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# Progress report on measles and rubella elimination and the package for accelerated action to achieve elimination by 2015





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## **Progress report on measles and rubella elimination and the package for accelerated action to achieve elimination by 2015**

In September 2010, the WHO Regional Committee for Europe, at its sixtieth session (RC60) in Moscow, set a new target date for the regional elimination of measles and rubella. RC60 also endorsed resolution EUR/RC60/R12 calling for a renewed commitment to measles and rubella elimination and sustained support for the polio-free status of the WHO European Region.

Adopted by the Sixty-fifth World Health Assembly in May 2012, the Global Vaccine Action Plan (GVAP) for the Decade of Vaccines (2011–2020) emphasizes the importance of reaching regional goals, including measles and rubella elimination, and provides a new framework for taking collective action to reverse the negative trends of the past few years.

This is a critical moment in the fight to eliminate measles and rubella. Many countries continue to experience large-scale outbreaks and persistent indigenous transmission of measles. Although most countries of the Region have controlled rubella, a few still reported a high incidence and outbreaks in 2012.

It is becoming increasingly apparent that routine childhood immunization programmes and activities may not be sufficient to reach the 2015 target without renewed political commitment, accelerated action and innovative ways of reaching susceptible populations.

This progress report provides an update of the situation in the context of the regional 2015 measles and rubella elimination target and with respect to maintenance of the Region's polio-free status. The report presents progress since RC60 and introduces a package of priority areas in which the Office will strengthen its technical support to Member States.

This document should be read in conjunction with the background document *Measles and rubella elimination: a package for accelerated action 2013–2015* which has been developed through a consultative process and endorsed by the European Technical Advisory Group of Experts on Immunization (ETAGE). Alongside traditional tried and tested methods to boost demand for vaccines and provide equitable access, the Package considers innovative ways to change current approaches, acknowledging that "business as usual" may not be sufficient to reach the elimination target.



## Introduction

1. In September 2010, at the sixtieth session of the WHO Regional Committee for Europe (RC60) in Moscow, a new target date was set for the regional elimination of measles and rubella. RC60 also endorsed resolution EUR/RC60/R12 calling for a renewed commitment to measles and rubella elimination and sustained support for the polio-free status of the WHO European Region. The resolution requested a progress report to be delivered to RC63 in 2013. This document presents that report and is accompanied by key background documents that support the progress made and map out future activities and initiatives.

## Background

2. Member States in the European Region are strengthening their national immunization programmes and the health systems that sustain them. Supported by the WHO Regional Office for Europe and other partners, their commitment to immunization and stewardship has reduced suffering and delivered great social and economic benefits. As a result, the Region is now on the cusp of eliminating serious diseases, with regional vaccination coverage levels at 95% for the third dose of DTP<sup>1</sup> as well as for polio vaccine; the third dose of *Haemophilus influenzae* type b vaccine stands at 92%.<sup>2</sup> Nevertheless, each year, nearly one million children born in the Region are not vaccinated according to their national immunization schedules, increasing the likelihood of disease outbreaks and consequent complications.

3. Adopted by the Sixty-fifth World Health Assembly in May 2012, the Global Vaccine Action Plan (GVAP) for the Decade of Vaccines (2011–2020) emphasizes the importance of reaching the regional goals, including measles and rubella elimination. The Regional Office will support countries in incorporating the GVAP into national action plans.

4. A package for accelerated action 2013–2015 for measles and rubella elimination has been developed through a consultative process and endorsed by the European Technical Advisory Group of Experts on Immunization (ETAGE). The package is summarized in this report and presented in full to RC63 as a background document.

## Sustaining the polio-free status of the Region

5. Resolution EUR/RC60/R12 calls for Member States to sustain the polio-free status of the European Region by, inter alia, ensuring human and financial resources, sustaining high-quality surveillance of acute flaccid paralysis, responding to the importation of wild poliovirus or detected circulating vaccine-derived poliovirus and meeting laboratory requirements to contain wild polioviruses.

## Situation analysis

6. Although certified polio free in 2002, the European Region experienced a large outbreak of imported wild poliovirus in 2010. The outbreak began in Tajikistan and spread to

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<sup>1</sup> Diphtheria, tetanus, pertussis vaccine

<sup>2</sup> Data for 2002–2011

Kazakhstan, the Russian Federation and Turkmenistan. In all, the outbreak resulted in 478 cases of polio and at least 29 deaths involving adults and children.

7. During its twenty-fifth meeting in Copenhagen in August 2011, the European Regional Certification Commission for Poliomyelitis Eradication (RCC) noted that poliovirus transmission had been interrupted and no new cases had been reported since September 2010. It concluded that there was no need to recertify all of the 53 Member States in the WHO European Region or any subregion, but that continued political commitment and investment of resources were necessary to protect the Region's fragile status.

8. The risk of polio transmission remains low for a Region characterized by strong laboratory-supported surveillance and high population immunity. Nevertheless, the RCC continues to call for significantly greater engagement in the Region to maintain polio-free status until global eradication is achieved.

9. In June 2013, the RCC considered four countries (Bosnia and Herzegovina, Georgia, Romania and Ukraine) as being at high risk of transmission following importation of poliovirus. The risk assessment is based on poliovirus surveillance indicators, population immunity indicators and immunization system sustainability. The situation in Ukraine is of particular concern, national polio vaccination coverage levels having fallen dramatically in 2011 and 2012 to below 60% (and to below 30% in some areas of the country). These low coverage rates indicate that, should wild poliovirus be introduced into the country or a circulating vaccine-derived poliovirus emerge, a polio outbreak would likely follow, posing a serious threat to the global polio eradication effort.

### ***Progress made and action taken***

10. Acting on the recommendations of the RCC, seven countries carried out several rounds of coordinated supplementary immunization activities (SIAs) during 2011. The goal of the SIAs was to effectively close any remaining gaps in immunity and to prevent the transmission of wild poliovirus across borders in the future. In total, more than 18 million children were reached with polio vaccines in 15 rounds of SIAs.

11. Notable regional achievements and activities conducted in 2012 include country assessments and review of country preparedness plans, independent polio surveillance reviews (in Azerbaijan, Georgia, Kyrgyzstan and Ukraine), technical assessment of all polio laboratories (of which all passed the WHO proficiency test in 2012) and risk assessments for all Member States.

12. Ten Member States participated in polio outbreak simulation exercises (POSE), developed and delivered jointly by the Regional Office and the United Kingdom's Public Health England.

13. Cross-border immunization activities and risk assessments were coordinated with the WHO Regional Offices for the Eastern Mediterranean and the Western Pacific.

### **Elimination of measles and rubella**

14. Resolution EUR/RC60/R12 conveyed that the Region faced a continuing threat of measles cases and outbreaks. It urged countries to review and reinforce their political commitment and the human and financial resources required to accelerate efforts to achieve the goal of measles and rubella elimination.

## **Situation analysis**

15. Following a decade of declining numbers of measles cases in the Region, and indeed an historic low number of recorded cases of measles in 2007 (7000 cases), the period since late 2009 has seen an increased level of transmission of both measles and rubella, with over 100 000 cases of measles reported between January 2010 and June 2013. Although most countries of the Region have controlled rubella, a few still reported high incidence and outbreaks.

16. The substantial increase in measles transmission has occurred mostly in western and central-eastern parts of the Region, with almost 80% of the cases occurring in western Europe. Over 40% of cases were in people over 15 years of age, and over one in three patients with measles in the Region was aged 20 years and older. Eight countries reported a total of 34 measles-related deaths during this period. Since January 2010, indigenous transmission of measles virus has continued throughout most of the Region and widespread outbreaks have occurred in many countries. The largest outbreaks occurred in Bulgaria (2010), France (2011), Ukraine (2012), Georgia and Turkey (2013). Epidemiologic patterns of these outbreaks are consistent with the history of measles vaccination policies and programme performance in each given country. Outbreaks have also focused on certain groups with low population immunity (such as Roma and some religious groups). Other countries have also experienced continued indigenous transmission during this period.

17. The overall decline in the number of rubella cases has resulted from introduction of rubella-containing vaccine into the routine childhood immunization programmes of all Member States by 2009 and successful SIAs, particularly in the eastern part of the Region. However, in 2012 there was a three-fold increase in reported cases. A nationwide outbreak of rubella occurred in Romania in 2011–2012, with over 20 000 reported cases, resulting in 22 cases of congenital rubella syndrome (CRS), 9 of which were fatal. Poland reported almost 30 000 cases of rubella in the first half of 2013, contributing almost exclusively to all cases in the Region during that period. The epidemiology of rubella in the Region usually reflects the history of national rubella immunization policies. For example, outbreaks in Poland and Romania predominantly affected gender and age groups not previously targeted by rubella immunization programmes.

## **Progress and action taken**

18. To attain the goal of eliminating measles and rubella, the Regional Office and Member States base their activities on the key strategies of reaching the required levels of vaccination coverage and surveillance and of improving information as outlined in the Regional Measles and Rubella Strategic Plan. In addition, advocacy activities have been intensified and the process of verifying elimination of these diseases has begun.

## **Strengthening the vaccination and immunization system**

19. The Regional Office has worked closely with Member States, international organizations and bilateral agencies to help countries strengthen their national immunization programmes and practices through capacity-building efforts and improved planning and financing. For example, in 2010, the Regional Office assisted seven countries eligible for support from the GAVI Alliance (Armenia, Azerbaijan, Georgia, Kyrgyzstan, the Republic of Moldova, Tajikistan and Uzbekistan) to develop budgeted, comprehensive multi-year immunization plans. These plans are a prerequisite for financial and technical support from the GAVI Alliance and an invaluable tool for planning other vaccination efforts. They have a direct effect on measles and rubella immunization through the routine immunization programme.

20. The Regional Office has also assisted and supported supplementary measles and rubella immunization campaigns in Uzbekistan. Other countries, such as Austria, Belarus, Denmark and the United Kingdom, have independently conducted measles immunization activities among specific susceptible populations, in addition to routine immunization programmes.

21. New tools have been developed to assist Member States in tailoring their immunization programmes, such as guidelines for addressing the decline of confidence in immunization following adverse vaccine-related events. The Regional Office has produced the “Tailoring Immunization Programme” (TIP) methodology and an online suite of resources and frontline health worker job aids. TIP enables countries to respond to the needs of susceptible populations by identifying demand- and supply-side barriers to immunization.

### **Surveillance**

22. The Regional Office has continued to strengthen and support the surveillance of measles and rubella at regional level by providing technical support to building surveillance capacity. Updated measles and rubella surveillance guidelines for the Region were made available in February 2013. At country level, the Office has provided technical support to countries in developing more effective routine surveillance systems and in monitoring and tracking disease outbreaks. Rapid technical support was provided to countries affected by widespread outbreaks, including Azerbaijan, Bulgaria, Georgia and Romania. In addition, selected countries received laboratory supplies from the Office to conduct virological investigations, and external quality assurance was offered to all participating laboratories. All WHO measles laboratory network laboratories passed proficiency testing in 2012.

23. Many countries improved their measles and rubella surveillance and reporting during the period and more reported case-based data. Other countries worked towards establishing or improving surveillance systems. For example, Germany initiated legal and technical activities to establish rubella surveillance in the country. France established a laboratory network with the reference laboratory for rubella surveillance, keeping existing regulation for the surveillance of rubella in pregnancy. Azerbaijan monitored surveillance and immunization coverage in territories with suboptimal surveillance performance during 2010–2012.

### **Verification of measles and rubella elimination**

24. The Regional Office established a Regional Verification Commission for Measles and Rubella Elimination (RVC) in 2010 and its first meeting was held in Copenhagen in January 2012. The Office has also assisted Member States in establishing national verification committees (NVC). To date, 38 of the 53 Member States in the Region have established an NVC. Four subregional meetings of the RVC with NVCs and representatives of national health systems were held in 2012–2013.

25. In 2012, the framework for the measles and rubella elimination verification process in the European Region was updated and an annual verification reporting form was created to assist countries in documenting progress towards eliminating measles and rubella. Both of these documents have been disseminated to the Member States.

### **Communication, information and advocacy**

26. During the past two years, the Regional Office has intensified its communication and advocacy activities to increase and sustain demand for immunization services and mobilize the resources needed to support them.

27. The Regional Office has continued to coordinate the annual European Immunization Week (EIW) with the participation of all 53 Member States in 2013. Through EIW,



immunization is advocated and promoted and both traditional and social media have been engaged to build support at all levels of the health-care system.

28. The provision of relevant information to health-care professionals and the public is another strategy that the Regional Office has undertaken through the publication of monthly epidemiological data tables and reports synthesizing country-specific information on risk and disease burden, promotional materials and various scientific publications, together with updates on its web site. A resource centre for health-care workers and the general public was also established during this period and a mobile phone application to track the vaccination status of any parent's child is now available to Member States for local adaptation.

29. The Regional Office has also contributed to strengthening vaccine safety "event" preparedness. Vaccine safety communication guidelines and a "quick guide" handbook were developed during this period and are to be accompanied by subregional training.

## **Challenges**

30. The large number of measles and rubella cases reported in 2012 and so far in 2013 suggests that more effort is still required, particularly in high-incidence countries, to achieve and maintain the required high vaccination coverage and to conduct high-quality surveillance of measles and rubella. Suboptimal rates of vaccination coverage and immunity gaps in the population due to historical programme weaknesses, late introduction of vaccine and gaps in service delivery remain at the core of the problem of continued measles or rubella transmission in the Region.

31. Vaccination coverage of  $\geq 95\%$  with two doses of measles vaccine and at least one dose of rubella vaccine through routine vaccination programmes has still not been achieved in every country and throughout all districts, but it is crucial to elimination. To close gaps in immunity, countries need to identify resources and innovative methods to increase public demand for vaccination and they need to consider undertaking supplementary immunization activities targeting susceptible individuals and populations. Every opportunity should be used to reach children with routine immunization, identify at-risk adolescents and adults and provide the latter with the necessary vaccinations.

32. Political and public complacency about the value of immunization and the lack of a perceived threat from vaccine-preventable diseases has contributed to a decline in vaccine uptake. The fact that a significant minority of health-care workers have questioned the safety and efficacy of MMR<sup>3</sup> vaccine highlights the need to develop appropriate educational and training materials that will provide health professionals with the required knowledge and communication skills to address and respond to parent and patient concerns. Moreover, in recent years, outbreaks of measles and rubella have repeatedly occurred among certain populations, including minority ethnic groups such as Roma communities, immigrants and religious and philosophical groups such as followers of anthroposophy.

33. There is a need for renewed political commitment, improved risk communication by health authorities and accelerated action by Member States and partners to eliminate measles and rubella in the European Region. At the same time, we must urgently address concerns about vaccination among the public and health-care workers and improve their understanding of the benefits and risks associated with vaccination against measles and rubella. Vaccine safety concerns are exacerbated by misinformation, spread in part by anti-vaccination groups.

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<sup>3</sup> Measles, mumps, rubella

## ***Measles and rubella elimination: a package for accelerated action 2013–2015***

34. Greater efforts are required if Member States are to honour their commitment to eliminate measles and rubella. Without the necessary accelerated action, backed by political commitment and adequate resources, these avoidable diseases will continue to infect thousands of susceptible individuals each year.

35. As part of the drive to meet the 2015 target, the Regional Office will further advocate for the acceleration and improvement of political commitment and action by Member States. The above-mentioned Package identifies priority work areas in which the Regional Office will strengthen its technical support to and in partnership with Member States.

36. The purpose of the Package is to highlight priority activities of the Regional Office. Where possible, it points out the need for innovative solutions or incremental support, in addition to overall improved efforts. Priority countries for accelerated action vary depending on the activity or milestone to be achieved and are currently being identified by the Regional Office.

37. The Package was developed by the Regional Office through a consultative and inclusive process guided by the Decade of Vaccines (2011–2020) vision, whereby the Regional Office and its partners work towards the integration and coordination of all immunization-related activities in order to:

- achieve and sustain very high coverage ( $\geq 95\%$ ) with two doses of measles and at least one dose of rubella vaccine through high-quality routine immunization services;
- provide measles and rubella vaccination opportunities, including SIAs, to all population groups at risk;
- strengthen surveillance systems;
- improve the availability of high-quality, evidence-based information for health professionals and the public on the benefits and risks associated with immunization; and
- verify the elimination of measles and rubella in the Region.

38. Alongside traditional tried and tested methods to boost demand for vaccines and provide equitable access, the Package considers innovative approaches, acknowledging that “business as usual” may not be sufficient to reach the elimination target. The Package outlines the role of the Regional Office and recommends key areas of action for Member States. Examples of improved and accelerated actions are described under six categories, below.

### **Vaccination and immunization system strengthening**

39. Implementation of measles and rubella elimination strategies requires robust immunization systems in Member States to vaccinate at least 95% of the population with two doses of measles- and rubella-containing vaccines. Member States should also facilitate access to populations with inadequate levels of immunity for the provision of supplementary immunization. Behavioural/communication tools are available to identify susceptible subpopulations, and increase demand and close immunity gaps. National Immunization Technical Advisory groups (NITAG) have an important role to promote and prioritize measles and rubella recommendations and policies.

## **Surveillance**

40. Case-based reporting of measles and rubella and congenital rubella syndrome needs to be enhanced through integrated laboratory and epidemiological surveillance systems. This becomes even more pertinent as the elimination goal is reached. It is also essential to accelerate progress on strengthening national capacity to manage immunization-associated risk by improving risk identification and assessment, prioritization, developing appropriate risk mitigation and/or risk-reduction strategies, application of standardized procedures and development of contingency plans.

## **Outbreak prevention and response**

41. Every Member State should have the capacity to prevent, identify and respond to importations and outbreaks in a timely manner. National plans of action for the response to measles and rubella outbreaks should be developed on the principles of short and long-term large-scale response activities (including supplementary immunization activities, when necessary). The Regional Guidelines on Outbreak Response that are currently being developed by the WHO Regional Office will be essential to assist Member States in developing comprehensive national response plans.

## **Communications, information and advocacy**

42. Advocacy and visibility of actions taken to reach the goal of measles and rubella elimination need to improve so that the necessary resources are made available to achieve and sustain the required high vaccination coverage. The European Immunization Week (EIW) platform is one of a range of opportunities to effectively communicate the benefits of immunization as well as explicitly set elimination goals at regional and national levels. Every effort should be made to improve health care workers' ability to provide information and advice on the benefits of immunizations and the risks of vaccine-preventable diseases. A Vaccine Safety Communication Guidelines document, currently being prepared, will guide health care workers in responding to vaccine scares.

## **Resource mobilization and partnerships**

43. The MECACAR platform is to be revived to allow cross-regional collaboration among countries of the Middle East, Caucasus and the Central Asian Republics. This will provide an opportunity to expand and strengthen measles and rubella elimination advocacy, resource mobilization and surveillance through inter-Regional cooperation and joint action.

## **Verification of measles and rubella elimination**

44. Every Member State is responsible for collecting, analysing and interpreting epidemiological and laboratory data of measles, rubella and CRS, and for the adequacy of the corresponding surveillance systems. To monitor progress towards the goal of eliminating measles and rubella, these data are documented in the annual status reports submitted to national verification committees. These reports will be reviewed by Regional Verification Commission. Providing feedback to Member States on these reports is an important responsibility of WHO Regional Office for Europe.

## **Conclusions**

45. The measles and rubella elimination target of 2015 is under threat. The continued occurrence of measles outbreaks in the European Region and the large number of measles cases

during the last few years poses a serious challenge to achieving this goal. The overall decline in rubella incidence is a notable achievement, however in a few countries with high rubella incidence the risk of CRS still exists and cases continue to occur.

46. The increase in the proportion of measles and rubella cases among young adults and repeated outbreaks in certain subpopulations point to the need for strategies tailored to these susceptible groups. Much of the public's complacency towards vaccination in many countries in the Region can be overcome by improving risk communication. Health-care workers also need to understand the importance of vaccination in order to serve as vaccine advocates toward the general population.

47. A large outbreak of polio in 2010 also emphasized the fragility of the Region's polio-free status.

48. Greater efforts are required if Member States are to honour their commitment to reach the goal of measles and rubella elimination and maintain the Region's polio-free status. Without their partnership, commitment and readiness, reinvigoration of the elimination effort will not succeed.

49. The keys to achieving these goals are (a) political commitment demonstrated by giving high priority to the maintenance of sufficient immunization coverage and dedicating the resources required to accelerate elimination efforts; (b) continued vigilance and monitoring through a high quality, laboratory-supported surveillance system; (c) improved importation/outbreak preparedness and timely response; and (d) evidence-based advocacy and communication.

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