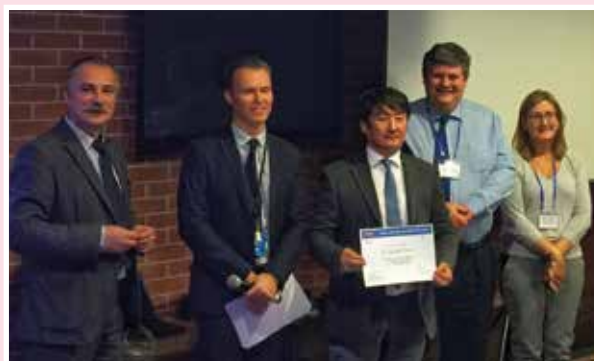
The RCC has encouraged all Member States in the European Region to test and update national preparedness plans using the polio outbreak simulation exercise (POSE) model developed by the Regional Office. POSE is a two-day tabletop exercise that covers use of the International Health Regulations (IHR) mechanism and communication, coordination and collaboration aspects of a comprehensive response in accordance with global outbreak response guidelines.

A POSE was conducted in Romania on 7-8 October 2015 for representatives of Czech Republic, Hungary, Republic of Moldova, Romania and Slovakia. Surveillance, immunization and communications professionals as well as IHR experts participated in various exercises, including mock interviews to prepare them for addressing the public and media in the event of an outbreak.

Though planned well in advance, this POSE came at a particularly opportune time following a regional risk assessment conducted by WHO which pointed to a heightened risk of importation of circulating vaccine-derived poliovirus into countries neighbouring Ukraine.

The first-ever inter-regional POSE was conducted in Kazakhstan in November for countries located close to the two remaining endemic countries of Afghanistan and Pakistan (Kazakhstan, Kyrgyzstan, the Russian Federation, China and Mongolia).

The Regional Office's application of scenario-based simulation exercises on polio and other areas of work have drawn significant attention and interest from partners and other WHO regional offices to adopt and adapt the work beyond the Region's borders.





Moving closer to measles and rubella elimination

In 2010, countries of the WHO European Region re-committed to measles and rubella elimination and set 2015 as an achievable target date. As Secretariat, the Regional Office coordinates the work of the RVC, which monitors progress in each country and at Regional level annually. The RVC is responsible for determining when individual countries and eventually the Region can be declared measles and rubella free.

The RVC met for the 4th time in October 2015 to review the 2014 annual documentation submitted by national verification committees, established in 50 of 53 countries in the European Region. This was the first time that three consecutive annual reports and updates were available to evaluate the elimination status for the majority of countries. Measles and/or rubella could now be declared eliminated in those countries that had demonstrated interruption of endemic transmission of either or both diseases in all three years. Progress was clear, with measles and/or rubella declared interrupted in over half of the 50 countries reporting, and eliminated in over one-third (Fig. 2).

At the same time, the meeting confirmed that the Region was off track to achieve measles and rubella elimination by the end of 2015 due to the several large outbreaks and persistent transmission in many Member States. This was a disappointing outcome in a Region where sufficient resources are available to reach target populations. The verification process has, however, led to improved surveillance and reporting by countries and enabled the Regional Office to identify priorities for the coming two years to support those countries lagging behind to also achieve this milestone.

Stepping up support where it is needed most

Recognizing in 2013 that 'business as usual' would not be enough to achieve the Region's measles and rubella elimination target, The Regional Office introduced a package of accelerated actions to address the remaining obstacles. Among other steps, a list of high-priority countries was prepared based on annual reporting to the RVC, and advocacy and technical visits

were conducted to these countries in coordination with members of the RVC. The mission teams looked at the issues specific to each country and lent technical support and advice as needed. Starting in December 2014, missions were conducted in Austria, Bulgaria, Croatia, Cyprus, France, Greece, Italy, Russian Federation and Spain.

Further missions were carried out to countries reporting measles or rubella outbreaks to help coordinate and implement response measures. Outbreak support in 2015 was provided to Bosnia and Herzegovina, Kazakhstan and Kyrgyzstan.

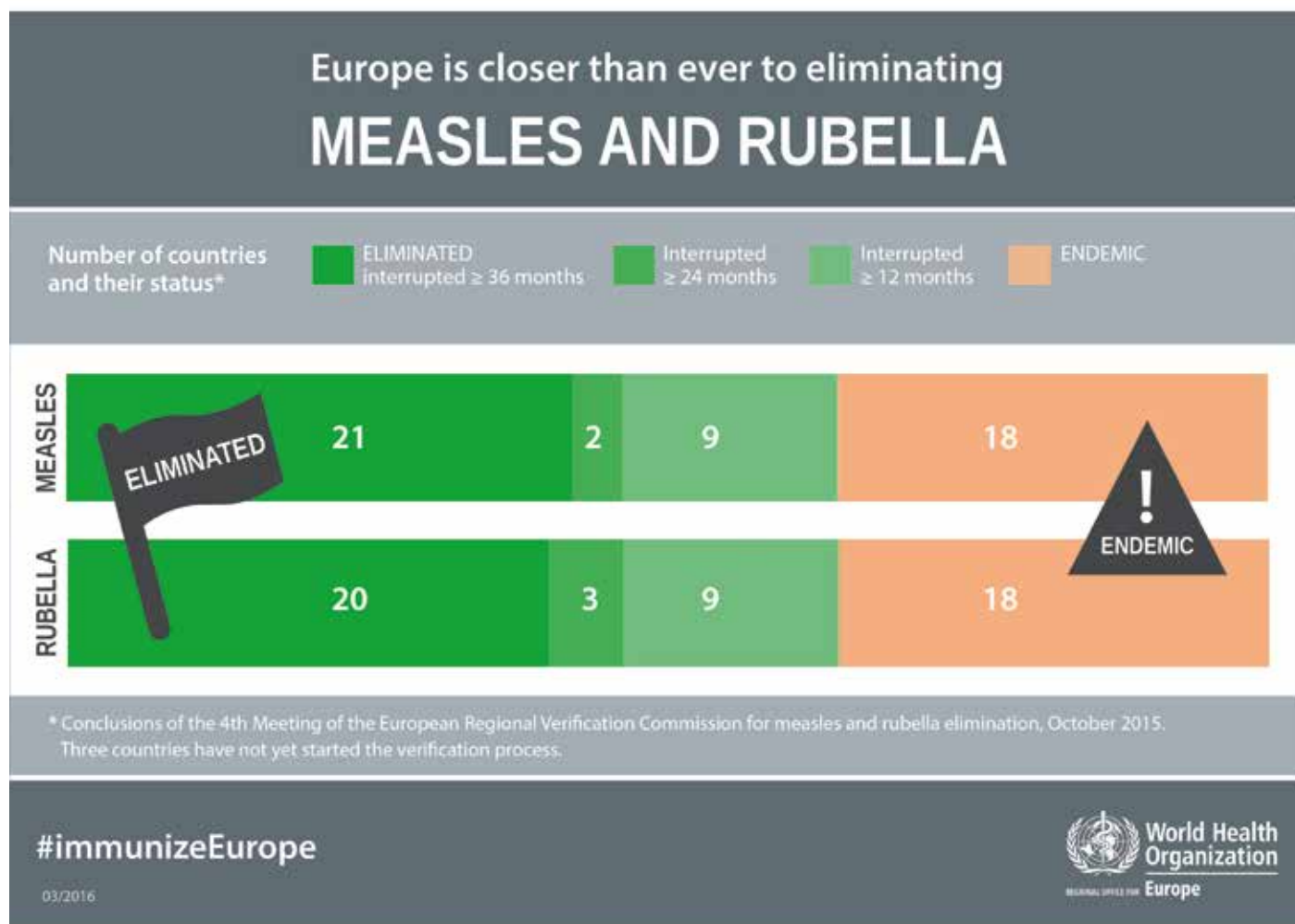


Fig. 2. Status of measles and rubella elimination in the WHO European Region, 2014



MEASLES AND RUBELLA

Live, attenuated Measles virus (Edmonston strain)
and Rubella virus (Wistar RA 27/3 strain) preparation

Dose : 0.5 ml S/C

Each dose contains

1000 CCID₅₀ of Measles virus

1000 CCID₅₀ of Rubella virus

Reconstitute with 5.0 ml of water

Do not administer to a pregnant woman

Store between 2°C and 8°C

Meets W.H.O. Requirements

Strengthening laboratories: the backbone of the verification process

The Regional Office coordinates the European Measles and Rubella Laboratory Network, consisting of 72 laboratories in 48 countries. The Network laboratories increasingly contribute to the national and regional efforts to verify measles and rubella elimination, with a high – yet uneven – rate of laboratory investigation. Member States need to maintain this progress, and also establish and document quality assurance programmes involving all laboratories contributing to the verification process beyond WHO-recognized laboratories.

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

- The number of Measles and Rubella National Reference Laboratories (MR NRLs) performing routine molecular testing continued to grow dramatically.
- All but one of the 72 Network laboratories sustained a high level of proficiency and were fully accredited.
- The Measles/Rubella LDMS – an online database linking laboratory and epidemiological data – was completely overhauled.
- Global and regional reference laboratories, in collaboration with the Regional Office provided skills strengthening opportunities to expand the Network's capacities in genotyping and sequence analysis.
- To guarantee the reliability of genotyping, molecular proficiency testing was introduced for the first time in the annual accreditation review of MR NRLs, with participation of 35 out of 72 labs.

The molecular characterization of measles virus chains of transmission is progressing at national level and needs to be scaled-up further. However, access to adequate specimens from rubella-suspected cases still remains a challenge for many countries, thus hampering molecular characterization of rubella strains in the Region. (Figures 3 and 4.)

These maps show the predominance of D8 genotype lineages in the Region for measles and the scarcity of rubella genotype information.

↓ →

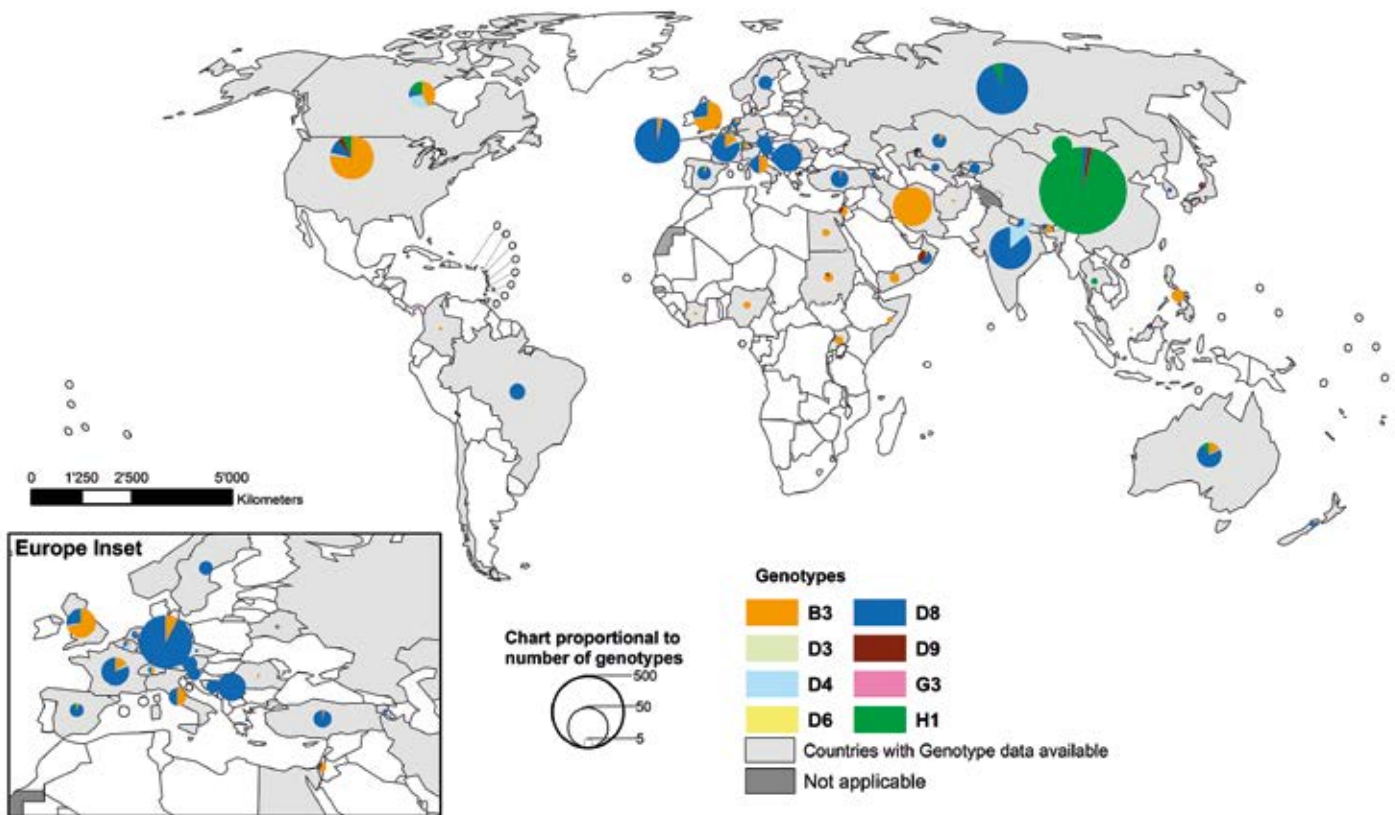


Fig. 3. Measles genotypes reported in 2015 by the European MR Labnet to WHO MeanNS.

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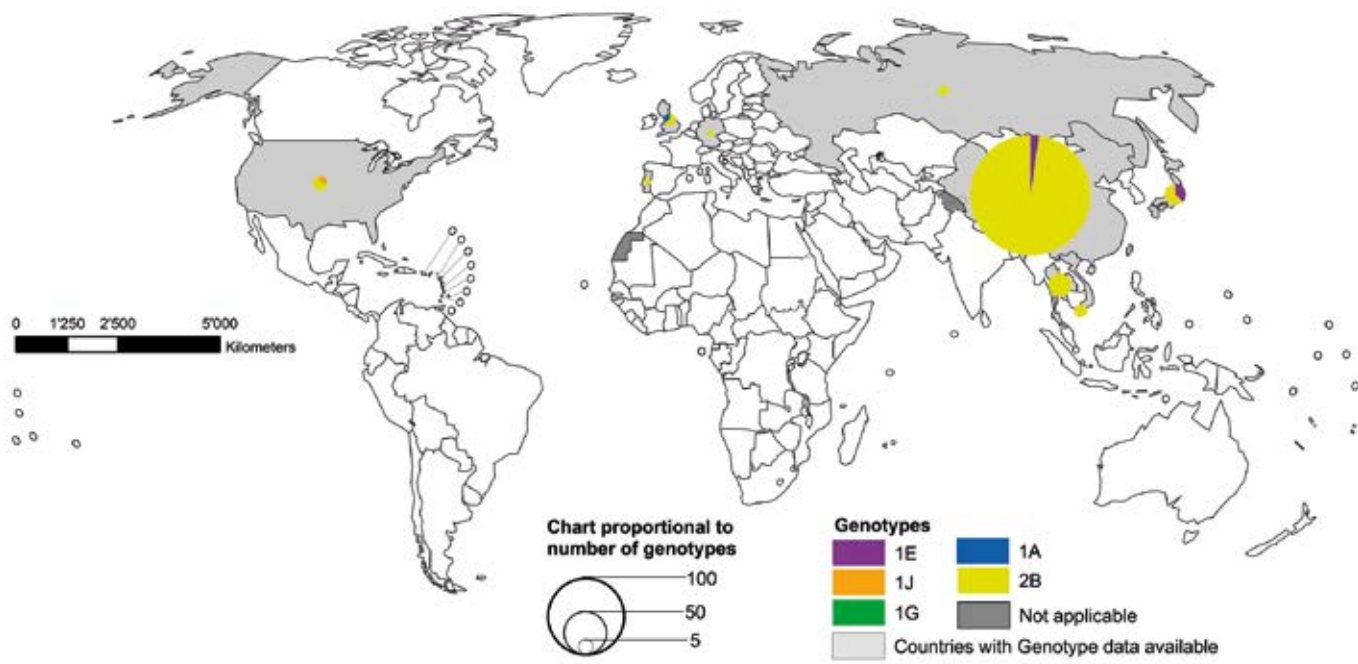


Fig. 4. Rubella genotypes reported in 2015 by the European MR Labnet to RubeNS.

Strengthening hepatitis B control through immunization

Approximately 13 million people in the WHO European Region are chronically infected with hepatitis B, leading to approximately 60 000 deaths per year from hepatitis-B-related liver cancer and cirrhosis. As many factors contribute to hepatitis B, the prevention and control of this disease can only be tackled through integrated programmes. The Regional Office sees control of all viral hepatitis as a public health priority and in 2015 initiated development of a Regional Action Plan to prevent and treat viral hepatitis. The plan to be launched in 2016 will include targets to be achieved by 2020 and specific activities to help Member States achieve the EVAP goal on strengthening hepatitis B control through immunization.

Though national policies vary widely, 47 of 53 (87%) countries in the WHO European Region have successfully implemented universal hepatitis B immunization. The plan will therefore focus on evidence-based introduction of universal immunization in the remaining countries, increasing coverage with hepatitis B vaccine, and improving programmes to prevent perinatal transmission of hepatitis B infection. These steps will lead in the long term to reduction of incidence and mortality due to acute hepatitis B, and consequences of chronic infection such as liver cirrhosis and hepatocellular carcinoma. New studies on prevalence of hepatitis B infection among vaccinated cohorts of children will help measure the public health impact of hepatitis B vaccination and document programme success.



Towards high vaccination coverage in every community

The WHO European Region is one of the best-performing regions in the control of vaccine-preventable diseases (Fig.5).

- While estimated global coverage for the third dose of diphtheria-tetanus-pertussis (DTP)-containing vaccine among children aged less than 12 months was 86% in 2014, the average in the European Region was 95%.
- Coverage of Bacillus Calmette–Guérin (BCG –for protection against tuberculosis) was 91% globally and 94% regionally.
- Coverage with the first dose of measles-containing vaccine (MCV1) was 85% globally and 94% in the European Region.

When it came time to adapt the Global Vaccine Action Plan to the regional context, European Member States therefore set the bar high, by establishing regional coverage targets that exceed those of the global Plan. The overall indicator for EVAP goal 4, for example, calls for 48 of 53 countries in the European Region to achieve $\geq 95\%$ coverage with three doses of diph-

theria-tetanus-pertussis (DTP)-containing vaccine at national level. This target was set at $\geq 90\%$ for the global context.

To achieve ambitious targets, coverage must be high in every community in every country.

As described in other sections of this report, several cross-cutting Regional Office activities contributed to this goal, including support to:

- increase political commitment to immunization;
- communicate the benefits and risks of immunization to ensure that individuals understand the value of immunization services and demand vaccination;
- identify and close immunization gaps by addressing inequities in service provision;
- strengthen the sustainability and functionality of national immunization programmes; and
- improve data quality to accurately track immunization coverage and disease burden.

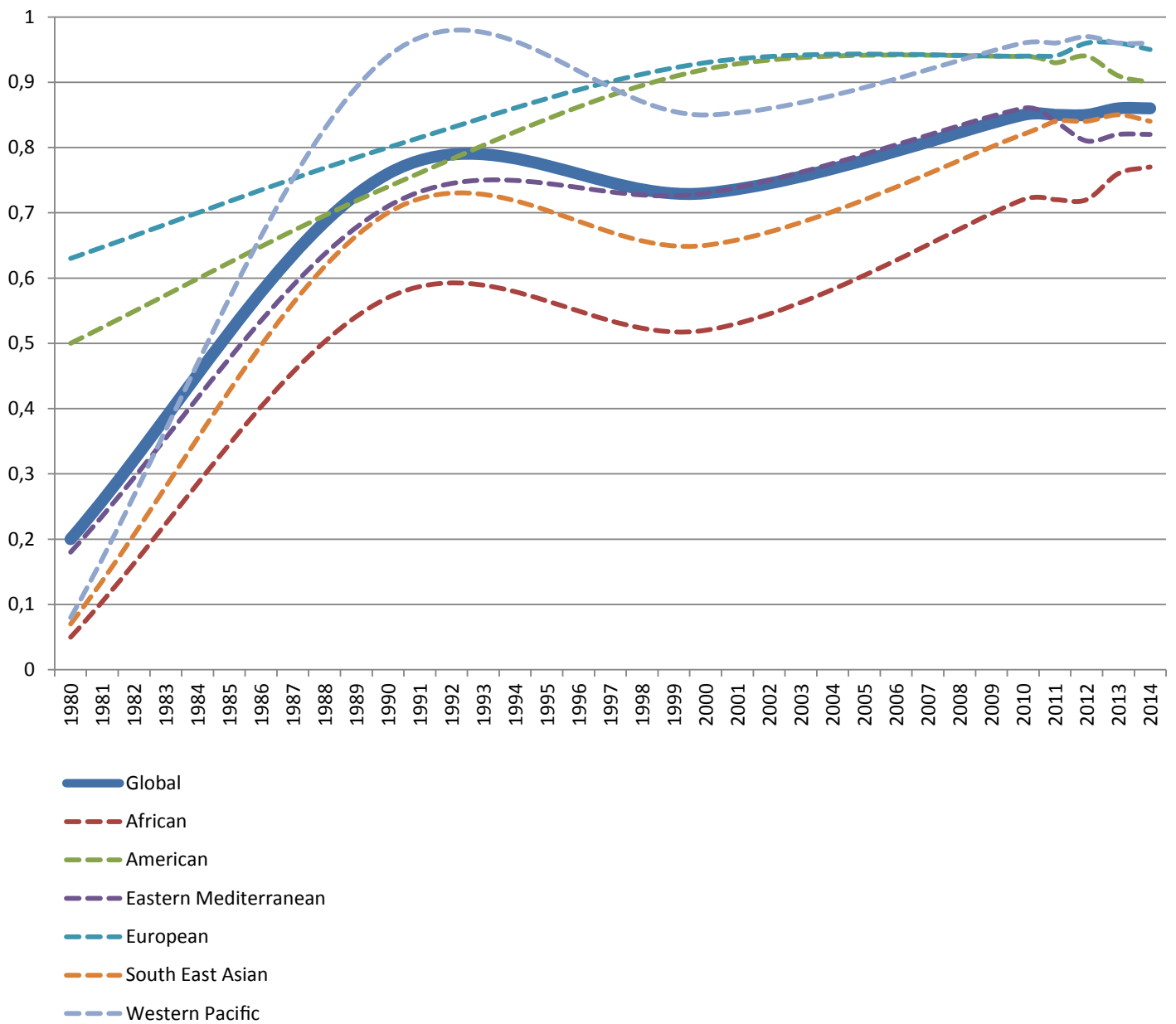


Fig. 5. Global DTP3 coverage, 1980-2014

Source: WHO vaccine-preventable disease monitoring system, 2015 global summary. http://apps.who.int/immunization_monitoring/globalsummary, Data received as of 18 Dec.2015, and accessed 25 Feb. 2016

Paving the way to evidence-based immunization policies

39 of the 53 Member States have established a national independent advisory group on immunization (NITAG).

WHO recommends that countries base immunization policies on scientific recommendations made by a group of independent experts, who have reviewed all of the available evidence, including disease burden, vaccine efficacy and safety, programmatic feasibility and economic data. To support this goal, the Regional Office works with countries to establish and strengthen independent advisory mechanisms at the national level.

By the close of 2015, national immunization technical advisory groups (NITAGs) had been established in 39 of the 53 Member States in the Region. In 2015 the Regional Office assisted these NITAGs in collecting local evidence to support national decision making. This includes strengthening surveillance to define the disease burden and conducting vaccine cost-effectiveness and impact studies. NITAG members were furthermore invited to participate in:

- training workshops;
- the Immunization Programme Managers Meeting
- annual meetings of the European Technical Advisory Group of Experts on Immunization (ETAGE) and the Strategic Advisory Group of Experts on Immunization (SAGE).



Together with the Supporting Independent Immunization and Vaccine Advisory Committees (SIVAC) Initiative, the Regional Office conducted evaluations of the NITAGs in Armenia, Belarus, Georgia and the Republic of Moldova.

Collaboration between NITAGs was facilitated through study tours and twinning activities, including a visit by NITAG members from Belarus and Georgia to the Netherlands.

Gavi, the Vaccine Alliance (Gavi) provides funding for capacity building in this area to eligible developing countries. Through this avenue, WHO and immunization partners were able to provide assistance to these countries in decision-making, the application process for Gavi support, preparedness for new vaccine introductions, evaluation of introductions, and implementation of additional activities based on the results of evaluations.

Middle-income countries have not benefited from this support; consequently their capacities in evidence-based decision making and immunization advocacy are lower than in developing Gavi-eligible countries. The Regional Office therefore provided additional support to middle-income countries in strengthening NITAGs, as well as in vaccine procurement, vaccine pricing and collecting evidence to support decision making.

These activities will continue in 2016 and will be accompanied by strong advocacy for NITAG establishment in countries where they are still lacking, and for international support to ensure the financial sustainability of NITAGs in middle-income countries.

Building capacity to ensure long-term financial sustainability

The Regional Office continues to provide a wide range of technical support to Member States to improve financial stability of immunization programmes, through development of multi-year planning for immunization, capacity building and strengthening of evidence-based decision making in-country. Additional support was provided in 2015 to all five countries that are in the process of transitioning from vaccine-related support from Gavi (Armenia, Azerbaijan, Georgia, Republic of Moldova and Uzbekistan) for planning, implementation and monitoring of transition action plans. Developed transition plans address programmatic and financial challenges that transitioning countries may face in sustaining immunization achievement after the transition.

A 3-day multi-year planning workshop was conducted in Copenhagen, Denmark, in April 2015 for Armenia, Azerbaijan, Georgia, Kyrgyzstan, Tajikistan, Uzbekistan and Ukraine.

Innovative activities were also initiated in 2015 to help stakeholders raise domestic resources for immunization. These include development of a workbook on advocacy and resource mobilization for immunization programme managers, a training package and web-based immunization advocacy library (see page 48).

Currently, 45 out of 53 Member States have achieved financial sustainability in procuring vaccines. Only Kyrgyzstan and Tajikistan will continue to receive donor support for vaccine procurement. As reflected in the target for EVAP goal 6, the remaining six countries are expected to be financially self-sufficient for procuring routine vaccines by the end of 2020.

WHO provided support to all five Gavi-transitioning countries.



Гимнатет – Вакцина (1 доза)

Поступила.	24.10.2010
Общее количество	66000
Серия.	UVA09033
Изготовлено	
Срок годности.	27.NOV.09
Производитель.	Корея
Поддержка.	ИСА

Extensive engagement of Armenia and other Member States in development of new advocacy resources

Across the Region we see health care budgets under great strain. Immunization managers struggle to obtain the necessary funding to strengthen immunization programmes and introduce new vaccines. Even protecting current budgets can be a challenge. The lack of political prioritization of immunization in some countries is alarming. Facing this challenge, Member States with the adoption of the EVAP called for guidance and technical support from WHO.

To make sure this support addressed the key challenges in Member States, and to build on already available tools, the Regional Office engaged national immunization managers and partners and conducted extensive desk research.

First step: gathering insights in Armenia

An in-country consultation with the Armenian immunization programme was the first step, followed by several consultations with partners and national counterparts in several countries. A pilot workshop was held with nine immunization managers to understand their support needs and preferred training methods.

As a result of this one-year process of consultation and continuous improvement, the final support package was launched in April 2015:

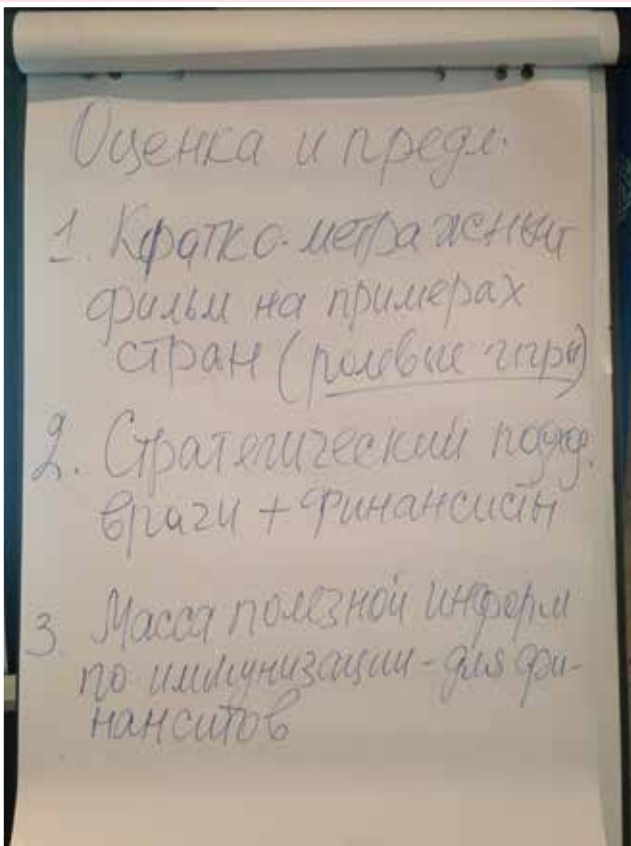
- Advocacy workbook offering a step-wise process description to help immunization programmes plan and carry out advocacy for immunization funding.
- Online advocacy library presenting a variety of support documents, templates, fact sheets and messages, to be applied in national advocacy for immunization funding.
- Training package with multidisciplinary modules, group work, exercises and facilitated discussions. This package was used in two training workshops with 14 Member States held in 2015.

Next step: In-country support to develop national action plans

Building on the outcome of the workshops and on a request from immunization managers for further support, VPI in 2016 will be offering in-country technical support for the development of national resource mobilization action plans.

“The WHO immunization team understands that their technical support and tools must target our specific challenges, and also be easy to use. I really appreciate the team’s efforts to engage national counterparts, and have found it interesting to be part of the development process right from the start.”

*Dr Gayane Sahakyan,
Immunization Manager, Armenia*



Working towards EVAP objectives





Ensuring high-level commitment to immunization as a public health priority

“The success of our collective vision for a Region free of vaccine-preventable diseases depends on the sustained commitment of us all to provide sufficient human and financial resources to fully implement this Plan”

*WHO Regional Director, Zsuzsanna Jakab,
Foreword to the European Vaccine Action Plan
2015-2020*

Political commitment to immunization is essential to achieve all other EVAP goals and objectives. High-level national commitment to immunization is demonstrated through:

- development of costed multi-year immunization plans;
- integration of immunization plans into broader health plans;
- a legislative framework that ensures the sustainability of immunization programmes and budgets;
- investment in the capacity-building of immunization programme management and staff;
- presence of a strong NITAG;
- collaboration with expert advisory groups (including ETAGE and SAGE);
- building of alliances to promote immunization and information exchange.



The Regional Office provides ongoing support in this area through high-level advocacy, capacity building and development of tools and mechanisms for information dissemination and exchange.

In 2015 this work included:

- a range of activities to support and strengthen the role of NITAGs;
- workshops for multi-year immunization planning;
- publication of an Immunization Advocacy Library;
- coordination of European Immunization Week;
- feasibility study for creation of an online information-sharing platform;
- regional meeting of immunization programme managers.

Commitment to immunization put to the test

The migration crisis that hit the European Region in 2015 pointedly demonstrated the need for high-level commitment to immunization as an integral part of well-functioning health systems. High immunization coverage is crucial, not just to protect long-time residents but also newcomers who may be more vulnerable to complications caused by vaccine-preventable diseases. Moreover, to equitably protect a country's population, culturally appropriate vaccination services and information must be offered to all, including refugees, migrants, international travellers and marginalized communities. The Regional Office provided technical support to the many countries coping with a sudden influx in refugees, and recommended that they incorporate vaccination of migrants into their routine vaccination programmes.

Immunization Programme Managers' Meeting in Belgium

National immunization programme managers, WHO, partners and international experts met on 1–3 September 2015 at the University of Antwerp, Belgium, to focus on the challenges facing the European Region in the area of immunization and progress towards implementation of EVAP at national level. Meeting sessions focused on each of the five EVAP objectives, within which presentations and panel discussions were tailored specifically to address delegates' questions submitted in advance through an online survey. Over 130 delegates from 47 countries exchanged information and best practices, contributing to a highly valued and participatory event.

In a special 'marketplace' session on European Immunization Week, 10 countries displayed the many ways in which they have utilized the event to promote immunization at country level.

The meeting was honoured to welcome Her Majesty, Queen of the Belgians, who attended a panel discussion on ensuring equitable access to vaccine services.



Presentation of EIW materials developed in the former Yugoslav Republic of Macedonia.



Coping with migration crisis in Europe

An effective response includes providing refugees and migrants easy access to health services.

The unprecedented influx of refugees, asylum-seekers and migrants to countries of the European Region in 2015 posed a public health challenge that will continue in the near future and that must be addressed in accordance with the principles of equity, solidarity, human rights and dignity. Most of the refugees and migrants arriving in Europe came from Middle Eastern countries where vaccines are widely accepted and coverage has traditionally been high. Those most at risk for vaccine-preventable diseases are therefore young children who have not yet been vaccinated because the vaccination programmes in their home countries have been interrupted by civil unrest and war. Most outbreaks of vaccine-preventable diseases such as measles, rubella and pertussis occur in the Region independently of refugee and migrant population movement, but the rapid influx of large numbers of unvaccinated children contributes to existing immunity gaps.



Health workers providing immunization services at a centre for asylum seekers in Sweden.

To support national authorities in addressing this challenge, WHO together with United Nations High Commissioner for Refugees (UNHCR) and UNICEF developed joint technical guidance on the principles of vaccination of refugees, asylum seekers and migrants. The guidance stresses that an effective response requires strengthening national and regional health systems to ensure that all refugees and migrants have easy access to the health services they need and that the services are fully inclusive and user-friendly. This includes timely immunization against vaccine-preventable diseases, particularly measles and polio.

www.euro.who.int/technical-guidance-vaccination-refugees

Driving demand for immunization

“The diseases our parents feared and that we now seldom see or even hear about are no less severe today. They are still present and only an unvaccinated person away.”

*HRH Crown Princess Mary of Denmark,
in her statement for European Immunization
Week 2015*

(<http://www.euro.who.int/patron-statement-eiw-2015>)

In a Region with historically high immunization coverage rates, resurgence of some vaccine-preventable diseases over the past five years has served as a wake up call: control of vaccine-preventable diseases cannot be improved, nor even sustained, if demand for immunization falters.

Growing awareness of the urgency to improve communication around immunization has led the Regional Office to develop new approaches and materials to support countries in the following critically important areas. With similar challenges threatening immunization programmes everywhere, there is considerable global interest to adapt the outcomes of this work for implementation in other WHO regions.



Minimizing damage caused by real or perceived threats

A vaccine-safety-related event is any incident that threatens to undermine public trust in vaccines or the services that provide them. This can be, for example, a real or perceived serious reaction to a vaccine, an unfavourable news report or a vaccine recall. Many countries are not prepared to monitor, detect, or recognize such events, and respond to them in a coordinated and appropriate manner so that situations do not develop into crises, and their impact is minimized.

In 2012, WHO developed a guide for countries on preparing for and responding to these events. Based on workshops conducted in various countries and consultation with stakeholders, a major revision of the document began in 2015. This project will culminate in 2016 with launch of a theoretical basis document, web-based library of tools, supporting documents and a training package.

Three sub-regional training workshops held in 2015 guided participants through various situation analyses and a one-day simulation exercise.



Mock interview as part of communication training.

Restoring public confidence in immunization in Kazakhstan

In response to a large measles outbreak that began in 2014, Kazakhstan initiated a vaccination campaign targeting 1 million adolescents in February 2015. During the campaign, several events were mistakenly linked with the vaccine, creating great public concern about the vaccine's safety and leading to temporary suspension of immunization activities. Because any such event can seriously damage public confidence in a vaccine or immunization programme, an intensive effort was required to re-establish trust among the public and the media before the campaign could be resumed.

At the request of the Ministry of Health, WHO worked with the Kazakhstan health authorities to initiate an immediate thorough investigation and communication response. Regional Office experts participated in the investigation of the incidents, conducted training to build the capacity of spokespersons to communicate with the public and the media, and helped develop a communication and social mobilization strategy for resumption of the immunization campaign.

A roundtable briefing for over 30 journalists in the country was also held in March 2015 to increase knowledge and understanding of the risks of measles and the safety and effectiveness of the vaccine.

The campaign was resumed in September 2015 and proceeded without any further incidents.



10th anniversary of European Immunization Week

European Immunization Week (EIW) was celebrated for the 10th time in 2015. Celebration of this milestone drew greater attention to the week and the important messages it promotes. Taking stock of progress and also the challenges still ahead, EIW 2015 focussed on maintaining commitment to immunization – at political, professional and personal levels. EIW messages were broadcast by traditional and social media and distributed through many settings, from ministerial conferences to patient waiting rooms. Regional Office staff participated in several national events, including technical conferences in Belarus, Lithuania and Poland, and press conferences in Albania and Austria.

Support for national activities was also provided in the form of a communications package, merchandising, information products in English and Russian and financial contributions for special projects.

Maintaining a high profile for immunization

To maintain public trust in and support for immunization, it is essential that accurate and reliable information on immunization is available and easily accessible to the public online. Through traditional, online and social media, the Regional Office aims to increase public awareness of immunization facts and news and to support and highlight the work being done by Member States and our partners to improve immunization coverage. Work also continued in 2015 to support national health authorities in communicating the benefits of vaccines to the public. This included conducting immunization communications reviews, advising on the creation of websites to provide information on vaccines and immunization and to engage with the public on social media.



European Immunization Week in the Republic of Moldova

With support from WHO and UNICEF, the Republic of Moldova utilized EIW to focus on national challenges related to immunization, including declining vaccination coverage rates due to parental refusals, the consequences of re-emerging communicable diseases and the difficult task of securing sustainable funding for vaccines.

A press club for media representatives featured journalists, bloggers and parents and was attended by senior health officials and the Head of the WHO Country Office in Republic of Moldova. The Ministry of Health, the National Center for Public Health and the WHO Country Office organized flash-mobs in

the capital city of Chisinau, on the Central Square and in the city's biggest mall. The events were attended by epidemiologists and medical students, residents and academia. Parents heard about immunization benefits, how vaccines could prevent severe infectious diseases and protect the health and welfare of their children. Vaccination information leaflets were distributed, providing vaccination schedules and other useful information in Romanian and Russian, as well as pens and balloons with the EIW logo and slogan "Prevent. Protect. Immunize".



Equitable access requires tailored, innovative strategies

Together with Member States, the Regional Office seeks innovative ways to successfully reach and improve immunization coverage of underserved populations. This work is fully aligned with its commitment to increase health equity as expressed in Health 2020, EVAP, and the Sustainable Development Goals 3 and 10.

A major area of work in this area is implementation of the Tailoring Immunization Programmes (TIP) approach launched in 2013. Projects to identify and address immunization gaps using this tool continued or were initiated in 2015:

- in regions of Germany that have been highly affected by measles outbreaks in recent years,
- in Kazakhstan, among urban vaccine refusers in Almaty and religious groups in two regions; and
- in the United Kingdom among the ultra-orthodox Haredi Jewish population of North London (see page 45).

While not yet finalized the projects have already contributed to communication guidelines and policy recommendations. The Regional Office is also engaging actively with researchers at Wits University in South Africa to develop and field test a TIP Field Guide for global use in lower-income settings. This guide is expected to be launched in 2016.



Tailoring Immunization Programmes in the United Kingdom

The United Kingdom engaged in a TIP project in 2014-2016 to identify barriers and motivators to childhood vaccination and improve vaccination coverage among the Charedi Jewish population (the ultra-orthodox) of North London. A multi-agency approach was used, with Public Health England, National Health Service England and the London School of Hygiene and Tropical Medicine. The methods used included a descriptive analysis of measles notifications; an in-depth qualitative analysis from a measles outbreak; a parent questionnaire and in-depth interviews with parents and key informants. Insights gained have identified ways to tailor local immunisation services. A community and stakeholder workshop, facilitated by the Regional Office, will be held in 2016 to share findings and consider the recommendations.

Strengthening links between immunization and the overall health system

Laboratory data serve as useful, reliable evidence for decision-making.

Immunization programmes cannot stand on their own. Among other links to strong health systems, they rely on well-trained medical staff and laboratory-based surveillance of vaccine-preventable disease.

Empowered health care workers are stronger advocates

Health care workers have significant influence over immunization behaviour, but their understanding of and commitment to immunization can be low and suitable training opportunities may be limited. In response to recommendations of ETAGE, the Regional Office together with the European Society for Paediatric Infectious Diseases (ESPID) initiated in 2015 development of training materials on immunization for continuous medical education. The online, interactive course called “Wiser Immunisers” takes a clinical approach, focussing on a range of vaccine-preventable diseases, vaccines, contraindications, communications and common misconceptions around immunization and vaccines. The ESPID course was piloted September to December 2015 and will launch in English in 2016. The next step will be to translate the materials into other languages and contexts.



Coordinating surveillance networks in support of new vaccine introductions

WHO coordinates sentinel surveillance networks for rotavirus and invasive bacterial vaccine-preventable diseases in countries that are, or have been, eligible for new vaccine support from Gavi. The laboratory data obtained serve as useful, reliable evidence for decision-making related to vaccine introduction as well as assessment of vaccine impact and/or effectiveness after introduction.

Seven countries in the European Region participate in the rotavirus network, five of which have introduced rotavirus vaccine into their national vaccination schedules, and continue to monitor the vaccine's impact. Five countries in the European Region participate in the global invasive bacterial diseases (IBD) sentinel surveillance network, which gathers standardized data related to bacterial meningitis in children under 5 years of age caused by *Haemophilus influenzae* type b, *Streptococcus pneumoniae*, and *Neisseria meningitidis*.

In 2015, the Regional Office continued to provide technical support to the participating laboratories and hospitals in the European Region through site assessment visits, proficiency training, laboratory training (such as PCR training in genotyping), subregional workshops and provision of supplies and reagents needed to carry out the surveillance work. The Regional Office also hosted a regional meeting for both networks in October 2015 in Antalya, Turkey, with representation from WHO-supported sites, as well as from Kazakhstan and Kyrgyzstan, which recently experienced a meningococcal disease outbreak.

More information: <http://www.espid.org/content.aspx?Group=education&Page=ESPID%20Online%20Courses%202016>

Securing sustainable funding and supply of vaccines

Resource mobilization

Competing demands on health budgets can negatively impact immunization programmes, while the risks associated with underfunding vaccines and vaccine services are not always fully appreciated or understood. Although countries may allocate very large budgets to the purchase of new or additional vaccines, other components of the immunization systems may be grossly underfunded and under resourced.

In recognition of this challenge, the Regional Office launched a workbook on advocacy and resource mobilization for immunization in 2015. The workbook encourages immunization programme managers and staff to be aware of their own role and that of decision-makers in ensuring sustainable funding. A web-based immunization advocacy library provides them with the tools they need to engage accordingly with decision-makers.

The Regional Office conducted training workshops for countries of the western Balkans and Gavi-supported countries. Plans for 2016 include in-country missions to provide technical support to develop national action plans. This will make it possible to monitor the implementation process at country level.

Vaccine pricing

Navigating the global vaccine market is a challenge for all countries, but especially difficult for those new to the self-procuring process or with small birth cohorts. Lack of transparency surrounding prices and procurement options inhibits competition and prevents countries from making informed decisions that will allow them to secure an affordable and sufficient supply of vaccines. Global vaccine shortages are a continuing problem that require. Once vaccines are purchased, legislative and licensure problems at national level can also stand in the way of timely delivery.

The Regional Office has taken steps to increase vaccine price transparency, promote networking and information exchange among national regulatory authorities and support capacity building on licencing and registration, particularly for middle-income countries. A *Review of vaccine price data* launched in 2015 helps stakeholders understand and utilize available information on the vaccine market. This document will be updated annually, but has already generated widespread interest as the first reference document of its kind in the vaccine field.

A 3-day training workshop conducted in December 2015 for representatives from Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Georgia, Kyrgyzstan, Republic of Moldova, Serbia, Tajikistan, Turkmenistan and Uzbekistan aimed to build capacity and initiate country action plans to improve access to vaccine prices and implement procurement performance monitoring.

Vaccine supply

The Regional Office advises countries to optimize procurement systems, monitors vaccine stock-outs through the annual WHO/UNICEF Joint Reporting Form and in 2015 also conducted a survey on vaccine supply shortages for specific products, to which 25 Member States responded. In 2015, 20 European Union countries, as well as Bosnia and Herzegovina, Kazakhstan and Lithuania reported supply problems related especially to IPV, BCG and/or pertussis-containing vaccines.

“In the near future, the Republic of Moldova will be facing new challenges in immunization, having to take over an increasing share of vaccination-related expenses with domestic funding, while securing sustainable financing for the national immunization programme.”

*Dr Jarno Habicht,
Head of the WHO Country Office,
Republic of Moldova*

Publications





Publications

Regional Office publications (2014-2015)

Available at: www.euro.who.int/vaccines



European Vaccine Action Plan 2015–2020

The European Vaccine Action Plan (EVAP) sets a course through a regional vision and goals for immunization and control of vaccine-preventable diseases by defining objectives, priority action areas and indicators, taking into account the specific needs and challenges of WHO European Region Member States (2014).



Review of vaccine price data: submitted by WHO European Region Member States through the WHO/UNICEF Joint Reporting Form for 2013

The report provides a brief overview of the availability and transparency of information on vaccine pricing at the country level, the mechanisms for vaccine procurement, the vaccines procured and price information for each product. (2015)



Polio Outbreak Simulation Exercise: How to test national preparedness plans using the POSE model

The aim of a Polio Outbreak Simulation Exercise (POSE) is to critically review and update national plans for responding to the detection of wild or vaccine-derived polioviruses. This publication provides material for a one-day exercise, including guidance notes for facilitators and explanatory documents for participants. (2015)



Workbook: Mobilizing resources for immunization

A workbook on resource mobilization to support immunization programmes in their effort to ensure sustainable funding for immunization (2015).

Immunization advocacy library

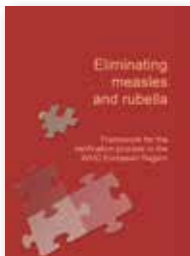


Enterovirus surveillance guidelines. Guidelines for enterovirus surveillance in support of the Polio Eradication Initiative

Information for national decision-makers and their technical advisors on the principles and practices of adopting enterovirus surveillance to support the Polio Eradication Initiative (2015).



A set of tools for immunization programme managers and other stakeholder advocate for prioritization of immunization in political agendas and public health budgets.



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

A detailed description of the steps be taken to document and verify that the elimination of measles, rubella and prevention of congenital rubella syndrome has been achieved in the WHO European Region (2014)



Narrative Report European Immunization Week 2015

Highlights of activities organized throughout the WHO European Region in celebration of the 10th EIW in 2015.

Meeting reports

- 15th meeting of the European Technical Advisory Group of Experts on Immunization (ETAGE)
30 September–1 October 2015, Copenhagen, Denmark
- Meeting of the Global Polio Laboratory Network (GPLN) in the WHO European Region
3–4 September 2015, Antwerp, Belgium
- 29th Meeting of the European Regional Certification Commission for Poliomyelitis Eradication (RCC)
9–10 June 2015, Sarajevo, Bosnia and Herzegovina.
- WHO meeting on strengthening the measles and rubella laboratory network in the Russian Federation and newly independent states
20–22 May 2015, St Petersburg, Russian Federation
- 10th meeting of the measles/rubella regional reference laboratories of the WHO European Region
3–4 February 2015, London, United Kingdom
- Meeting of Regional and Global Specialized Polio Reference Laboratories of the WHO European Polio Laboratory Network
11–12 March 2015, National Institute for Biological Standards and Control, Potters Bar, United Kingdom
- Third meeting of the European Regional Verification Commission for Measles and Rubella Elimination (RVC)
10–12 November 2014, Copenhagen, Denmark
- WHO meeting on strengthening measles and rubella laboratory network in the Russian Federation and newly independent states
8–10 September 2014, Hammamet, Tunisia
- Subregional meeting for the measles rubella national reference laboratories of western and central European Countries (2014)
5–7 May 2014, Helsinki, Finland
- Regional meeting on new vaccines introduction experience and issues
25–27 June 2014, Izmir, Turkey,
- 9th meeting of the measles-rubella reference laboratories of the WHO European Region
10–11 March 2014, Copenhagen, Denmark

EpiData and EpiBrief

The WHO EpiBrief and EpiData periodical reports contain an overview and analysis of epidemiological data on selected vaccine-preventable diseases in the WHO European Region.

VPI staff contributions to external publications

- Impact of rotavirus vaccine introduction and vaccine effectiveness in the Republic of Moldova. *Clin Infect Dis*. 2016. 62 [suppl 2]: S140-S146 doi:10.1093/cid/civ1209.
- Impact and effectiveness of monovalent rotavirus vaccine in Armenian children. *Clin Infect Dis*. 2016. 62 [suppl 2]: S147-S154 doi:10.1093/cid/ciw045.
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The WHO Regional Office for Europe



The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

Member States

Albania	Finland	Luxembourg	Slovenia
Andorra	France	Malta	Spain
Armenia	Georgia	Monaco	Sweden
Austria	Germany	Montenegro	Switzerland
Azerbaijan	Greece	Netherlands	Tajikistan
Belarus	Hungary	Norway	The former Yugoslav Republic of Macedonia
Belgium	Iceland	Poland	Turkey
Bosnia and Herzegovina	Ireland	Portugal	Turkmenistan
Bulgaria	Israel	Republic of Moldova	Ukraine
Croatia	Italy	Romania	United Kingdom
Cyprus	Kazakhstan	Russian Federation	Uzbekistan
Czech Republic	Kyrgyzstan	San Marino	
Denmark	Latvia	Serbia	
Estonia	Lithuania	Slovakia	



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