



**World Health  
Organization**

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REGIONAL OFFICE FOR **Europe**

**Meeting on prevention and control  
of measles outbreaks in the Caucasus**

**10–11 July 2013, Tbilisi, Georgia**

## Abstract

Representatives from the ministries of health of Armenia, Azerbaijan and Georgia, the World Health Organization, the Rostropovich-Vishnevskaya Foundation (RVF), the United States Centers for Disease Control and Prevention (CDC) and the United Nations Children's Fund (UNICEF) met in Tbilisi, Georgia, on 10–11 July 2013 to discuss progress towards the 2015 measles and rubella elimination target for the WHO European Region and plan a response to the current measles outbreaks in the Caucasus subregion.

The country representatives agreed on comprehensive efforts for the coming year to close immunity gaps in the population and prevent further spread of the disease within and across their borders; while partners pledged technical and possible financial support to develop and implement the planned responses. These efforts will start as soon as possible and major activities should be completed by mid-2014.

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## Abbreviations

CDC	United States Centers for Disease Control and Prevention
CRS	Congenital rubella syndrome
EIW	European Immunization Week
HCWs	Health care workers
MMR	Measles, mumps rubella vaccine
MR	Measles, mumps vaccine
RVF	Rostropovich-Vishnevskaya Foundation
SIA	Supplementary immunization activities
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

## 1. Executive summary

Despite substantial progress made by participating countries towards the regional target of measles and rubella elimination by 2015, large or nationwide measles outbreaks were reported from Azerbaijan and Georgia, and importations into Armenia, in the first half of 2013.

Representatives from the ministries of health of Armenia, Azerbaijan and Georgia, the World Health Organization, United States Centers for Disease Control and Prevention (CDC), Rostropovich-Vishnevskaya Foundation (RVF) and the United Nations Children's Fund (UNICEF) met in Tbilisi, Georgia, on 10-11 July 2011 to review the current epidemiological situation and agree on comprehensive coordinated efforts to respond to current measles outbreaks, including conducting supplementary immunization activities to close immunity gaps in the population. Unless susceptibility in older age groups due to historic problems with immunization programmes in these countries is addressed, it will not be possible to achieve elimination.

These efforts should start as soon as possible and major activities should be completed by mid-2014.

### *Conclusions*

#### Armenia

- Considerable efforts have been made to sustain high population immunity.
- Further efforts are needed to prevent further spread following importations. These should include accelerating ongoing catch up of un/underimmunized individuals.

#### Azerbaijan

- Supplementary immunization activities (SIAs) are required to close immunity gaps in Baku City and affected districts. Further in-depth epidemiological analysis is needed to better define populations at risk, in particular in older age groups.
- Macro-planning needs to be completed as soon as possible (by mid-August 2013) to define strategies and realistic budget estimates to obtain national and partner commitments and initiate resource mobilization activities.

#### Georgia

- Supplementary immunization activities are required to close immunity gaps nationwide. Further in-depth epidemiological analysis is needed to better define population groups and territories at risk.
- Macro-planning needs to be completed as soon as possible (by 1 September 2013) to define strategies and realistic budget estimates to obtain national and partner commitments and initiate internal and external resource mobilization activities.

Partners pledged to:

- provide technical assistance to develop country-specific macro plans for measles and rubella activities, including recommendations for vaccine, target population and strategies for vaccine delivery and communications;
- define and coordinate partners' support and fundraising based on country needs through meetings/teleconferences and country missions;
- work with in-country partners and deploy long- and short-term consultants, when needed, to help conduct in-depth epidemiologic analysis of the outbreaks and provide assistance in specific technical areas as needed;
- assist with the procurement of vaccine as needed;
- coordinate future activities with Turkish health authorities.

## 2. Introduction

The World Health Organization Regional Office for Europe has established a measles and rubella elimination goal with the target date set for 2015. Measles outbreaks pose a serious challenge to the regional elimination efforts and underline the need to strengthen routine immunization and invest additional time and resources to reaching susceptible populations.

From January to June 2013 the WHO Regional Office for Europe was notified of over 14 000 cases of measles, the majority being reported in the Caucasus and Turkey. To ensure a coordinated response in the subregion, the Regional Office organized a two-day high-level meeting on measles in Tbilisi, Georgia, on 10–11 July 2013, which was attended by representatives from the ministries of health of Armenia, Azerbaijan, and Georgia, the World Health Organization, the Rostropovich–Vishnevskaya Foundation (RVF), the United Nations Children’s Fund (UNICEF) and the United States Centers for Disease Control and Prevention (CDC).

The meeting was chaired by Professor Paata Imnadze, Research Director of the National Center for Disease Control and Public Health of Georgia, and Robert Perry, WHO headquarters.

The objectives of the meeting were to:

- review and discuss current epidemiological situation of measles in the WHO European Region, and particularly in the Caucasus,
- share national experiences and examples of circumstances and risks that resulted with measles outbreaks, as well as lessons learnt and successful control measures implemented in current outbreaks;
- define concrete actions to be taken to respond to current measles outbreaks;
- discuss challenges and opportunities for strengthening routine immunization, and conducting supplemental immunization activities to close immunity gaps in the population, with emphasis on vaccine communications and vaccine safety related issues;
- discuss the role of the WHO and international partners in assisting Member States with outbreak response and the mechanisms through which that support could be provided.

## 3. Introductory presentations

### Opening remarks

On behalf of the WHO Regional Office for Europe, Dr Nedret Emiroglun thanked Georgia’s Ministry of Health for hosting the meeting, welcomed all participants and expressed WHO’s intention to share the meeting’s results with health authorities in Turkey. The results of this meeting will contribute to discussions at the European Regional Committee meeting in September 2013, where WHO will present the *Accelerated package of action for measles and rubella elimination* and work to ensure the political commitment and resources necessary to achieve the 2015 target.

Dr Emiroglun noted that the meeting was taking place at an historic moment when the Region is within reach of the 2015 target at the same time that outbreaks threaten to undermine achievement of this goal.

On behalf of the WHO Country Office in Georgia, Dr Rusudan Klimiashvili also thanked all participants for their attendance and welcomed the meeting as an opportunity to look for common solutions to the challenges shared by the participating countries.

Georgia's Deputy Ministry of Labour, Health and Social Affairs, Dr Mariam Jashi underlined the importance of immunization and the new Government's plans to make it a flagship issue for Georgia. Dr Jashi looked forward to the meeting's recommendations related to targeting, timelines and resource mobilization and reconfirmed Georgia's commitment and readiness to implement these recommendations.

### **Global measles and rubella update**

Dr Robert Perry, WHO headquarters

Global efforts are successfully holding the line against measles, but just barely. The current stepping up of activities to control rubella can put the world back on track, but achieving the measles and rubella elimination target will also require better-quality programmes, equitable routine immunization and innovative solutions to current challenges.

One of the goals of the Global Vaccine Action Plan (GVAP) is to reach 90% measles and rubella immunization coverage in each country nationwide and 80% in each district. Globally estimated measles deaths dropped by 71% from 2000 to 2011, but immunization coverage rates have levelled off since 2010 and the number of reported cases increased from 2008 to 2011. Outbreaks of endemic or imported measles virus continue to occur in each WHO region.

The new WHO global recommendation to conduct wide-range campaigns with MR or MMR to close immunization gaps and then introduce the combined vaccine in routine schedules can serve as the required push to achieve at least 80% coverage. GAVI has committed over US\$ 554 million to move on rubella through MR vaccine introduction and this will shift the market away from M to MR.

Another challenge is that rubella and congenital rubella syndrome (CRS) reporting (carried out by 164 and 121 countries respectively) is insufficient. Reporting needs to be strengthened in all WHO regions, including the European Region.

Countries need to seize the opportunity provided by investments from GAVI and other sources to document best practices and use them more widely.

### ***Measles outbreaks as a guide to optimizing the response***

Measles outbreaks in individual countries provide useful lessons on where to strengthen programmes and how to determine age ranges for campaigns. They clearly identify immunity gaps and allow for a targeted response, as demonstrated by Kyrgyzstan in 2001, Malawi in 2010, Sri Lanka in 2000 and Zambia in 2010–2011. Among the lessons learnt:

- working with religious or community leaders can be an important way to change immunization behaviour;
- geographic targeting needs to be wide to work (a district level response results in measles moving to other districts);
- outbreak investigations identify gaps throughout the immunization system and lead to increased awareness of problems with the cold chain, vaccine failure, etc.; and
- responding to gaps in a coordinated and comprehensive way helps to strengthen routine immunization.

### ***Discussion***

#### ***Vaccine supply***

Dr Perry explained that countries that have graduated from GAVI support are not eligible for further assistance in procuring vaccines.

The UNICEF representative noted that the global supply of MR and MMR vaccines is very tight. Three manufacturers supply to UNICEF, and a fourth supplies bilaterally to countries. The Serum Institute of India is a major supplier for MMR and the only supplier for MR, and it is struggling to meet the demand for campaigns in Nigeria, Pakistan and elsewhere. Countries in the European Region prefer European suppliers, and Sanofi is expected to withdraw from the vaccine market in 2015.

The implication of this tight supply situation is that countries need to plan SIAs as far in advance as possible, particularly if the vaccines are to be ordered through UNICEF because of UNICEF's routine forecasting schedule, as well as the time required to issue a tender and ship vaccine.

### **Overview of epidemiological situation in the WHO European**

Dr Abigail Shefer, WHO Regional Office for Europe

Measles has declined dramatically since 2000, and in general the European Region is moving in the right direction:

- All Member States administer two doses of measles-containing vaccine.
- All Member States include rubella in routine immunization schedules.
- Regional immunization coverage is high.
- SIAs comprising over 44 million doses have been conducted in the Region (2005–2012).
- The Region has 67 WHO-accredited laboratories.
- Surveillance tools for evidence-based decision-making are available, e.g. for immunization registries, genotyping data, seroprevalence studies and vaccine supply.

However, suboptimal coverage in the 1980s and 1990s created pockets of what are now susceptible adults. Since 2010, increased measles cases have been reported, the majority of which have been in western and central Europe, and 1 in 3 of which have been over 20 years of age.

In 2011–2012 the predominant endemic genotype was D4, while D8 has been prominent in 2013, with similar sequencing in Turkey and Georgia.

Age distribution of cases in the different countries are related to the timing of immunization gaps that have occurred in the population: a large proportion of adults among the measles cases indicates historical gaps in coverage, while countries in which large numbers of children are affected have more recent problems with their routine immunization programmes.

Rubella incidence and outbreaks in 2012 occurred mostly in central and eastern Europe and can in part be traced to the historic use of gender-specific immunization schedules.

Among the most important influencing factors in the European Region are the historic immunization context, perceptions on vaccination among the public and health care workers and competing priorities in countries stemming from health care reform.



### ***Verification process for measles and rubella elimination***

The *Framework for verification process of measles and rubella elimination in the WHO European Region* was finalized in 2012 following establishment of the Regional Verification Commission in January 2012. Since that time four inter-country meetings have been held and 36 national verification committees have been established in Member States. The first national status reports were due 31 July 2013.

### ***Discussion***

#### ***Outbreak responses in the WHO European Region***

Countries do not always report SIA activities, so it is difficult to get an overview of responses for the whole Region. No massive campaigns have been reported in the European Union, but activities have taken place at district and local levels, including educating the public about vaccination during European Immunization Week in France, a campaign targeting 10–16 year olds in the United Kingdom, and a campaign targeting a specific geographic area in the Netherlands.

## 4. Country updates

### Armenia

Armenia has a highly sophisticated and well-performing immunization programme. The main strategies to reach measles and rubella elimination by 2015 are to maintain 95% or more coverage with two doses of measles and rubella vaccine in all administrative territories, conduct catch up campaigns in communities with low performance (if necessary), continue to conduct surveillance, and implement laboratory confirmation of all suspected cases.

Progress towards measles and rubella elimination target:

- Armenia has achieved national immunization coverage of 97%, with no community reporting less than 95% coverage.
- The country established an active verification and certification commission in 2012.
- Progress in surveillance has been realized, with all target indicators having been achieved except detection rate.
- Rapid outbreak control and standard operating procedures are in place for all levels.
- Timeliness is satisfactory, with all suspected cases sampled within 21 days, 98% of cases shipped to the laboratory within 3 days, and 100% laboratory confirmation within 7 days.
- Perceptions about vaccination are positive among the general public, but less so among health care workers.

### Measles cases 2004–2005

Armenia experienced relatively stable periods from 1998 to 2004 and from 2007 to the present. Outbreaks in 2004 and 2005 revealed a susceptible cohort in the 6–29 year-old age group. SIAs conducted among this age group in October 2007 achieved a coverage rate of 96% of the over 900 000 eligible individuals.

### Measles cases 2013

In the first half of 2013, 3 clusters, totalling 8 measles cases were registered. Of these, 6 were imported (from Georgia and via a Georgian citizen in Ukraine) and 2 were linked to the imported cases. All of the infected individuals were unvaccinated. Two were under age 5; 4 were 20–29 years old; and 2 were over 30 years old.

In response to these recent cases, the Government of Armenia initiated a prompt investigation, including verification of immunization status of all contacts and mandatory vaccination for those with unknown vaccination status or zero doses and no measles history. They are also continuing to implement their routine catch-up immunization activities for children at the age of routine vaccination.

Authorities are also working with tourism organizations to alert travellers to the Black Sea coast and recommend one dose of MMR vaccination for travellers.

The situation for rubella is similar to that of measles. The number of cases has remained stable since SIAs were implemented in 2007.

### *Looking forward*

The next steps for Armenia include:

- sustaining high population immunity
- conducting regular monitoring and catch-up campaigns (if necessary)

- ensuring a permanent vaccine stock
- continuing case-based surveillance for measles, rubella and CRS
- ensuring continuous education of health care workers on immunization
- increasing public confidence in the benefits of vaccination.

### ***Discussion***

The following issues were addressed:

*Data verification.* A Demographic Household Survey (DHS) conducted in 2010 to verify collected data revealed only a 2% difference from the national statistical report. The country is also developing plans for 2014 to conduct serological and coverage surveys to identify susceptible children and target groups.

*Surveillance.* Active surveillance is among the standard operational policies. All hospitals are being visited on a quarterly basis.

*Perceptions about vaccination.* Armenia has high vaccination acceptance among the general population, but not among all health care workers. For this reason, authorities use all opportunities, including European Immunization Week (EIW), to improve perceptions and make vaccines available. Opportunities to reach pediatricians have been utilized, but this group is in general already positive about MMR vaccination. Other health care workers, including surgeons and gynecologists, tend to be less supportive.

*Communication.* Of particular note is the highly successful communication component of the 2007 campaign. It was not aggressive, but reached everyone in the country and serves as a good example for other countries in the subregion.

*Capacity for genotyping.* It is difficult to find funding for the operational costs of transporting samples to the WHO Regional Reference Laboratory in Moscow. At the time of the meeting, four samples were ready for shipment pending funding.

### **Azerbaijan**

In line with national strategies over the period 2005 to 2015, Azerbaijan has taken various steps towards the elimination of measles and rubella, including introduction of two doses of MMR (produced by the Indian Serum Institute) into routine immunization schedules, at ages 12 months and 6 years. In response to increased measles and rubella cases in the period 2003–2005, mass immunization campaigns were conducted that achieved broad coverage. These included a measles campaign in early 2006 targeting over 2 million 7–29 year olds, a measles campaign in late 2006 targeting over 400 000 women aged 23–35, and a rubella campaign in May 2007 targeting women aged 35 and 36.

Since that time the country has retained good coverage and realized a sharp reduction in morbidity of both measles and rubella. From 2010 to 2013 no confirmed cases of measles or rubella were detected. In 2012 one case of rubella was imported from the Republic of Moldova.

#### ***Progress towards measles and rubella elimination target***

Until 2009 data for measles and rubella was aggregated and based on clinical confirmation. Laboratory confirmation was not mandatory. In February 2009 the protocol and standard procedures for identification of morbidity were introduced. With WHO assistance, the Republican Centre monitored coverage with the MMR vaccine and surveillance for measles and rubella in eight regions of the country. The results showed that surveillance has improved.

## **Measles cases 2010–2012**

During this period, measles incidence rate and surveillance performance indicators were met. Starting in November 2012, the number of suspected cases increased, but all suspected cases sent for laboratory confirmation were discarded.

## **Measles cases 2013**

The 73 laboratory confirmed and 3 epidemiologically linked cases in this period were centred in Baku City and Aghjabadi district. The highest number of confirmed cases were reported in the 20–29 year age group (34%), followed by 10–14 year olds (17%) and 15–19 year olds (14%). Hospitalizations by age group followed the same pattern. With respect to vaccination status, the 20–29 age group had the highest proportion of individuals for whom no vaccination data was available. Of the total 76 cases, 10 had been vaccinated. Of the total of 784 suspected cases from January to June 2013, 420 were discarded and 288 suspected cases with rash onset in May or June were still pending at the time of the meeting.

In response to this outbreak, and within the framework of EIW in April, vaccines were provided to 27 083 children under 10 years of age who had not been vaccinated previously or who had been in contact with individuals infected with the disease. Within the routine immunization programme, an additional 111 000 children were reached with the first and second doses of MMR. The Government furthermore strengthened epidemiological surveillance, weekly analysis of data and performance indicators.

### ***Looking forward***

The next steps for Azerbaijan include plans to conduct SIAs targeting about 200 000 10–14 year olds in Baku City and Aghjabadi district, with one dose of preferably MMR (from the Indian Serum Institute); and training of epidemiologists on measles, rubella and CRS surveillance.

### ***Discussion***

The following issues were addressed:

*High number of discarded cases.* Clinical samples from all of the discarded cases were tested for both measles and rubella. No cases of rubella had been detected thus far. The laboratories receive blood samples from Baku and other areas, and dry blood drops instead of blood from some districts. Surveillance monitoring was conducted in November and December 2012.

*Choice of targeted age group.* Concern was expressed that the campaign targeting 10–14 year olds would miss the susceptible 20–29 year age group, representing the highest number of cases reported. The Ministry representatives explained that this issue will be revisited based on more data analysis. Increased monitoring in Baku and elsewhere will help to identify individuals who are not yet vaccinated.

Concern was also expressed that a campaign restricted to Baku and Aghjabadi district might cause the virus to shift to other regions of the country.

*Incentives to vaccinate.* Health care workers are not given incentives to immunize aside from their normal salaries.

*Procurement and supply.* Vaccine procurement is funded by the Ministry of Health and is tender based. Upon arrival, the supply is properly stored at central vaccine store and then redistributed according to Ministry instructions to medical institutions. The country has reserve stock for three months.

*Surveillance and diagnostics outside of areas reporting measles cases.* Certain regions have not reported any cases of measles. Some suspected cases were reported in Ganja and other districts and regions, but these were detected

through epidemiological surveillance. It is therefore not possible to speak about detection rates in these regions. Baku accounts for the major part of mortality rates.

*Surveillance data.* Azerbaijan has an integrated surveillance system for infectious diseases. All suspected cases of any infectious diseases are entered into the database of every region or district, as well as at national level. This database is accessible to health care workers in Baku and the regions.

*Vaccination registry.* All vaccination cases are entered into the recently introduced national vaccination registry. This new system may still be faulty, but it is working and intended to reflect all routine and supplemental vaccination cases including for MR and other vaccines. Ambulatory settings that administer vaccines have both electronic recording and paper journals. A child's medical card is therefore reflected in computer systems and on paper.

## **Georgia**

Vaccination for measles began in the 1960s, and led to a dramatic drop in morbidity rates. Incidence of measles began to increase again after the 1990s collapse of the Soviet Union, followed by gradual progress toward sustained high coverage but also a large measles outbreak in 2004 that revealed persistent gaps. Incidence during this outbreak was lower in Tbilisi than nationwide. An MR catch up campaign was conducted in 2008.

Between 2010 and 2012, Georgia experienced some declines in coverage rates for MMR, as the immunization programme has been impacted by privatization and marketization of the health care system. This decrease has already been reflected in cases of measles in Tbilisi and needs to be addressed as quickly as possible.

The current Government has made immunization a high priority. A number of SIAs have already been conducted, although the catch up SIA in 2008 reached only 50% of the target population. To achieve the 2015 elimination target, the country needs to intensify efforts to improve routine immunization, service delivery, monitoring, and essential supplemental activities.

Establishment of a new reference laboratory has made it possible to conduct research and bring together the most important laboratories in the country for polio, measles/rubella and influenza. This new facility will give the subregion greater possibilities for laboratory surveillance.

### **Measles cases 2013**

In total, 6447 cases have been reported in Georgia from January 2013 to date. Weekly data reporting first revealed 19 cases of measles in Tbilisi in week 7 of 2013. By March, the Ministry of Health issued a decree to launch a vaccination campaign to localize and end the outbreak. A vaccination campaign was initiated in Tbilisi and rolled out to other areas, reaching by the time of the meeting over 54 000 children under seven who had not been immunized at all or had only received one dose, health care workers and contacts. Other measures included registration, analysis and provision of data to stakeholders. Of the total of 6447 cases, 7.4% were laboratory confirmed, 8.3% were epidemiologically linked, 2% were rejected and 82% were classified as probable.

*Incidence.* Comparing incidence per region in 2013 and average coverage in the MR campaign of 2008 shows that areas with the lowest coverage during the 2008 campaign correspond with the highest incidence rates today. Areas with the lowest levels of MMR 2 coverage are also clearly reflected.

While cases have been reported from most regions of the country in 2013, unlike in 2004 the incidence rate has been much higher in Tbilisi than nationwide. The epidemiological peak also appeared later nationwide than in Tbilisi.

*Genotype.* In 2011, the D4 genotype was isolated, but in 2013 D8 was isolated from 21 out of 23 specimens obtained. The latter is identical to the 2012 strains from Romania and the United States.

*Age groups.* The largest percentage of cases occurred in the 20–29 year age group, however incidence per 100 000 was highest in infants, followed by the 1–4 age group.

*Vaccination status:* 88% of cases had either not been vaccinated or had an unknown status. The only way to reliably determine vaccination status is through registration.

*Classification of cases:* Because of the high number of cases, it was not possible to have each one laboratory tested; 82% of the cases therefore remain probable. 7.4% were confirmed by laboratory testing and 8.3% through an epidemiological link.

*Morbidity.* The disease appears to have been most severe among children under 1 year of age and adults aged 20 to 29. The most frequent complications were pneumonia and diarrhoea.

### ***Looking forward***

Plans for the future include:

- reaching and sustaining high routine coverage of MMR 1 and MMR 2;
- continued vaccination of contacts;
- vaccination of selected age groups based on data available today and on accessibility of age group for vaccination;
- selection of priority geographic areas or pockets where coverage is low, mortality is not too high and where the Government campaign failed to reach high coverage even during catch up activities.

Challenges to be overcome involve access to and availability of vaccines, choice of vaccine between MMR and MR, operational costs, readiness of the health system (which is currently in the process of reform), and advocacy and communication requirements – keeping in mind the lessons learnt during the 2008 campaign when negative information broadcast on television had a highly detrimental effect on vaccine coverage.

### ***Discussion***

The following issues were addressed:

*High proportion of probable cases and cases with possible epidemiological linkage.* Georgia follows WHO standard recommendations for final classification of suspected cases. Those cases that have epidemiological linkage with lab-confirmed cases are classified as epidemiologically confirmed. Not all cases are laboratory tested, even if the chain is long. For this reason there are more probable than laboratory confirmed or discarded cases. All cases found to be negative for measles are tested for rubella. A few cases of rubella have been confirmed this year.

*Protecting the youngest age group.* Right from the start of the outbreak, attention has been paid to this vulnerable age group. The Government considered vaccinating babies at 9 months, but this proposal was not approved by the interagency coordination committee. The first dose thus remains at its currently scheduled age of 12 months, but the Government recommends that any babies who have been in contact with measles cases should be vaccinated as of 6 months or older. They should then still receive their first regularly scheduled dose of MMR1 at 12 months.

*Health care workers.* At the start of the outbreak it appeared that incidence was high among medical personnel, but this number declined later. On a daily basis, there does not appear to be many cases among medical personnel.

Out of the 54 000 people vaccinated during the 2013 campaign, only 6000 were health care workers. The low vaccination rate among medical personnel is a significant challenge.

*Communication:* The negative television broadcast had a large impact on the 2008 campaign. In preparation for the campaign, the Government had created a media plan, which included a special training for the media, building of personal relations with media contact persons and establishment of a crisis group responsible for providing clear answers to media inquiries. All of the preparations did not mitigate the impact of the negative press attention.

New tools are available to help guide the current campaign, including *Tailoring immunization programmes* and *Vaccine safety events: managing the communication response*. An important issue related to communication is health care workers' attitudes. They are key to this campaign. It would therefore be good to conduct a quick survey to determine whether their vaccination hesitancy is based on safety concerns or complacency.

## 5. Country plans

In group discussions, country representatives identified the main areas requiring attention in their respective countries and drew up together with partners a plan for the most appropriate response, i.e. the type of SIAs to be implemented, the scale of each campaign, the type of vaccine to be used, the target group, estimated size of the population, delivery strategy and time frame. They then discussed practical obstacles to implementation of the plans and the types of technical and financial support that would be needed from partners.

### Supplementary immunization activities

	Armenia	Azerbaijan	Georgia
Type	Catch up	Catch up in regions, mop up in Baku	Catch up, mop up, routine (add missed dose for <14-year-olds)
Scale	Nationwide	Nationwide, pending additional analysis	Nationwide
Vaccine	MMR (also used for routine activities)	MMR (in the event of shortage MR)	MMR
Target group	20–50 <sup>1</sup>	10–14 years <sup>2</sup>	1–39 years (to be revised based on surveillance data) <sup>4</sup>
Est. population	60 000 (5% of target group)	200 000	2.4 million
Delivery strategy	Selective (unvaccinated, missed records/unknown)	10–14 selective, 14+ selective (unvaccinated, missed records/unknown)	1–5 years selective, 6–18 years nonselective, 19–39 years certain groups (students, major employers, etc.)
Time frame	August–December 2013	Possible August–December 2013, up to April during EIW 2014 <sup>3</sup>	2013–2014–2015

#### Notes:

##### Armenia

<sup>1</sup>The target group should be 20–50 because recent imported cases and those epidemiologically linked to these cases point to a susceptible population among this age group.

##### Azerbaijan

<sup>2</sup>Initially the focus will be on 10–14 year olds in Baku (about 180 000) and Aghjabadi province (20 000). The coverage strategy requires further analysis and surveillance data. If the opportunity is available through supplemental funding from donors, Azerbaijan would like to vaccinate the group of 14 and older as well.

3Unclear timeframe for campaign at this time. Regular processing of procurement documents and the transport of vaccines will take about 8 to 9 months. So a campaign in April within the framework of EIW and with the support of partners would be possible with prior planning. In addition, procurement of vaccines as humanitarian aid will begin right away in order to start possible mop up campaign in late 2013.

### Georgia

<sup>4</sup>At least 20% of this targeted population is not immune, and the plan is to cover at least half of this subgroup. Lessons learnt from SIAs in 2008 indicate that it is best to plan based on what is actually achievable.

Since a rubella outbreak is forecasted, a campaign among 19–39-year-olds should be used to prevent infection of women who may become pregnant as well as their partners and health care workers.

### Essential partner support needed

	Armenia	Azerbaijan	Georgia
Outbreak investigation	Technical and financial If and when necessary <sup>1</sup>	Technical and financial: laboratory tests, training, expert support, July 2013	As needed
Vaccine procurement/ Licensing	Financial support if there is a shortage of vaccine <sup>2</sup>	Financial: vaccines, 50% <sup>4</sup> July–Dec. 2013	As needed
Macroplanning		As needed	As needed
Microplanning			
Monitoring/supervision		Technical: consultancy, monitoring tools, 1st quarter 2014	
Communication	Technical Sept.–Oct. 2013 /Financial August 2013 <sup>3</sup>		As needed
Logistics			As needed (cold chain issues)
Evaluation	Technical and financial 1 <sup>st</sup> quarter 2014	Technical: external campaign evaluation	As needed
Surveillance	Technical: transport of samples to the RRL, serological surveillance, July–Dec. 2013, 2014 / Financial 2013–2014	Technical and financial: laboratory tests, July–December 2013 <sup>5</sup>	As needed
Other (e.g. education, strengthening of routine immunization programmes)	Technical: Education of HCWs, mass media, peer-to-peer, medical societies, academic institutions / Financial Sept. 2013–2015		As needed

#### Notes:

#### Armenia

<sup>1</sup> Financial support will be needed for outbreak investigation if it occurs.

<sup>2</sup> It is estimated that sufficient vaccine will be procured this year to cover 50% of the campaign. Procurement of additional vaccines will require financial support.

<sup>3</sup> Technical assistance will be needed in choosing the communication strategy to be implemented from



September to October 2013, and in deciding which component should be covered by this activity. Communication materials and training of mass media representatives will also be needed.

### *Azerbaijan*

<sup>4</sup> Vaccination among 10–14 age group was committed to by the Ministry of Health. Due to large expenditures currently being made for the introduction of pneumococcal vaccine and the procurement of other vaccines, the Government can fund only 50% of this activity. 50% thus requires cofunding. In addition, 50% of funding is needed for training and other activities. With additional funding the target group could be expanded, for example to older school children.

<sup>5</sup> Laboratory tests are needed to expand testing of suspected cases and thereby obtain a better overview of the situation.

Issues related to microplanning and macroplanning were addressed in 2006, so it is unclear whether Azerbaijan needs assistance in this area.

## **6. Role of partners**

### **Rostropovich–Vishnevskaya Foundation (RVF)**

RVF has been supporting Azerbaijan and other countries since 2003 together with WHO, UNICEF and USAID. RVF was instrumental in the successful introduction of MMR in Azerbaijan; and it is currently working on fundraising and a communication plan for introduction of pneumococcal vaccine and on strengthening communications for all public health programmes. Proposals developed at this measles meeting will be discussed at the headquarters level to see how the organization can participate in Azerbaijan's measles campaign.

RVF does not have funds in this year's budget for Georgia, but it may be possible to find ways to support the new initiative there as well.

### **UNICEF**

*Procurement:* Any country wishing to use the UNICEF procurement mechanism should submit a request for vaccines well in advance through UNICEF country offices. UNICEF sends an annual forecast of needs for the coming year to the supply division in November/December. Due to the global shortage of vaccine supplies, ad hoc orders not included in this annual forecast may be difficult to accommodate. Requests in response to outbreaks are treated as an emergency, but should still be submitted as early as possible.

*Communications:* Specialists in country offices have been involved in previous outbreaks and communication campaigns. They may have the opportunity to provide some funding and technical support to develop and implement plans and produce materials.

*Cold chain and logistics:* Support is closely linked to strengthening of routine immunization programmes. The country office in Georgia is already engaged and will follow up in these areas.

*Advocacy:* UNICEF country offices and representatives will also be ready to engage in high-level policy dialogue and advocacy if there is a need for more concrete political commitment.

### **WHO**

Starting with Romania in 1999, WHO has participated in and learnt valuable lessons from about 10 SIA campaigns in the region. WHO has worked with RVF on at least three of these campaigns, all of which benefited greatly from the Foundation's strong advocacy role. This contribution would also be very useful in the current measles campaigns.

WHO is ready to provide support and engage consultants for the planning of activities, implementation of previously tested tools, monitoring and media training. Strengthening of long or mid-term surveillance and of routine immunization are also part of WHO's mandate. The scale of support will be based on careful macro plans and budgets to be prepared as the first step in this process.

All of these activities are part of the *Accelerated package of action for measles and rubella elimination* for the coming years that will be presented to the WHO Regional Committee in September 2013.

WHO headquarters is prepared to provide backstopping support where needed. No countries within the European Region are priority countries for the Measles and Rubella Initiative, but regional elimination goals are important for the Initiative and will be supported as much as possible. Countries need to make a plan and budget that clearly identify needs and these will then be consolidated by the Regional Office and submitted for inclusion in global plans for next year.

### **CDC**

*Technical support:* The role of CDC is to help build capacity and strengthen surveillance, while also providing services to existing staff. The country office in Georgia is prepared to supplement its current activities in Georgia, as well as to work with partners in Armenia and Azerbaijan. Support can be related to media training, pandemic and outbreak response, reporting and implementation of Electronic Integrated Disease Surveillance System (EIDSS) software. In addition, CDC can conduct surveys (e.g. on health care worker resistance, communication and immunization coverage), possibly working with private sectors in these areas.

*Funding:* CDC is not a donor agency per se, but it has cooperative agreements with UNICEF and WHO. If needs are identified early enough, funding for joint activities could be included in next year's cooperative agreements. There is potential to set up a cooperative agreement or memorandum of understanding also in Armenia and Azerbaijan.

### **USAID**

The Georgia Country Office (not present at the meeting) has the power to decide the priority for that office and its mission. It would be good to speak with them and any other bilateral organizations present in the countries and advocate for their support.

## **7. Risk communication in relation to measles or rubella outbreaks**

Ms Cristiana Salvi, WHO Regional Office for Europe

Principles of crisis communication apply in the context of a measles or rubella outbreak even though these events distinctly differ from health emergencies. With respect to outbreaks, risk communication is essential for reducing the impact of outside (negative) forces and for supporting outbreak control.

Effecting behaviour change in this context requires proactive communication – people are generally not aware of the serious complications of measles and rubella and therefore must be alerted to the risk so that they will want to seek protection. However, caution should be taken to not overemphasize tragic stories of disease complications. During a health emergency, on the other hand, people are already listening and aware of the potential dangers.

The importance of communication for routine as well as supplementary immunization activities was also emphasized by all speakers.

The goals of a communication campaign are:

- to bring the public's perception of risks in line with actual risk assessment (e.g. the risks of measles infections and the risks/benefits of vaccines), and
- to build, maintain and restore trust in the motives, honesty and skills of public authorities.

The core components of risk communication are transparency, coordination, listening and information dissemination.

### 1. Transparency

Providing prompt and accurate information about a measles outbreak increases trust, acknowledges the public's right to know and capitalizes on the opportunity afforded by the outbreak: to alert people to the risks of the disease and provide information on the values and minimal risks of vaccination. If people are prepared for the potential minor side effects, they will be less likely to respond negatively.

### 2. Public communication coordination

It is important to coordinate with many people and sectors in order to send a consistent message. Working together strengthens outreach, maximizes resources and promotes trust. As a fundamental partner and channel through which to reach the public, health care workers need to be empowered with all available information, so that they can respond appropriately to adverse vaccine-related events or undue perceptions of risk related to vaccines. Many have never seen measles cases and therefore do not have a good understanding of the disease.

### 3. Listening through dialogue

The public's fears and concerns about vaccination need to be heard and understood as part of the information gathering phase of a campaign: they are part of people's perception of the issue made up by a combination of hazard and outrage. Then they need to be addressed. Without this exercise, messages won't be effective. It is important to also know what health care workers, community leaders, religious authorities as well as anti-vaccination lobbies are saying and to use the same channels they do to reach the desired audience (e.g. television, social media). Complacency, fueled by a low perception of risk, is a huge challenge; it must be addressed by informing about the risks of the disease using both facts and human stories.

### 4. Information dissemination including media relations

Mass media is a key partner in disseminating information. The most important media channels vary per country, but in general television is the most important, social media is growing and the printed press is declining. Maintain working relationships with journalists and engage those that are supportive.

During the recent measles immunization campaign in Wales, the United Kingdom, Facebook was used with great success as a platform for interaction with and among parents. The 'cocooning strategy', in which people are encouraged by health care workers to get vaccinated in order to protect family members who cannot (yet) be vaccinated, has worked well in the United States.

Planning, based on the above considerations, is central to an effective campaign. Lessons learnt through testing messages early on and monitoring campaign activities should feed into ongoing plan adjustments. A useful tool for this process is the WHO [Outbreak communication planning guide](#) as well as other resources as indicated in the annex to this report.

## 8. Closing

The meeting's presentations and discussions provided an overview of country needs and the partner support available, as presented in the executive summary of this meeting report. The next important step is for countries to develop detailed macro plans and budgets for the envisioned activities so that partners can respond accordingly. All of the attending partners are interested and willing to help countries continue to achieve good results. If the needed

resources are not available, the organizations represented can help find and encourage other partners and donors to provide them.

Participating countries were invited to submit by 31 July their first national status reports for the regional verification process of measles and rubella elimination. These first reports will cover the past three years and are not expected to reflect the current outbreaks. Detailed information about these outbreaks should be included in next year's report as this evidence will be essential for the Regional Verification Commission's efforts to determine the status of measles and rubella elimination in the WHO European Region.

## **Annex 1. Programme**

**Wednesday, 10 July 2013**

***Plenary session 1: Global and regional measles and rubella elimination***

10:00	-	10:15	Opening	<i>MLHSA, Georgia Nedret Emiroglu, WHO/Europe Rusudan Klimiashvili, WHO Georgia</i>
10:15	-	10:45	Measles and rubella elimination: global progress and challenges	<i>Robert Perry, WHO headquarters</i>
10:45	-	11:15	Update from the WHO European region	<i>Abigail Shefer, WHO Regional Office for Europe</i>
11:15	-	11:30	<i>Discussion</i>	

***Plenary session 2: Country updates on measles outbreaks in the Caucasus (current epidemiology; actions taken and plans)***

12:00	-	12:30	Armenia
12:30	-	13:00	Azerbaijan
13:00	-	14:00	<i>Lunch</i>
14:00	-	14:30	Georgia

***Working group sessions Country plans to stop current measles outbreaks and prevent resurgence***

15:00	-	18:00	Developing country action plans to respond to the current measles outbreaks	<i>Sergei Deshevoi WHO Regional Office for Europe</i>
			<i>Azerbaijan</i>	<i>Group work facilitated by WHO staff; partners invited to participate</i>
			<i>Georgia</i>	
			<i>Armenia</i>	
			Feedback from groups and discussion	

**Thursday, 11 July 2013**

***Plenary session 3: Vaccine communication and safety issues***

09:30 - 10:00 Outbreak communications and risk management

*Cristiana Salvi  
WHO Regional Office for Europe*

10:00 - 10:30 *Discussion*

**Plenary session 4: Partner's support and cooperation**

11:00 - 12:30 Define areas of partners' support

*Roundtable discussion led by  
moderator (Robert Perry)*

12:30 - 13:00 Conclusions and recommendations

13:00 - 13:15 *Closure*

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### **Rapporteur**

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WHO Consultant

### **Interpreters**

Ms Rusudan Kraveishvili

Ms Maka Apakidze

## **Annex 3. Resources**

[Caucasian countries make plans to end measles outbreaks](#)

News item about measles meeting on WHO/Europe web site

[Vaccine safety events: managing the communication response](#)

WHO/Europe, 2013

[Guide to tailoring immunization programmes](#)

WHO/Europe, 2013

[Measles and Rubella Initiative Annual Report 2012](#)

MRI, 2013

[Eliminating measles and rubella: framework for the verification process in the WHO European Region](#)

WHO/Europe, 2012

[Communication for behavioural impact](#)

WHO, 2012

[Outbreak communication planning guide](#)

WHO, 2008

[Outbreak communication guidelines](#)

WHO, 2005