

Targeted Diseases and Immunization Affirmation Opportunities and challenges in the year to come

What a year 2009 was for the European Region! From pandemic (H1N1) 2009 response to measles and rubella supplemental immunization activities (SIAs) in Tajikistan to the establishment of regional reference laboratories for rotavirus and invasive bacterial diseases to the post-introduction evaluation of *Haemophilus influenzae* type b (Hib) vaccine in Bosnia and Herzegovina and on, and on.

The WHO European Region had successes in its eradication and elimination goals in 2009. It maintained its polio-free status owing to the efforts of Member States, and nationwide SIAs conducted in Tajikistan (97% coverage) and Kazakhstan (99% coverage) made progress towards measles and rubella elimination. In addition, progress was made on the framework for verifying that Member States have interrupted indigenous measles and rubella transmission. With Turkey eliminating neonatal tetanus, all Member States in the European Region have met this elimination goal. That is a major achievement; in 1980 maternal and neonatal tetanus caused over 1 million deaths globally.

The European Technical Advisory Group of Experts on Immunization (ETAGE) met in March and September 2009 and provided policy guidance on:

- developing a regional goal for hepatitis B;
- strengthening capacity of public health professionals to deliver safe vaccines; and
- enhancing collaboration on surveillance for vaccine-preventable diseases among the partners in the Region.

ETAGE also reviewed the progress towards measles and rubella elimination in the Region and recognized that the measles outbreak in many countries in the western part of the Region was jeopardizing the target date of 2010.

The Regional Commission for the Certification of Polio Eradication in the European Region (RCC) met in June 2009 and reviewed updates on the national polio eradication programme and laboratory containment activity from all Member States in the WHO European Region. The RCC declared that the Region has

sustained its polio-free status but the risk of importation of wild poliovirus remains high.

In the area of advocacy and communication, 36 Member States participated in European Immunization Week in April 2009. The theme was *Back to Basics: Prevent, Protect, Immunize*. The WHO Regional Office for Europe launched a viral communication strategy using Facebook and YouTube to promote and advocate immunization. Its video had over 10 000 views in 2 weeks and became the most watched online WHO video.

Equity and access to public health interventions are main drivers of the strategic vision of the WHO Regional Office for Europe, and vaccines are one of the strongest and most cost-effective prevention strategies to reduce mortality and morbidity. In the introduction of new vaccines, the Regional Office worked with Member States to strengthen and promote evidence-based decision-making, while ensuring they had accurate data for the task. It supplied technical support to strengthen the decision-making processes of national immunization technical advisory groups (NITAGs), with a particular focus on introducing new vaccines and ensuring safety.

Surveillance for rotavirus and invasive bacterial diseases was implemented or maintained in countries evaluating disease burden data for decision-making on the introduction of rotavirus and pneumococcal conjugate vaccines. Regional reference laboratories were established in Belarus (rotavirus) and Russian Federation (invasive bacterial disease). A post-introduction evaluation of Hib vaccine in Bosnia and Herzegovina revealed that the vaccine was successfully introduced and received a high level of acceptance among the general population.

The response to pandemic (H1N1) 2009 quickly became the main priority from April 2009. The Regional Office conducted vaccine deployment workshops for all 53 Member States and worked with them on access to pandemic vaccine and strategies for communication with target populations. Eight countries in the Region (Armenia, Azerbaijan, Georgia, Ky-

gyzstan, the Republic of Moldova, Tajikistan, Ukraine and Uzbekistan) were eligible for WHO stockpiled vaccine and Azerbaijan began vaccinating in early 2010.

Despite Member States' extraordinary successes in 2009 – achieved in partnership with WHO, the United Nations Children's Fund (UNICEF), the European Centre for Disease Prevention and Control (ECDC) and others – well-defined challenges and threats remain. In 2010, the Regional Office's primary focus is sustaining the gains made so far.

The new year brings new opportunities to realize a greater vision. The Global Immunization Meeting (1–3 February 2010) clearly showed the urgent need to reach the unimmunized and under-immunized sustain Europe's gains and achieve the Millennium Development Goal on child health. A global evaluation of the unvaccinated child revealed that reasons for not vaccinating are more related to parent/guardian concerns about vaccine safety in urban settings and access to immunization services in rural settings.

This is highly relevant in the European Region, where pockets of un-immunized or under-immunized individuals have resulted in measles outbreaks in many Member States in the western part of the Region. These pockets exist for many reasons, including groups' having inadequate health care services, being hard to reach (because they are physically and socially isolated, internally displaced or refugees, or economically disadvantaged) and opposing vaccination. To sustain the Region's polio-free status and eliminate measles and rubella, the Regional Office will work with Member States to identify and develop effective strategies to reach these populations. This includes developing profiles of these groups and communication strategies on vaccine safety to create demand for immunization. Further, immunization partnerships in the Region need to be expanded to include professional health associations, and nongovernmental and civil-society organizations to address un-immunized or under-immunized populations. Country-level assessments and strategies need to be developed for risk and crisis communication, and to provide high-quality information on the quality and safety of vaccines and vaccination.

The Region's largest immunization advocacy initiative, European Immunization Week, will be held from 24 April to 1 May 2010, with the theme of eliminating measles and rubella.

WHO asks all Member States to join in this year and gain high-level political commitment to immunization.

In the strategic areas of eradication and elimination, field-based simulation exercises will be held to evaluate national plans to address the potential importation of wild poliovirus. The quality of surveillance for polio, measles and rubella needs to be enhanced and sustained as the RCC reviews the Region's polio-free status in 2010, and the Region begins the verification process for measles and rubella elimination. The first meeting of the Regional Commission on the Verification of Measles and Rubella Elimination is expected to take place in November 2010.

The Regional Office will continue to give high priority to the response to the influenza pandemic. It will complete ongoing evaluations of vaccine procurement, immunization strategies and communication and share the results with all Member States to strengthen future preparedness and response.

The Regional Office will work with ETAGE to set regional goals for hepatitis B and pertussis. It will also use a more comprehensive public health approach to new vaccine introduction, working with maternal and child health and reproductive health experts to develop a portfolio of interventions. For example, a portfolio for the introduction of pneumococcal vaccine will include prevention and treatment, and, for humanpapilloma virus (HPV) vaccine, cancer screening will be addressed.

The Regional Office will strengthen data for decision-making by providing technical support to Member States in strengthening surveillance and data quality and validation, and sharing best practices from Member States. Twinning of NITAGs will be introduced to enhance exchange of knowledge and experiences among countries.

We at the Regional Office thank all Member States for their efforts in immunization, and will continue to work with our partners for maximum impact: leveraging each partner's comparative advantage. We look forward to continuing our support to countries to reach the Region's goals in immunization.

Contributed by Dr Rebecca Martin, Team Leader, Targeted Diseases and Immunization

Fifth Global Immunization Meeting

The Global Immunization Meeting (GIM) is an annual assembly held jointly by WHO, United Nations Children's Fund (UNICEF) and the GAVI Alliance. It was held in Geneva, Switzerland on 1–3 February 2010 and had three main objectives:

1. to provide technical update on progress of the Global Immunization Vision and Strategy (GIVS) and the global immunization and mortality reduction goals in the overall framework on the Millennium Development Goals;
2. to share policy decisions and recommendations from the Strategic Advisory Group of Experts (SAGE) and other technical/advisory bodies; and
3. to provide WHO and UNICEF global and regional staff, as well as immunization partner representatives, with technical updates focusing on the programmatic issues related to the global immunization efforts, including reaching the unreached.

The participants had an incredible opportunity to update their knowledge and awareness of key advancements in immunization and to network and share information with technical counterparts and collaborators from all over the world.

All GIM presentations are available on the Technical Network for Strengthening Immuni-

zation Services (Technet21) web site (<http://www.technet21.org/forumV3/viewtopic.php?t=1660>). The following presentations pertain to immunization activities in the European Region:

- from Session I:
 - * #7 *Epidemiology of the unvaccinated: addressing the social determinants of health and using this knowledge to reach more and to improve coverage;*
 - * Side Session #2 *Study of factors influencing new vaccine introduction in lower-middle-income countries (LMICs);*
- from Session II:
 - * #8 *An update on new vaccine introduction;*
 - * #9 *An update on rotavirus vaccines and the WHO recommendations*
- From Session III:
 - * #2 *HPV vaccination in europe: experience from national immunization programmes;*
 - * #4 *H1N1 pandemic update & vaccination preparedness/lessons learned*

The WHO headquarters web site offers the full text of the *Global Immunization News* (Issue 26, 26 February 2010), with information on to the review Global Measles Management meeting, held on 4 February 2010 (http://www.who.int/entity/immunization/GIN_February_2010.pdf).

Summer School Course

Vaccinology Course in Antwerp, Belgium 4–10 July 2009

The Centre for the Evaluation of Vaccination (CEV) of the University of Antwerp is providing a five-day summer school course on vaccinology in collaboration with the European Medical Students Association (EMSA) of Antwerp. This course offers complete basic education on different aspects of vaccinology consisting of nine modules based on the criteria for good pre-service training in immunization and vaccine safety.

This programme is supported by WHO and the European Society for Paediatric Infectious Diseases (ESPID). More information on the programme and registration is available on the Internet (<http://www.ua.ac.be/main.aspx?c=CEVSUMMERSCHOOL>).

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Update European Immunization Week 2010

For the fifth European Immunization Week (EIW), 24 April–1 May 2010, the WHO Regional Office for Europe is using web-based and traditional communication methods to advocate the regional measles and rubella elimination goal.

As part of a portfolio of activities and materials developed to strengthen and support EIW in 2010, the WHO Regional Office for Europe, in partnership with the World Bank, will host a video conference using the World Bank's Global Development Learning Network (GDLN) platform. Ten countries will participate in the live discussion from a GDLN-affiliated site in their cities or the local World Bank office, while the remaining 46 Member States and sites will be connected via a real-time webcast. This enables dialogue between participating countries and presenters, while other Member States are able to pose questions and to raise discussion points via the chat function accompanying the webcast.

The video conference will take place on Monday 26 April 2010 at 09:00–12:00 CET. The event will launch the 2010 EIW and facilitate the exchange of country experiences and techniques in boosting immunization, reaching



susceptible members of the population and controlling outbreaks. Presentations from countries will share best practices and the key lessons learned to identify, reach and build demand for immunization in partially immunized or un-immunized children, thus reducing the potential for future outbreaks.

Details on how to can follow the event will be given on the EIW 2010 web site (<http://www.euro.who.int/vaccine/eiw/2010>). The site features an overview of activities, a list of participating countries, a compendium of materials and artwork to download, “10 myths about vaccination”, a list of articles related to vaccines and immunization and other helpful links and resources. In the coming weeks an online portal will be launched to promote networking by EIW stakeholders and to encourage interaction between participating countries and partners engaged in EIW.

Get involved! Find out how your country is participating and see if you can take part. The 2010 goal is vital and attainable, but it will only be achieved if communities, individual countries and the Region as a whole make a focused and concerted effort.

The WHO Regional Office for Europe's focal point for EIW 2010 is Chelsea Hedquist (e-mail: eiw2010@euro.who.int). Information on EIW is also available through Wikipedia (http://en.wikipedia.org/wiki/European_Immunization_Week).

WHO/UNICEF Publications

WHO Regional Office for Europe requested all Member States to submit the 2009 WHO/UNICEF Joint Reporting Form – sections 1–3 – by 15 March 2010.

The Form is used to collect annual data on vaccine-preventable diseases (VPDs), immunization coverage and indicators of immunization systems' performance. A standardized questionnaire is sent to all Member States. Data retrieved from these questionnaires are analysed and used for numerous purposes including establishing and monitoring VPDs and immunization coverage trends to predict outbreaks, as well as profiling areas with high risks of disease importation. WHO and UNICEF compile the data for all participating countries and publish them in annual summaries.

Current reports based on WHO/UNICEF Joint Reporting Form:

WHO vaccine-preventable diseases: monitoring system – 2009 global summary (http://www.who.int/immunization/documents/WHO_IVB_2009/en/index.html); a CD-ROM is available with data files in Excel)



Immunization summary: a statistical reference containing data through 2008 (the 2010 edition; http://www.childinfo.org/files/Immunization_Summary_2008_r6.pdf)



Pandemic (H1N1) 2009 Overview

This overview includes a European situation update, a summary of the statement made by the WHO Director-General following the seventh meeting of the WHO Emergency Committee and a list of the viruses WHO recommends to be used in the influenza vaccine for the 2010–2011 northern hemisphere influenza season.

Situation update in the European Region: overview of influenza surveillance data from week 40/2009 to week 07/2010

The WHO Regional Office for Europe collects and presents data on influenza submitted by Member States in the WHO European Region through the EuroFlu web site (<http://www.euroflu.org>). A preliminary review of pandemic (H1N1) 2009 influenza data submitted to EuroFlu between week 40/2009 and week 07/2010 shows that, in most countries that reported data, levels of influenza activity are now well below recent pandemic peak levels.

Countries in the European Region experienced an early start to the influenza season and clinical activity during winter time peaked earlier than in recent years. In 19 of 22 countries reporting five or more years of data, the peak clinical consultation rates that were observed during the 2009/2010 pandemic season did not exceed peak clinical consultation rates observed during previous years. However, in several countries clinical consultation rates did exceed recent historical peaks in some younger age groups.

Within the western part of the Region, the geographical progression of pandemic (H1N1) 2009 influenza occurred in a west to east direction. A total number of 49 out of 53 Member States reported laboratory confirmed cases, the large majority of which occurred without complications. The vast majority of influenza virus detections were pandemic (H1N1) 2009, 99.74% of influenza A subtyped viruses from sentinel sources (N = 19 838). All pandemic (H1N1) 2009 influenza viruses analysed antigenically (N = 1777) or genetically (N = 995) were similar to the vaccine strain and the majority were sensitive to both oseltamivir and zanamivir. Overall, 4572 laboratory confirmed deaths associated with pandemic (H1N1) 2009 were reported to the WHO Regional Office for Europe. Although these are underestimates of the actual number of deaths associated with pandemic (H1N1) 2009 virus infections, these

crude estimates of mortality suggest similar rates to those observed in countries during the winter season in the southern hemisphere.

WHO Director-General's statement following the seventh meeting of the Emergency Committee

The International Health Regulations (IHR) Emergency Committee held its seventh meeting by teleconference on 23 February 2010. The Director-General sought the Committee's views on the determination of the pandemic status.

It concluded that there was mixed evidence showing declining or low pandemic activity in many countries, but new community-level transmission in West Africa. Committee members also noted that the winter season in the southern hemisphere would soon begin and there was uncertainty as to whether additional general waves of activity might occur.

Based on these discussions and the current epidemiological evidence, WHO Director-General, Dr Margaret Chan, determined that there has been no change in the pandemic phase. The Committee will soon reconvene to review intervening developments and related epidemiological information.

The full statement is available on the WHO headquarters web site (http://www.who.int/csr/disease/swineflu/7th_meeting_ihr/en/index.html).

WHO vaccine recommendations for the 2010–2011 northern hemisphere influenza season

Based on available epidemiological and virological data provided to WHO between September 2009 and February 2010, WHO has announced the recommended viruses for use in the influenza vaccine for the 2010–2011 northern hemisphere influenza season. The three recommended viruses are:

- * A/California/7/2009 (H1N1)-like virus;
- * A/Perth/16/2009 (H3N2)-like virus; and
- * B/Brisbane/60/2008-like virus.

Human influenza viruses evolve continuously, so influenza vaccines are updated every year to contain representative circulating viruses. WHO recommendations are offered as a guide to national public health authorities and vaccine manufacturers to facilitate the use of appropriate viruses for the upcoming season.

WHO Recommendations on Hepatitis B Vaccines

In accordance with its mandate to provide guidance to Member States on health-policy matters, WHO issues a series of regularly updated position papers on vaccines and combinations of vaccines against diseases with an international public health impact. This article (1) presents WHO's position on hepatitis B vaccines including recommendations on immunization schedule, catch-up vaccination for children, adolescents and adults, additional target groups for catch-up vaccination and system monitoring:

- * all infants should receive their first dose of hepatitis B vaccine as soon as possible after birth, preferably within 24 hours;
- * delivery of hepatitis B vaccine within 24 hours of birth should be a performance indicator for all immunization programmes
- * reporting and monitoring systems should be strengthened to improve quality of data on birth dose;
- * birth dose should be followed by 2 or 3

doses with minimum interval 8 weeks to complete the primary series;

- * there is no evidence to support the need for a booster dose of hepatitis B vaccine in routine immunization programmes;
- * catch-up vaccination should be considered for cohorts of children with low coverage as a way to increase the number of protected children; and
- * all regions and associated countries develop goals for hepatitis B control appropriate to their epidemiological situation.

The full updated paper on hepatitis B vaccines with recommendations by WHO's Strategic Advisory Group of Experts (SAGE) on Immunization is available on the WHO headquarters web site (<http://www.who.int/wer/2009/wer8440/en/index.html>).

Reference:

1. Hepatitis B vaccines: WHO position paper-recommendations. WHO publication. *Vaccine*. 2010, 28

Immunize Now

Considerable spread of measles to the general population in Ireland

A study (1) on a measles outbreak in Ireland found that the number of cases increased from 43 during weeks 1–30/2009 to 320 in weeks 31/2009 – 7/2010. Out of these 320, 227 (71%) were confirmed cases and 92 (29%) were classified as possible. Fig. 1 shows the increase in measles cases from 2008 to date, including the 2010 outbreak peak (1).

The first confirmed case in week 31 was in an adult; in week 33 one case was reported in a child from the Roma community and six cases in weeks 38 and 39 were reported in children from the Traveller community – an indigenous minority group. Since February 2010, the spread of measles has increased in the general population.

The majority of notified cases were unvaccinated – 206 (64%) – and 45 (14%) had only one

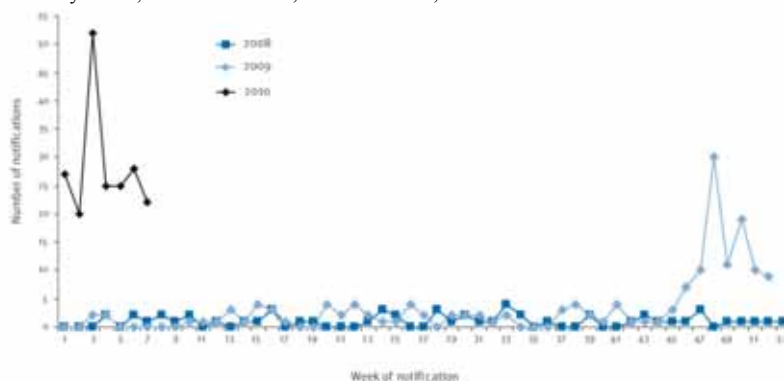
dose of measles–mumps–rubella (MMR) vaccine; 63 (20%) of cases had unknown/not reported doses of MMR, but 6 (2%) reported having had two doses of MMR. Vaccination dates were reported for only for one of those six cases.

The increase in measles outbreak in Ireland among partially vaccinated and/or unvaccinated children shows the need for MMR vaccination coverage of at least 95%. Improving routine immunization programmes in countries of the European Region is essential to prevent further measles outbreaks.

Reference:

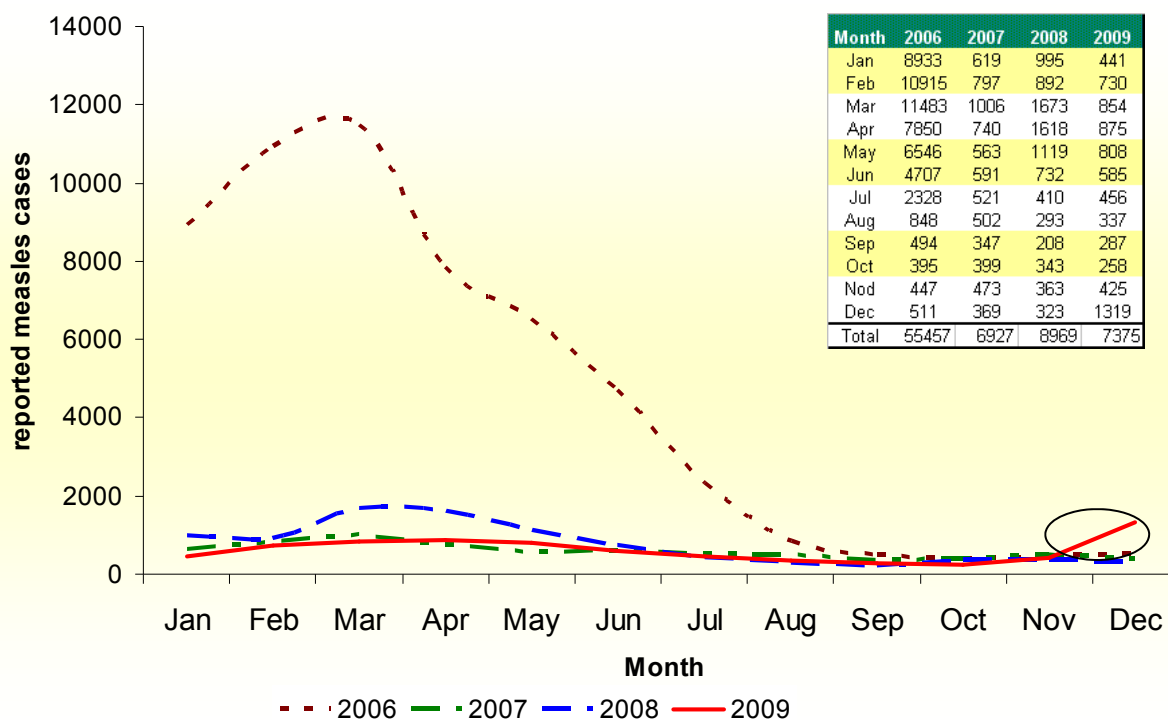
1. Gee S, Cotter S, O'Flanagan D, on behalf of the national incident management team. Spotlight on measles 2010: Measles outbreak in Ireland 2009–2010. *Euro Surveillance*. 2010;15(9):pii=19500 (<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19500>, accessed 9 April 2010)

Fig. 1. Measles notification by week, Ireland: week 1, 2008 – week 7, 2010



Quick Euro Stats

Reported measles cases by month of rash onset, WHO European Region, 2006-2009*



* data as of March, 2010

In 2002, the WHO Regional Committee for Europe adopted a resolution to eliminate indigenous measles and rubella in the 53 Member States in the Region by 2010. Since then great progress has been made and the number of measles cases decreased to 7375 in 2009 from 93472 in 2002. This progress was attributed to high coverage of two doses of measles containing vaccine and implementing high quality national measles supplementary immunisation activities (SIA). However, pockets of low immunization coverage within countries still cause sustained circulation of measles virus and coincident measles outbreaks in the region.

Analysis of monthly trends of measles shows

that high measles transmission season typically occurs between February and July. In the WHO European Region, the lowest number of measles cases (6927) were reported in 2007. In 2009, the monthly trend was similar to 2007 except for a sudden rise in measles cases in November (encircled above). This increase in measles cases was attributed to a measles outbreak in Bulgaria, which is the second largest in the Region since 2006 (>10,000 cases); the largest having occurred in Ukraine in 2005-2006 (>45,000 cases).

For more information on Bulgarian outbreak please check following URL

<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19442>

Table 1. Classification of reported suspected measles and rubella cases, January 2010 (data as of 28 Feb 2010)

Country	Measles										Rubella							
	Total Population ¹	Annualized Incidence Rate per 1 million population	Total conf. measles (% of suspected measles cases)	Classification				Importation ³	Monthly Reporting		Total suspected	Total Rubella (%)	Classification				Monthly Reporting	
				Lab confirmed	Epi-Link	Clinical ²	Discarded		% Completeness	% Timeliness			Lab confirmed	Epi-Link	Clinical ²	Discarded	% Completeness	% Timeliness
Albania	3 245 003	0.0	0	0	0	0	0	0	100%	100%	0	0	0	0	0	0	100%	100%
Andorra	67 696	0.0	-	-	-	-	-	-	0%	0%	-	-	-	-	-	-	0%	0%
Armenia	2 986 527	0.0	-	-	-	-	-	-	0%	0%	-	-	-	-	-	-	0%	0%
Austria	8 442 118	0.0	0	0	0	0	0	0	100%	100%	-	-	-	-	-	-	0%	0%
Azerbaijan	8 671 004	0.0	-	-	-	-	-	-	0%	0%	0	0	0	0	0	0	0%	0%
Belarus	9 528 528	0.0	0	0	0	0	0	0	100%	100%	0	0	0	0	0	0	100%	100%
Belgium	10 521 760	3.4	3 (100.0)	0	0	3	0	0	100%	0%	-	-	-	-	-	-	0%	0%
Bosnia and Herzegovina	3 941 513	0.0	-	-	-	-	-	-	0%	0%	-	-	-	-	-	-	0%	0%
Bulgaria	7 471 300	0.0	0	0	0	0	0	0	100%	100%	-	-	-	-	-	-	0%	0%
Croatia	4 532 155	0.0	0	0	0	0	0	0	100%	100%	-	-	-	-	-	-	0%	0%
Cyprus	881 654	13.6	1 (100.0)	1	0	0	0	1	100%	100%	-	-	-	-	-	-	0%	0%
Czech Republic	10 175 048	0.0	0	0	0	0	0	0	100%	100%	-	-	-	-	-	-	0%	0%
Denmark	5 472 713	0.0	0	0	0	0	0	0	100%	100%	-	-	-	-	-	-	0%	0%
Estonia	1 321 171	0.0	0	0	0	0	0	0	100%	100%	0	0	0	0	0	0	100%	100%
Finland	5 322 535	2.3	1 (100.0)	1	0	0	0	1	100%	100%	-	-	-	-	-	-	0%	0%
France	62 507 184	25.1	131 (100.0)	79	9	43	0	3	100%	0%	-	-	-	-	-	-	0%	0%
Georgia	4 300 629	0.0	0	0	0	0	0	0	100%	0%	2	2 (100%)	0	0	2	0	100%	0%
Germany	82 365 040	7.3	50 (100.0)	22	24	4	0	6	100%	100%	-	-	-	-	-	-	0%	0%
Greece	11 214 979	3.2	3 (100.0)	3	0	0	0	0	100%	0%	-	-	-	-	-	-	0%	0%
Hungary	9 939 818	0.0	0	0	0	0	0	0	100%	0%	-	-	-	-	-	-	0%	0%
Iceland	308 391	0.0	0	0	0	0	0	0	100%	100%	-	-	-	-	-	-	0%	0%
Ireland	4 526 465	326.1	123 (100.0)	69	25	29	0	1	100%	100%	0	0	0	0	0	0	100%	100%
Israel	7 271 843	0.0	-	-	-	-	-	-	0%	0%	-	-	-	-	-	-	0%	0%
Italy	59 031 628	0.0	-	-	-	-	-	-	0%	0%	-	-	-	-	-	-	0%	0%
Kazakhstan	15 758 521	0.0	-	-	-	-	-	-	0%	0%	-	-	-	-	-	-	0%	0%
Kyrgyzstan	5 496 576	0.0	-	-	-	-	-	-	0%	0%	-	-	-	-	-	-	0%	0%
Latvia	2 243 209	0.0	0	0	0	0	0	0	100%	100%	-	-	-	-	-	-	0%	0%
Lithuania	3 335 672	0.0	0	0	0	0	0	0	100%	100%	0	0	0	0	0	0	100%	100%
Luxembourg	483 152	0.0	0	0	0	0	0	0	100%	100%	-	-	-	-	-	-	0%	0%
Malta	411 355	0.0	0	0	0	0	0	0	100%	100%	-	-	-	-	-	-	0%	0%
Monaco	37 350	0.0	-	-	-	-	-	-	0%	0%	-	-	-	-	-	-	0%	0%
Montenegro	599 784	0.0	0	0	0	0	0	0	100%	100%	0	0	0	0	0	0	100%	100%
Netherlands	16 502 272	0.0	-	-	-	-	-	-	0%	0%	-	-	-	-	-	-	0%	0%
Norway	4 785 489	0.0	0	0	0	0	0	0	100%	100%	-	-	-	-	-	-	0%	0%
Poland	37 902 108	2.2	7 (100.0)	2	4	1	0	0	100%	0%	-	-	-	-	-	-	0%	0%
Portugal	10 724 806	0.0	0	0	0	0	0	0	100%	100%	-	-	-	-	-	-	0%	0%
Republic of Moldova	3 706 905	0.0	0	0	0	0	0	0	100%	0%	0	0	0	0	0	0	100%	0%
Romania	21 147 492	0.0	0	0	0	0	0	0	100%	100%	-	-	-	-	-	-	0%	0%
Russian Federation	140 317 808	0.0	0	0	0	0	0	0	100%	100%	-	-	-	-	-	-	0%	0%
San Marino	29 162	0.0	-	-	-	-	-	-	0%	0%	-	-	-	-	-	-	0%	0%
Serbia	9 924 874	0.0	0	0	0	0	0	0	100%	100%	-	-	-	-	-	-	0%	0%
Slovakia	5 395 917	0.0	0	0	0	0	0	0	100%	100%	0	0	0	0	0	0	100%	0%
Slovenia	2 000 554	0.0	0	0	0	0	0	0	100%	0%	-	-	-	-	-	-	0%	0%
Spain	45 108 136	1.9	7 (100.0)	4	3	0	0	1	100%	100%	-	-	-	-	-	-	0%	0%
Sweden	9 241 600	0.0	0	0	0	0	0	0	100%	100%	-	-	-	-	-	-	0%	0%
Switzerland	7 566 783	6.3	4 (80.0)	1	0	3	1	1	100%	100%	-	-	-	-	-	-	0%	0%
Tajikistan	7 062 446	0.0	0	0	0	0	0	0	100%	100%	0	0	0	0	0	0	100%	100%
The former Yugoslav Republic of Macedonia	2 041 341	0.0	0	0	0	0	0	0	100%	0%	1	1 (100%)	0	0	1	0	100%	0%
Turkey	71 517 100	0.0	-	-	-	-	-	-	0%	0%	-	-	-	-	-	-	0%	0%
Turkmenistan	5 163 430	0.0	0	0	0	0	0	0	100%	0%	-	-	-	-	-	-	0%	0%
Ukraine	45 169 656	0.0	0	0	0	0	0	0	100%	100%	-	-	-	-	-	-	0%	0%
United Kingdom	61 517 376	1.0	5 (83.0)	5	0	0	1	0	100%	100%	-	-	-	-	-	-	0%	0%
Uzbekistan	28 579 758	0.0	-	-	-	-	-	-	0%	0%	-	-	-	-	-	-	0%	0%
Total/Averages	887 817 334	4.53	335 (99.0)	187	65	83	2	14	73%	56%	3	3 (100.0)	0	0	3	0	20%	13%

Data source: Monthly aggregate and case-based data reported by Member States to WHO/Europe and/or EUVAC.NET.

¹ Source: "World Population Prospects: The 2008 Revision", New York, United Nations and updates provided by Member States.

² Cases with missing classification are classified as "Clinical".

³ Imported or import related measles cases included in total measles. Indicators not meeting target and countries not reporting monthly measles data are highlighted in red.

Table 2. Measles and rubella laboratory test results, January 2010 (data as of 28 February 2010)

Country	Specimen* (Serum, Oral Fluid, Swab, Urine and other)								Reporting	
	Tested for measles	Positive for measles (%)	Measles Equivocal	Negative for measles	Tested for rubella	Positive for rubella (%)	Rubella Equivocal	Negative for rubella	% Completeness	% Timeliness
Albania	0	0	0	0	0	0	0	0	100.0	100.0
Andorra	No Lab									
Armenia	0		0	0	0		0	0	0.0	0.0
Austria	110	1 (1.0)	0	109	322	0 (0.0)	0	322	100.0	100.0
Azerbaijan	0	0	0	0	1	0 (0.0)	0	1	100.0	0.0
Belarus	22	0 (0.0)	0	22	22	0 (0.0)	0	22	100.0	100.0
Belgium	0	0	0	0	6	0 (0.0)	1	5	100.0	100.0
Bosnia and Herzegovina	No report								0.0	0.0
Bulgaria	0		0	0	0		0	0	0.0	0.0
Croatia	0	0	0	0	0	0	0	0	100.0	100.0
Cyprus	1	1 (100.0)	0	0	1	0 (0.0)	0	1	100.0	100.0
Czech Republic	2	1 (50.0)	0	1	3	0 (0.0)	0	3	100.0	100.0
Denmark	No report								0.0	0.0
Estonia	16	0 (0.0)	0	16	39	0 (0.0)	0	39	100.0	100.0
Finland	15	0 (0.0)	0	15	36	0 (0.0)	0	36	100.0	100.0
France	44	36 (82.0)	0	8	0	0	0	0	100.0	100.0
Georgia	No report								0.0	0.0
Germany	17	5 (29.0)	0	12	1	0 (0.0)	0	1	100.0	100.0
Greece	12	4 (33.0)	0	8	23	3 (13.0)	0	20	100.0	0.0
Hungary	10	0 (0.0)	0	10	20	1 (5.0)	0	19	100.0	100.0
Iceland	7	0 (0.0)	0	7	7	0 (0.0)	0	7	100.0	100.0
Ireland	123	77 (63.0)	6	40	24	1 (4.0)	0	23	100.0	0.0
Israel	0		0	0	0		0	0	0.0	0.0
Italy	No report								0.0	0.0
Kazakhstan	1	0 (0.0)	0	1	1	0 (0.0)	0	0	100.0	100.0
Kyrgyzstan	0		0	0	0		0	0	0.0	0.0
Latvia	20	0 (0.0)	0	20	21	0 (0.0)	0	21	100.0	100.0
Lithuania	0	0	0	0	0	0	0	0	100.0	100.0
Luxembourg	4	0 (0.0)	0	4	7	0 (0.0)	1	6	100.0	100.0
Malta	0	0	0	0	85	0 (0.0)	0	85	100.0	100.0
Monaco	No Lab									
Montenegro	No Lab									
Netherlands	0		0	0	0		0	0	0.0	0.0
Norway	4	0 (0.0)	0	4	1	0 (0.0)	0	1	100.0	100.0
Poland	6	3 (50.0)	0	3	3	0 (0.0)	0	3	100.0	100.0
Portugal	0	0	0	0	0	0	0	0	100.0	100.0
Republic of Moldova	0	0	0	0	0	0	0	0	100.0	100.0
Romania	0	0	0	0	0	0	0	0	0.0	0.0
Russian Federation	72	0 (0.0)	0	72	56	16 (29.0)	0	40	100.0	100.0
San Marino	No Lab								0.0	0.0
Serbia	0		0	0	0		0	0	0.0	0.0
Slovakia	0	0	0	0	7	0 (0.0)	0	7	100.0	100.0
Slovenia	2	0 (0.0)	0	2	2	0 (0.0)	0	2	100.0	100.0
Spain	7	1 (14.0)	0	3	2	0 (0.0)	0	2	100.0	100.0
Sweden	No report								0.0	0.0
Switzerland	1	1 (100.0)	0	0	4	4 (100.0)	0	0	100.0	100.0
Tajikistan	0		0	0	0		0	0	0.0	0.0
The former Yugoslav Republic of Macedonia	No report								0.0	0.0
Turkey	0		0	0	0		0	0	0.0	0.0
Turkmenistan	2	0 (0.0)	0	2	2	0 (0.0)	0	2	100.0	100.0
Ukraine	16	0 (0.0)	0	16	22	7 (32.0)	0	15	100.0	100.0
United Kingdom	209	17 (8.0)	5	187	39	0 (0.0)	1	38	100.0	100.0
Uzbekistan	0	0	0	0	0	0	0	0	100.0	100.0
Total / Average	723	147 (20%)	11	562	757	32 (4%)	3	721	75.0	53.0

*Specimen based data are not population based, and should not be interpreted as indicators for epidemiological surveillance. Laboratories may have received more than 1 clinical sample or may have conducted more than 1 test for a given case reported in Table 1.

Data source: Aggregated monthly lab data provided by laboratories of the regional measles and rubella lab network.

Table 3. Classification of AFP cases and key AFP surveillance indicators, 2009–2010

Countries doing AFP surveillance in WHO European Region	2009 (Weeks 1 - 52)						2010 (Weeks 1-9)									
	AFP Cases	Polio Compatible	Pending Classification Total	Surveillance Rates / Index			AFP Cases	Polio Compatible	Pending Classification			Surveillance Rates / Index			% complete of weekly reporting	% Timeliness of weekly reporting
				Non-Polio AFP Rate Target ≥ 1.00	% With 2 Stool Specimens ² Target ≥ 80.0%	Surveillance Index ³ Target ≥ 0.8			Total	Hot ⁴ Cases	Total >90 Days ⁵	Annualized Non-Polio AFP Rate ¹ Target ≥ 1.00	% With 2 Stool Specimens ² Target ≥ 80.0%	Surveillance Index Target ≥ 0.8		
Albania	12	0	0	1.55	100.0	1.00	3	0	3	0	0	1.85	100.0	1.85	86.0	63.0
Andorra	0	0	0	0.00	0.0	0.00	0	0	0	0	0	0.00	0.0	0.00	100.0	40.0
Armenia	9	0	2	1.65	88.9	0.89	3	0	3	0	0	2.66	33.3	2.66	67.0	61.0
Austria	4	0	0	0.32	25.0	0.16	0	0	0	0	0	0.00	0.0	0.00	100.0	73.0
Azerbaijan	46	0	18	2.45	95.7	0.98	3	0	3	0	0	0.77	100.0	0.77	90.0	88.0
Belarus	51	0	3	3.66	98.0	0.98	5	0	5	0	0	1.72	100.0	1.72	28.0	28.0
Belgium	6	0	0	0.35	0.0	0.12	0	0	0	0	0	0.00	0.0	0.00	96.0	80.0
Bosnia and Herzegovina	5	0	2	0.78	60.0	0.78	0	0	0	0	0	0.00	0.0	0.00	94.0	73.0
Bulgaria	15	0	16	1.50	100.0	1.00	0	0	0	0	0	0.00	0.0	0.00	84.0	65.0
Croatia	2	0	2	0.30	50.0	0.15	0	0	0	0	0	0.00	0.0	0.00	100.0	26.0
Cyprus	1	0	0	0.63	100.0	0.63	3	0	3	0	0	9.03	66.7	9.03	98.0	92.0
Czech Republic	11	0	0	0.79	100.0	0.79	0	0	0	0	0	0.00	0.0	0.00	82.0	75.0
Estonia	1	0	0	0.51	100.0	0.51	0	0	0	0	0	0.00	0.0	0.00	92.0	88.0
Georgia	12	0	0	1.64	100.0	1.00	2	0	2	0	0	1.32	100.0	1.32	80.0	73.0
Germany	55	0	0	0.49	34.5	0.27	10	0	9	0	0	0.43	10.0	0.43	96.0	92.0
Greece	16	0	4	1.02	62.5	0.63	2	0	2	0	0	0.61	100.0	0.61	86.0	23.0
Hungary	7	0	0	0.48	28.6	0.34	0	0	0	0	0	0.00	0.0	0.00	88.0	50.0
Ireland	0	0	0	0.00	0.0	0.00	0	0	0	0	0	0.00	0.0	0.00	100.0	65.0
Israel	20	0	0	1.01	15.0	0.50	4	0	0	0	0	0.95	0.0	0.95	78.0	75.0
Italy	42	0	0	0.51	69.0	0.38	6	0	6	0	0	0.35	66.7	0.35	19.0	19.0
Kazakhstan	98	0	18	2.66	100.0	1.00	9	0	8	0	0	1.14	100.0	1.14	78.0	63.0
Kyrgyzstan	21	0	0	1.34	100.0	1.00	0	0	0	0	0	0.00	0.0	0.00	3.0	1.0
Latvia	4	0	0	1.32	100.0	1.00	2	0	2	0	0	3.14	100.0	3.14	100.0	44.0
Lithuania	9	0	0	1.80	100.0	1.00	0	0	0	0	0	0.00	0.0	0.00	78.0	76.0
Malta	0	0	0	0.00	0.0	0.00	0	0	0	0	0	0.00	0.0	0.00	88.0	9.0
Montenegro	2	0	0	1.72	100.0	1.00	0	0	0	0	0	0.00	0.0	0.00	88.0	80.0
Norway	5	0	3	0.56	0.0	0.11	0	0	0	0	0	0.00	0.0	0.00	96.0	67.0
Poland	37	0	5	0.66	59.5	0.44	5	0	5	0	0	0.43	0.0	0.43	63.0	13.0
Portugal	0	0	0	0.00	0.0	0.00	0	0	0	0	0	0.00	0.0	0.00	0.0	0.0
Republic of Moldova	7	0	0	1.04	85.7	1.00	5	0	5	1	0	3.60	60.0	3.60	100.0	96.0
Romania	11	0	0	0.34	100.0	0.34	1	0	7	0	0	0.15	100.0	0.15	86.0	84.0
Russian Federation	353	0	6	1.69	93.8	0.96	41	0	40	1	0	0.92	97.6	0.92	94.0	88.0
Serbia	17	0	3	0.94	94.1	0.94	3	0	3	0	0	0.79	100.0	0.79	90.0	86.0
Slovakia	3	0	1	0.36	66.7	0.36	0	0	0	0	0	0.00	0.0	0.00	84.0	67.0
Slovenia	0	0	0	0.00	0.0	0.00	0	0	0	0	0	0.00	0.0	0.00	90.0	67.0
Spain	21	0	0	0.32	28.6	0.24	7	0	5	0	0	0.49	42.9	0.49	96.0	71.0
Switzerland	7	0	0	0.60	28.6	0.34	1	0	0	0	0	0.41	0.0	0.41	88.0	23.0
Tajikistan	35	0	12	1.37	85.7	0.91	8	0	8	0	0	1.49	87.5	1.49	61.0	50.0
The former Yugoslav Republic of Macedonia	8	0	0	2.20	100.0	1.00	1	0	1	0	0	1.33	100.0	1.33	75.0	63.0
Turkey	176	0	71	0.86	77.3	0.71	21	0	23	0	0	0.49	61.9	0.49	92.0	88.0
Turkmenistan	28	0	0	1.92	92.9	0.93	0	0	0	0	0	0.00	0.0	0.00	78.0	76.0
Ukraine	101	0	12	1.62	95.0	0.95	9	0	10	3	0	0.69	100.0	0.69	88.0	84.0
Uzbekistan	102	0	11	1.20	98.0	0.98	8	0	8	0	0	0.45	100.0	0.45	32.0	32.0
Average/Total	1360	0	189	1.06	84.0	0.89	162	0	161	5	0	0.51	75.0	0.41	72.0	55.0

¹ Non-polio AFP cases per 100 000 children under the age of 15 years (annualized for year 2009). Number of non-polio (discarded) AFP cases X 100000 / total population under 15 years.

² Two stool specimens collected at least 24 hrs. apart within 14 days of onset of paralysis and adequately shipped to the laboratory.

³ Surveillance Index = non-polio AFP rate up to 1.0 x (% AFP cases with at least 1 adequate specimens within 14 days of onset).

⁴ Hot cases = AFP case reported with a priority code (e.g. less than three doses of polio vaccine/Clinically polio/Recent travel to endemic country/high risk group).

⁵ Total number of AFP cases pending final classification 90 days after date of onset.

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