News

Another milestone in the EPI history of Myanmar! Myanmar introduces Pneumococcal vaccine (PCV) into routine immunization

Rajendra Bohara, WHO Country Office, Myanmar

On 1 July 2016, Dr Myint Htwe, Minister of Health and Sport for Myanmar, launched the introduction of the pneumococcal vaccine (PCV) during a high-level ceremony held in the capital, Nay Pyi Taw. PCV has been introduced throughout the country from 1 July 2016. All new birth cohorts will receive the new vaccine. The Chief Ministers of states and regions also launched the vaccine with high level ceremonies that took place in all state and regional capitals on the same day.

During the ceremony at the Ministry of Health and Sports, representatives from GAVI, UNICEF and WHO congratulated the Government of Myanmar for launching this new vaccine and for their proven commitment towards improving children’s health in the country.

Dr Alaka Singh, acting WHO Representative, congratulated the Government and expressed her appreciation to basic health staff for their dedication and hard work in the field, which will result in lifelong improvements for the nation’s health. She also remarked the continuous support of WHO and WHO congratulated the Government of Myanmar for launching this new vaccine and for their proven commitment towards improving children’s health in the country.

During the ceremony at the Ministry of Health and Sports, representatives from GAVI, UNICEF and WHO congratulated the Government of Myanmar for launching this new vaccine and for their proven commitment towards improving children’s health in the country.

The government of Myanmar is committed towards improving children’s health and reducing under five-year-old mortality rates; the expansion of the immunization programme (EPI) is therefore considered a high priority for the Ministry of Health and Sports.

In his speech the Minister emphasized the need for reaching every eligible child with the new vaccine. He also stressed the importance of reducing mortality, morbidity, disability and suffering caused by vaccine preventable diseases. Every effort should be made to reach every child in the country and make immunization services equitable and available for everyone, everywhere.

Myanmar has made significant progress in the area of immunization. The last case of wild poliovirus was detected in 2007, MNT was eliminated in 2010 and there was a drastic reduction in number of measles cases after a catch-up campaign. Myanmar introduced HepB vaccine in 2003, Hib in 2012, rubella and Inactivated Polio Vaccine in 2015 and PCV in 2016. The Ministry is also planning to introduce the Japanese Encephalitis (JE) vaccine into routine immunization in 2018 following a large scale JE immunization campaign in 2017, Rotavirus vaccine in 2018 and Human Papillomavirus vaccine (HPV) in 2019.

Myanmar is also using the introduction of PCV as an opportunity to strengthen routine immunization. There are plans to improve service delivery and equitable access to vaccines irrespective of geography, social factors, ethnicity, wealth, education and gender; improve data management, monitoring and capacity building of basic health staff; implement special strategies for hard-to-reach, peri-urban, conflict areas and for migrant populations; increase community participation and ownership; conduct advocacy with policy makers and strengthen cold chain and demand generation.
Brazilian measles outbreak in the Americas is interrupted in the post-elimination era
Pamela Bravo, Desiree Pastor and Cuauhtemoc Ruiz Matus, PAHO-Washington, DC; Samia Samad, PAHO-Brazil

The state of Ceará in Brazil completed a year without confirming any new measles cases, after the rash onset of the last case was reported in 6 July 2015. This milestone allows the country to verify that the endemic measles virus circulation in Ceará has been interrupted and that Brazil has met PAHO’s elimination criteria for measles outbreak interruption. The conclusion was made by the president of the International Expert Committee (IEC), Dr. Merceline Dahl-Regis, who visited Brazil with PAHO’s Secretariat in order to meet with health authorities from Ceará and Brasília on 20-21 July 2016.

This result was achieved through a partnership of efforts from the Brazilian Ministry of Health, the Health Department of Ceará, the Health Secretary of Fortaleza and Caucia (the two most affected municipalities), PAHO/WHO, the Brazilian Association of Nursing, medical universities, scientific societies and the unwavering determination of health workers and volunteers.

Lessons learned from the Brazilian outbreak include the need to implement an aggressive and rapid response to any imported measles case, in order to immediately interrupt virus circulation and to avoid the slow but continuous transmission of measles cases (“drop by drop” transmission). The outbreak also highlighted how high reported administrative coverage can mask pockets of susceptible individuals, leading to a false sense of security among immunization programme managers. Finally, the establishment of strategic partnerships was seen as critical to confront and resolve this health crisis. In 2016, the Brazilian Ministry of Health, the Health Department of Ceará and the Health Secretary of Fortaleza have established a plan of interventions to guarantee the sustainability of measles and rubella elimination in the country.

Measles Outbreak in Ceará

A total of 1,052 measles cases were confirmed in Ceará, Brazil, between 25 December 2013 and 9 October 2015, in 38 of 184 municipalities. The last endemic case was confirmed on 6 July 2015. The genotype identified was D8. Adolescents and adults aged 15-39 years old were the most affected group by this outbreak (39%), followed by children aged 6-11 months (28%). Around 62.1% of the confirmed cases were unvaccinated; 44% of the unvaccinated (n=288) individuals were aged 15-39 years. Among vaccinated individuals, 93.1% had received one dose of the MMR vaccine and 7% had received two doses. These data demonstrate, again, that one dose to interrupt measles transmission is insufficient and a rapid, aggressive response to control a measles outbreak is key to maintain elimination.
Greece: MSF Denounces High Price of Vaccines for Refugee Children
Rosane Lopes, François Servranckx, Médecins sans Frontières

In July 2016, Médecins Sans Frontières warned that Pharmaceutical companies are making it exorbitantly expensive to vaccinate vulnerable children, and called on Pfizer and GlaxoSmithKline (GSK) to lower the price of the pneumonia vaccine (PCV) for governments and humanitarian organizations working in emergency contexts.

In recent weeks, MSF has vaccinated more than 5,000 refugee children between six months and 15 years of age in camps and settlements across Greece. Using multiple vaccines, the campaign is targeting ten diseases including pneumonia, which is the single largest killer of children under five worldwide and is particularly acute in humanitarian crises.

MSF purchased the pneumonia vaccine for 60 euros, or about $68, per dose from local pharmacies in Greece. The price is 20 times more than the lowest global price of the vaccine, which is roughly $3.10 per dose. This lowest global price for the pneumonia vaccine is only available to the world’s poorest countries through Gavi, the Vaccine Alliance. Three doses of the pneumonia vaccine are needed to provide full protection for a child.

To protect crisis-affected children MSF has been trying for more than six years to negotiate a lower price for the pneumonia vaccine with Pfizer and GSK, the vaccine’s only producers. So far, both companies have refused to reduce the price.

In May 2016, MSF delivered the names of more than 416,000 people from 170 countries who signed a petition asking Pfizer and GSK to reduce the price of the pneumonia vaccine to $5 per child (for all three doses) for crisis-affected populations and for all developing countries.

Innovative Vaccination Strategies to Reach the Most Isolated Populations: Example of Malawi
Florentina Rafael, Agence de Médecine Préventive (AMP)

Since December 2015, Malawi has been facing a serious cholera epidemic with the majority of cases coming from Lake Chilwa in the southeast part of the country.

To control this epidemic and organize the response to cholera, the Ministry of Health requested the technical assistance of AMP (through the project VaxiChol) and MSF France, UNICEF and the World Health Organization. The partners decided to rapidly organize an Oral Cholera Vaccine (OCV) campaign targeting the fishing communities on Lake Chilwa and the surrounding area with the goal to prevent further spread of the outbreak. 180,000 doses of the Shanchol™ OCV were ordered for a target population of 80,000 people.

The cholera vaccine is typically delivered through two vaccination rounds, at least two weeks apart using Directly Observed Vaccination (DOV) and requiring a cold chain. The two-dose delivery presents a heavy financial and human resource burden, particularly in areas where populations are mobile or live in isolated zones, like the fishing communities.

During the campaign, AMP and MSF implemented two innovative strategies for self-administration of the second dose of the vaccine. For the two strategies, the first dose was administered according to international recommendations (vaccine conserved under cold chain and administered under DOV).

Fishermen living in fishing camps received their second dose at the same time as the first dose, with the instructions to take it 14 days after receiving their first vaccination.

For people living on the islands, where the population is more stable, the second dose was distributed to the population for self-administration at home, two weeks after the first round. These simplified strategies did not require the logistical constraint of the cold chain and allowed an accelerated administration of the vaccines, thus significantly reducing the length of the vaccination campaign.
National Immunization Programme review in Kyrgyz Republic

Oya Zeren Afşar, UNICEF Regional Office for CEE/CIS

UNICEF CEE/CIS led a review of the national immunization programme of the Kyrgyz Republic with participation from Ministry of Health/Republican Centre of Immunoprophylaxis, WHO Regional Office for Europe, Gavi Secretariat, Centers for Disease Control and Prevention-Atlanta, and UNICEF and WHO Country Offices. The activity was agreed last year by immunization partners during the Joint Appraisal, and included in the PEF package for this year. The review took place from 25 July to 3 August and included interviews with all government, CSOs and multilateral agency stakeholders at the national level, as well as field visits at four sites covering sub-national and health facility levels.

Kyrgyz Republic has a historically well-established immunization programme reporting around 90% national coverage for most antigens. The country introduced PCV this year, implemented the switch in oral polio vaccines (OPV) in April 2016, and has made significant improvements in cold chain and vaccine management. The country is also establishing an electronic birth registration and immunization information system expected to revolutionize monitoring of children and data analysis. However, the programme has been suffering from health system challenges such as weak managerial coordination among departments and within the Immunization Coordination Committee (ICC), limited financial resources, eroding work force and lack of incentives in primary health care, and a migrating population. The review also identified coverage inequities by age and population groups, and weaknesses in disease surveillance and outbreak response capacity, which manifested itself as the largest measles outbreak in the region in 2015. Another emerging phenomenon is the anti-vaccination sentiment mainly on religious grounds.

The full report of the national immunization programme review is due to be finalized and shared by the end of August 2016. Next steps include developing a joint plan of action by the immunization partners in line with the recommendations, and facilitating the utilization of Gavi HSS and other available funds to provide further technical and procurement support.

Second Evaluation of the Polio Outbreak in Guinea

Crepin Hilaire Dadjo, WHO/ Inter-Country Support Team for West Africa

For the last two years, 8 cases of circulating vaccine derived poliovirus (cVDPV) were notified in Guinea, one case in 2014 detected at Sigui district (Kankan region), and 7 in 2015, including 6 detected at Sigui district again. A comprehensive response plan has been developed, endorsed by the ICC and implemented with support of different partners including UNICEF, the Bill and Melinda Gates Foundation (BMGF) and WHO. As recommended by the polio standard operating procedures (SOPs), regular outbreak assessments (OBRAs) should be conducted to track the progress made in the field. Following the first OBRA performed in March 2016, a second OBRA took place from 11-19 August 2016.

Five regions, 10 provinces and 20 health centers were visited by an international team of investigators made up of UNICEF, CDC, BMGF and WHO staff. Coordination, NIDs quality, communication, AFP surveillance and RI performance were the 5 key areas assessed.

The 2nd OBRA teaches that overall the political will is there, concretized, for instance, in the nomination of a personal adviser on polio to the minister of health. But surveillance is not quite optimal and sustained; there is a backlog of 224 samples (40% of all samples collected) with pending results; 100% of surveillance priority sites have been visited mostly by WHO consultants, with perhaps limited national ownership. In routine immunization (RI), the cold chain has been rehabilitated with 108 refrigerators installed in almost all health centers and an integrated plan of communication has been developed and adopted. Despite all this, the RI performance is stagnating with 48,894 children not vaccinated from January to June 2016. Consequently, an immunization gap is still prevailing, according to the investigation team, adding that the surveillance system is not robust enough to detect any transmission of the virus. The quality of national immunization days has improved, but still needs to be strengthened. That is why it is highly recommended that the technical support (82 consultants present in the country, of whom 69 WHO hired personnel) be maintained up to December 2016. In the absence of any new case and with a much stronger surveillance system, especially in the residual sources of low performances, an evaluation to assess the end of the outbreak can be envisaged within 3 months, the evaluation team said.
How to handle and dispose of tOPV found after 1 May 2016
Alejandro Ramirez Gonzalez, WHO Headquarters

As many of you know, the switch to bivalent OPV has been completed in all 155 countries and territories that were using trivalent OPV. This has been a great achievement that brings us even closer to polio eradication.

Based on the country validation reports that WHO received, approximately 140,000 health facilities were visited by monitors during a period of 2 weeks in April. During the same period, more than 15,000 district, 3500 regional, and 267 national stores were also visited to ensure all tOPV was removed from the cold chain.

Nevertheless, this sampling of cold stores and service points does not represent ALL the facilities in EVERY single country. Additional vigilance should be maintained during the upcoming months to ensure that no tOPV remains in the cold chain with the risk for inadvertent use.

Therefore, we would request that whenever you are on mission in-country, and have the opportunity to visit cold chain stores and/or health facilities, please keep an eye out for any tOPV.

In case you find it, provided is simple guidance on the appropriate actions to take. Added information available through the same link offers guidance on the validation and monitoring process that took place during the switch.

Findings from the Post Introduction Evaluation of HPV in Burkina Faso
Crepin Hilaire Dadjo, WHO/ Inter-Country Support Team for West Africa

HPV vaccine was introduced in Burkina Faso in November 2015 for the first dose and six months later as recommended by WHO in May 2016 for the second dose. Targeted audiences included 8,487 girls aged 8 for the first dose, and 8,187 for the second dose. A second cohort of 3,891 all aged 8 was targeted with a first dose administered in May 2016. Overall, two districts were involved, one based in a rural setting at Solenzo (317 km from the capital city) and one urban, situated at Baskuy, in the region of Ouagadougou.

Vaccination coverage obtained for the first cohort for dose 1 and 2 were respectively 92% and 93.49% at Baskuy; 100% and 97.21% at Solenzo. For the first dose administered to the second cohort of girls, Baskuy covered 91.8% and Solenzo, 99.66%.

A PIE (post introduction evaluation) was conducted in May 2016 by the national EPI team in collaboration with PATH. While the data are still being analyzed, some lessons can be learned from this pilot project. For instance, microplanning enhanced the ownership of the process by health agents; a good census of the target audience (wherever they might be, in schools and out of schools) prior to the vaccination allowed the management team to determine a realistic denominator. In the areas of social mobilization and community engagement, tailoring the message according to the specific needs of every segment identified in the audiences is instrumental to engaging populations and dispelling any misinformation. Finally, the cross-sector collaboration and the involvement of all stakeholders were key success factors.

At this stage, the next steps include, among other things, administering doses in November 2016 and May 2017 and the integration of HPV vaccination with other health services targeting girls and boys aged from 9 to 13 years old.

According to Globocan 2008, about 10,000 new cases of cancers (all types included) are occurring every year in Burkina Faso. Cervical cancer is the second most commonly diagnosed cancers among women in Burkina Faso including women aged between 15 and 44 years old, and the leading cause of cancer death for women. If left untreated, cervical cancer is almost always fatal.
Benin: Enrolment for the Bachelor’s Degree in Health Logistics 2016-2017 Is Open
Eustache Agboton, Agence de Médecine Préventive (AMP)

The Benin LOGIVAC Center, jointly administered by Agence de Médecine Préventive (AMP) and the Institut Régional de Santé Publique (IRSP), launches the fifth edition of the bachelor’s degree in Health Logistics (LPLS) starting in the new academic year 2016-2017.

For this fifth promotion, a total of 25 to 30 students will be chosen to study, from October 2016, courses whose educational content has been validated by a committee of experts from the public and private sector such as: the WHO, UNICEF, the Health Ministry of Benin, the University of Abomey-Calavi, Imperial Health Sciences (IHS), BMGF, Gavi The Vaccine Alliance, AMP, and IRSP.

This training course is open to candidates with a baccalaureate and at least two years of higher education or a superior technician diploma in nursing and obstetrics, in public health, and in hygiene and sanitation, or in transport and trade logistics.

This 10-month innovative course is made up of three stages: distance learning (three months), class-room training (four months) and a professional internship completed by the preparation and defense of the internship report before a jury (three months).

Implemented by a technical and financial partnership in collaboration with the States, the Bachelor’s degree in Health Logistics is a response to the growing needs of health systems in countries in francophone sub-Saharan Africa, which lack qualified and motivated professionals to manage the supply chain in healthcare systems.

If you would like to enroll in this training course, please fill out an enrollment form before September 18, 2016 (all submissions received after this deadline will be not be accepted).

Grants are available.
For further information, please contact the Benin LOGIVAC Center.
Tel.: (AMP office) +229 21 30 56 22.

Upcoming Meeting
International Association of Immunization Managers (IAIM) announces Inaugural Joint Regional Meeting for Asia and the Pacific
Peter Carrasco, Sabin Vaccine Institute

The International Association of Immunization Managers (IAIM) is pleased to announce its Inaugural Joint Regional Meeting for Asia and the Pacific, to be held on 22-23 September 2016 in Beijing, China.

The meeting will bring together immunization managers and other immunization professionals from Asia and the Pacific to share their experiences, successes, and challenges in managing immunization programmes. Immunization managers and other immunization professionals from both within the Asia and Pacific region – as well as other immunization professionals internationally – have registered to attend.

This is also the first co-hosted IAIM event. The Chinese Preventive Medicine Association (CPMA), a non-profit national academic institution, will bring its members from throughout China to participate in the meeting. Its members, who are voluntary scientific and technological workers in the fields of public health and preventive medicine, will surely bring a valuable perspective to the discussions.

The event will feature presentations from immunization managers and professionals from Asia and the Pacific, and international speakers, with a focus on immunization programme management topics. The draft agenda for the meeting can be found here.

If you are interested in participating in this event, you can register as an IAIM member or stakeholder. If you represent a for-profit company, your company can also sponsor the event. Please visit the pages IAIM Membership Types, Eligibility and Benefits or contact Katie Waller to learn more.

We hope to see you in September for this exciting event!
Past Meetings/Workshops

Seventh Meeting of the South-East Asia Regional Immunization Technical Advisory Group (SEAR-ITAG)

Nihal Abeyesinghe, World Health Organization, Regional Office for South-East Asia, WHO SEARO

Location: New Delhi, India

Date: 06-10 June 2016

Participants: Day one of the meeting was attended by chairpersons/members of different technical advisory groups representing the Region, namely the Strategic Advisory Group of Experts (SAGE), South East Asia Regional Committee for the Certification of Poliomyelitis Eradication (SEAR-RCCPE), National Immunization Technical Advisory Groups (NITAGs)/National Committee on Immunization Policies (NCIPs) from eight Member States and also from the recently formed SEA Regional Verification Commission for Measles Elimination and Rubella/CRS control. The following four days were attended by 30 participants from 11 Member States including national managers of the expanded programme of immunization/surveillance focal points, 20 representatives from donor/partner organizations, 8 observers and, 15 and 31 staff respectively from the headquarters, regional and country offices of UNICEF and WHO.

Purpose:

1. To review the performance status of national EPI programmes in relation to disease eradication/elimination/control targets and the implementation of recommendations of the Sixth SEAR-ITAG Meeting 2015.
2. To seek the guidance of SEAR-ITAG in effectively addressing the following priority areas:
   - implementation of the Global Vaccine Action Plan (GVAP);
   - mid-term review of the measles elimination and rubella/CRS control by 2020;
   - implementation of the Polio Eradication and Endgame Strategic Plan 2013-18 (outbreak response preparedness, validation of the switch from tOPV to bOPV, IPV introduction, containment of polioviruses as per Global Action Plan III and transition planning in SEAR countries);
   - validation of MNTE during 2016
   - vaccine quality and management
   - introduction of new and underutilized vaccines and health system strengthening for immunization outcomes.

Details: The ITAG noted the progress made in immunization activities in the region since the last meeting of SEAR ITAG held in 2015, especially in the following areas:

- establishment of the SEAR-NITAG voluntary network in April 2016 towards enhancing the capacity of NITAGs
- IPV introduction and the switch from tOPV to bOPV in April/May 2016, including validation;
- containment of all type 2 polioviruses as per Global Action Plan III (GAP III)
- authorization for use of mOPV2 and fractional dose IPV if an outbreak is detected
- initiation of efforts to develop transition plans for polio assets in five priority countries
- SEAR on becoming the second of the six WHO Regions after the European Region to achieve MNTE
- the formation of National Verification Committees and the SEA Regional Verification Commission for measles elimination and rubella/CRS control

Recommendations from the SEAR-ITAG focused on each of the priority areas identified for guidance from the ITAG members, including strategic actions to achieve the objectives of the Global Polio Eradication and Endgame Strategic Plan 2013-2018 and the regional goal of measles elimination and rubella/CRS control by 2020. Other significant recommendations were in relation to the capacity and future role of the NITAGs, monitoring the progress of SEAR-VAP implementation, benefits of legislation (such as the Immunization Act of Nepal 2016) to achieving public health goals, establishing a regional goal for control of hepatitis B as part of the SEAR-VAP, monitoring and maintaining the MNTE status. More information is available at this link.
### Regional Conference: Leadership for Immunization Supply Chain

**Alice Henry Tessier, Agence de Médecine Préventive**

**Location:** Abidjan, Côte d'Ivoire  
**Date:** 13-14 June, 2016  
**Participants:** AMP, Gavi, WHO, UNICEF, PATH, JSI, UEMOA and WAHO

**Purpose:**
- To sensitize senior country government representatives, and regional organization decision makers on the implications of the immunization supply chain on EPI performance and costs; how it can be optimized to accommodate vaccines now and in the future; and actions to sustain the supply chain.
- To engage countries in the implementation of supply chain management policies, procedures and tools to design, implement and maintain immunization supply chains.
- To facilitate synergies between governments, local administration, regional and local partners, CSO and the private sector to increase and secure financial, human and technical investment for sustainable supply chains.

**Details:**

The regional conference on Leadership for Health and Immunization Supply Chains was an opportunity to gather high-level representatives from Ministries of Health and Gavi partners. The discussions and presentations allowed participants to reflect on different issues related to supply chains, which hinder country health systems by reducing access to quality health products and services.

The conference, which was consisted of plenary sessions and roundtables, emphasized sharing country experiences, especially with regards to:
- Supply chain optimization;
- Management of cold chain equipment;
- Human resources and leadership; and
- Funding and sustainability of supply chains.

The conference participants call to action to strengthen health and immunization supply chains in Africa. The roadmaps developed by countries delegations will contribute to the implementation of this call. The Gavi Partners Regional Working Group for Immunization for West and Central Africa will support countries by monitoring activity implementation.
Workshop to review the Reaching Every District (RED) guidelines

Blanche Anya and Richard Mihigo, WHO/AFRO

Location: Mahe, Seychelles
Date: 27 June – 1 July 2016
Participants: Participants from WHO HQ, AFRO, Country offices, UNICEF, JSI, USAID, BMGF and a consultant recruited to consolidate group work and finalize the guide after the workshop.

Purpose: To revise the 2008 Reaching Every District RED approach guidelines based on field experience, an equity dimension, integration and life course approach.

Details: The RED Approach developed in 2002 by WHO/AFRO and its partners and revised in 2008 has been implemented in the Region as the main strategy to increase and sustain immunization coverage.

However, to reach the goal of universal immunization coverage as stipulated in the Regional Strategic Plan for Immunization 2014-2020, a special focus should be given to equitably reaching the unreached and underserved populations.

The workshop was organized as a follow-up of the one conducted in January 2016 on Exchange of Best Practices on RED, equity and integration of child survival interventions.

Participants were divided into five working groups of the five operational components of the RED approach (planning and managing of resources, reaching target populations, strengthen links with communities, supportive supervision, monitoring for action) to identify the changes needed, the issues missing and new developments to be taken into account when revising the guide.

At the end of the workshop, participants produced revised versions of the five components of the RED guide and suggestions for revised monitoring tools.

A timeline was agreed upon with the consultant to consolidate the document and harmonize the content.
Workshop on the Regulatory Aspect of Vaccines and Vaccination Safety in Mexico

Pamela Bravo Alcántara, Jose Luis Castro and Helvert Felipe Molina León, PAHO-Washington, DC

Location: Mexico City, Mexico

Date: 27 June – 1 July 2016

Participants: State leaders and representatives from the main institutions on vaccine safety from all over Mexico, including the National Regulatory Authority (Comisión Federal para la Protección contra Riesgos Sanitarios [COFEPRIS]), the National Immunization Programme (Centro Nacional para la Salud de la Infancia y la Adolescencia [CENSIA]) and Dirección General de Epidemiología (DGE), the institution responsible for epidemiological surveillance. Technical staff from federal offices also participated.

Purpose: To strengthen the technical capacity of health workers on vaccine regulation and vaccination safety. The workshop also aimed to teach how to set up an effective response plan when risking or facing damage during vaccine administration.

Details: After being certified as a referenced National Regulatory Authority (NRA), COFEPRIS was given the recommendation to strengthen vaccine surveillance capacity. Aiming to increase national capacity to respond to any vaccination-related risk, COFEPRIS gathered all of the institutions dealing with vaccine safety and organized this workshop.

Eighty participants attended this course from all over Mexico and for the three involved institutions, 43% were from COFEPRIS, 36% from CENSIA and 18% from DGE.

Through interactive lectures and problem-based learning activities, participants reviewed topics such as: the role of the NRA and of a quality laboratory in vaccine safety, clinical aspects of Adverse Events Following Immunization (AEFI), step-by-step surveillance activities, causality assessment, data analysis and signal identification, vaccination safety and topics related to communication activities.

The short-term impact in knowledge was measured and most participants improved their performance. The satisfaction level with the workshop was very high. One of the most important outcomes of this workshop was encouraging collaborative work between the NRA, the National Immunization Programme and the National Surveillance Directorate. The collaborative work from these organizations is responsible for AEFI surveillance.

After this workshop, there should be more communication, sharing of information and joint assessment of what Mexico is doing to guarantee and improve vaccines and immunization safety.
National Workshop on Improving the Immunization Programme in Nepal

Jagat Narain Giri, WHO Country Office Nepal

Location: Hotel Yak & Yeti, Durbar Marg, Kathmandu, Nepal

Date: 7-8 July 2016

Participants: EPI officers of 75 districts of Nepal, Chair, National Committee on Immunization Practices (NCIP) Members, Minister of Health, Chair of Social Welfare for Women and Child Health (Parliamentarian); Secretary of Health, Member of National Planning Commission, Director General of the Department of Health Services (DoHS), Directors of different divisions within DoHS, Representatives from WHO, UNICEF, Water Aid, the SABIN Vaccine Institute and Lifeline Nepal, Members from line ministries- Ministry of Finance, Director Custom Office, Airport authority and civil aviation, etc.

Purpose: The Constitution of Nepal and immunization law ensure immunization as the right of every child, thus reaching every child through the immunization programme is the responsibility of the health workers and the parents. Reaching a hundred percent children fully immunized by 2017 is the target, through fostering the commitment of EPI officers and stakeholders.

Details: Nepal aims to declare itself a fully immunized country by 2017, a highly ambitious target. Nepal constitutes of 75 districts, 217 municipalities and 2898 village development committees (VDCs). To date, more than 1500 VDCs/municipalities and 18 districts have been declared fully immunized i.e. children aged 12-23 months have received their Bacillus Calmette-Guérin (BCG), Diptheria, Tetanos, Pertussis (DTP), Hepatitis B, Hib, Oral Polio Vaccine (OPV) 1, 2, 3, and Meningococcal Vaccines (MCV1) in their first year of life. To keep this momentum intensified and sustained, a national workshop on improving the immunization programme was held under the leadership of the Child Health Division in support of WHO, UNICEF, WASH and Lifeline Nepal.

The workshop was every effective as it addressed several issues related to immunization. An important issue that came up was to disseminate the immunization law and its contents, to establish an immunization fund and strengthen the vaccine and immunization supply chain management system through the use of the latest energy efficient technology in immunization. A focus was also palced on the integration of new interventions and the use of innovative approaches in immunization including eHealth, mHealth. Strong support was seen from the parliament members and other high officials of the government. This workshop was a successful activity.
Workshop on improving the quality of the data reported in the joint reporting form (JRF)

Marcela Contreras Salas, Cara Janusz, Carilu Pacis Tirso, Cuauhtemoc Ruiz and Martha Velandia, Pan American Health Organization (PAHO), and Laure Dumolard and Claudio Politi, World Health Organization (WHO)

Location: Panama City, Panama

Date: 13-14 July 2016

Participants: Facilitators: Marcela Contreras Salas, Laure Dumolard, Cara Janusz, Claudio Politi, Carilu Pacis Tirso, Cuauhtemoc Ruiz, Martha Velandia.

Member States Participants: Persons responsible for filling the JRF from 14 Latin American Member States: Argentina, Brazil, Chile, Colombia, Cuba, Dominican Republic, Ecuador, El Salvador, Honduras, Mexico, Nicaragua, Panama, Paraguay and Uruguay.

Purpose: To follow up on the recommendation from the SAGE Global Vaccine Action Plan (GVAP) working group and the defined standards from PAHO to foster the quality of the immunization related data, by providing guidance to the persons filling the JRF in 14 countries from Latin America.

Details: The general objective of the workshop was to provide guidance to selected countries in Latin America to improve the quality of data reported in the JRF, which is the main source of information for monitoring progress of GVAP and the Regional Immunization Action Plan (RIAP). The focus was placed on ways to improve the process of the JRF data collection and validation, and on the importance of the data reported and its uses both at global and regional levels.

The workshop was organized around three different sessions, which maintained a high involvement of all participants and a very positive dynamic:

1. One traditional session of presentations focusing on highlighting the global and regional indicators, their trends, challenges and opportunities as reported in the JRF and on how they respond to the monitoring needs of GVAP and RIAP.

2. A very interactive session where a panel of experts responded to specific questions from countries. It allowed for the clarification of issues and identification of difficulties that the countries are facing in completing the form each year. Interestingly, some country representatives stressed the importance of gathering and analysing the data reported in the JRF to guide national decision making.

3. A last session was dedicated to a group brainstorm to review the process of completing the forms, and to run data validation rules to check the consistency and coherence of the data reported. The countries conducted a cross checking of JRF data with other countries and reviewed their financial data and trends, to enhance the quality of the JRF data. Simultaneously, the representatives of the countries provided feedback on how to improve the JRF in order to diminish the risk of reporting inconsistent or incoherent data.
Intercountry workshop on the elaboration of national manuals on surveillance of Adverse Events Following Immunization

**Crepin Hilaire Dadjo**, WHO/ Inter-Country Support Team for West Africa

**Location:** Ouagadougou, Burkina Faso, West Africa

**Date:** 25-28 July, 2016

**Participants:** About 40 participants including WHO/EPI Focal Points and Staff in charge of surveillance/EPI from the ministries of health originating from Benin, Burkina Faso, Burundi, Cameroon, Mali, Mauritania, Niger and Togo

**Purpose:** The workshop objectives were to provide countries with clear guidelines on the surveillance of Adverse Events Following Immunization (AEFI); update participants on the tools, techniques and methods used in AEFI surveillance; assist in the drafting of a national manual on the surveillance of AEFIs; review and upgrade the tools used for AEFIs surveillance in countries; share orientations on the holding of national validation workshops of the AEFIs surveillance system.

**Details:** Between 2007 and 2017, a total number of 3,116 AEFIs were reported from 8 countries that conducted yellow fever preventive campaigns. And out of 153 million people vaccinated against Meningitis A, 28,481 cases of AEFI were documented. This means that the more people are getting vaccinated through mass campaigns, routine vaccination or new vaccines introduction, the more AEFIs will be notified. Hence the need to put in place a robust surveillance system to help prevent AEFIs and better manage them when they occur.

Participants have been trained during the workshop to master tools, techniques and methods used in AEFIs surveillance. Within country groups, a national manual on the surveillance of AEFI has been
25th Meeting of the Technical Advisory Group on Immunization and Vaccine-Preventable Diseases

Sergey Diorditsa, WHO WPRO
Manila, Philippines
26 -29 July, 2016

Seven TAG members, six temporary advisers, 28 participants from 16 countries and areas, and 76 representatives from partner organizations, and WHO staff from headquarters, the Regional Office for the Western Pacific and country offices.

To review progress, identify critical issues, and discuss key activities and priority actions to achieve regional immunization goals as specified in the Regional Framework for Implementation of the Global Vaccine Action Plan in the Western Pacific; and to identify opportunities to enhance collaboration and coordination among immunization partners.

The meeting participants discussed progress towards achieving the targets and indicators for the polio endgame; elimination of measles, rubella, and maternal and neonatal tetanus; and accelerated control of hepatitis B and Japanese encephalitis (JE). Discussions also covered evidence-based introduction of new vaccines and decision making processes, as well as vaccine safety and regulatory capacity. The regional immunization coverage goals aim to ensure equity and sustainability in immunization services to reach underserved populations and improve data quality.

TAG’s key recommendations included setting a regional rubella elimination target date of 2020, and finalizing the Regional Strategies and Plan of Action on measles and rubella.

Member States were advised to prioritize available stocks of IPV for high risk areas and to explore the programmatic feasibility of using a fractional dose via intra-dermal administration.

The TAG recommended the use of a JE incidence target of < 0.5 cases per 100,000 population in the targeted population (typically children aged <15 years) in affected areas.

The TAG reiterated the importance of establishing a second year of life platform for immunization as an opportunity to reach all children. Member States were encouraged to work with WHO and partners to ensure vaccine security and avoid stock outs through regular vaccine forecasting, timely procurement and adequate resource allocation, making use of the Middle Income Country strategies and the Vaccine Product, Price and Procurement (VP3) platform to overcome potential risks to vaccine security.

Member States and the Region were encouraged to take a cautious approach when considering the use of dengue vaccine, closely following advice in the current position paper and any additional recommendations from SAGE.

The meeting report with complete conclusions and recommendations will be available shortly online, under fea-
First Meeting of the South-East Asia Regional Verification Commission (SEA-RVC) for Measles Elimination and Rubella/Congenital Rubella Syndrome Control

Aarti Garg and Sudhir Khanal, WHO Regional Office for South-East Asia

Location: New Delhi, India

Date: 1-4 August 2016

Participants: All twelve members of SEA-RVC, members of National Verification Committees (NVCs) from ten of the eleven member states of WHO SEAR, chair of measles rubella working group of Strategic Advisory Group of Experts (SAGE), representatives from Lions Club International, representative from UNICEF regional office for South Asia and experts from US CDC and WHO headquarters.

Purpose:
- Orient the members of SEA-RVC on the current global and regional status of measles elimination and rubella/congenital rubella syndrome (CRS) control;
- Finalize the framework for verification of measles elimination for the SEA region;
- Build a working mechanism between the SEA-RVC and NVCs in the Region;
- Orient the representatives of NVCs on the framework for verification of measles elimination and on the terms of reference (TORs) of SEA-RVC;
- Plan for the activities for 2016-17 for SEA-RVC and NVCs.

Details:
The meeting endorsed the TORs of the SEA-RVC, adopted the framework for verification of measles elimination and rubella/CRS control in SEAR and the Annual Reporting Template for the NVCs to report to SEA-RVC in an annual basis.

The SEA-RVC also reviewed the TORs of the ten NVCs that were present and reported to SEA-RVC and made suggestions as and when required.

The meeting concluded with a number of recommendations and roadmap for 2017 to ensure a smooth working mechanism between the SEA-RVC and the NVCs of the countries and support Member States to make progress towards measles elimination and rubella/CRS control.
Resources

Publication of data reported by the WHO Member States on immunization
Olivier Beauvais, Laure Dumolard and Claudia Steulet, WHO/HQ

Since 1998, WHO and UNICEF annually collect data on national immunization systems through the WHO/UNICEF Joint Reporting Form on Immunization (JRF). The JRF collects national level data on reported cases of selected vaccine preventable diseases, immunization coverage, recommended immunization schedules, supplementary immunization activities, vaccine supply, and other information on the structure, policies and performance of national immunization systems.

During the second quarter of each year, national authorities complete the form and submit the data to WHO and UNICEF, who consolidate the replies and reconcile any differences between the two reporting channels. This data is analysed, and queries are sent back to the countries. The data is constantly revised upon reception of updated information from Member States.

By 21 July 2016, 186 of the 194 WHO Member States reported data for 2015. This includes JRF from all countries of the WHO Regions for Africa, the Americas, the Eastern Mediterranean and South East Asia. Completeness of the data reported in the JRF varied from one indicator to another. For example, 91% countries reported on the number of measles confirmed cases, 97% on the existence of a multi-year plan, 92% on the number of districts with DTP3 coverage >=80%, and 73% on the percentage of total expenditure on vaccines financed by government funds.

In addition to contributing to numerous publications, this data is the main source of information for WHO Member States and Partners for annual review at the World Health Assembly, of the progress made towards achieving the Global Vaccine Action Plan (GVAP) goals.

The WHO vaccine preventable diseases monitoring system is updated with 2015 data and can be accessed through country profiles, or by subject.

WHO and UNICEF immunization coverage estimates 1980-2015
Carolina Danovaro and Marta Gacic-Dobo, WHO HQ, and Mamadou Diallo, UNICEF HQ.

WHO and UNICEF have reviewed the data available on national immunization coverage and produced country-specific estimates of immunization coverage for 1980-2015. The data was released on 15 July; read more in the press release.

These estimates are based on data officially reported to WHO and UNICEF by Member States as well as data reported in the published and grey literature. More about the estimation methods is available here.

Global immunization coverage show that 86% of the world’s children received the required 3 doses of diphtheria-tetanus-pertussis containing vaccines (DTP3) in 2015, a coverage level that has been sustained above 85% since 2010. As a result, the number of children who did not receive routine vaccinations has dropped to an estimated 19.4 million, down from 33.8 million in 2000. Visual presentation of key findings can be found here.

The data are posted both on UNICEF and WHO web sites. The data can be accessed in tabular format, excel file, and country profiles in pdf.
Importance of vaccination: Diseases we can prevent thanks to vaccination

Darina Sedlakova, WHO Country Office, Slovakia

A new publication on vaccination in Slovakia and the European Union was launched at the start of the Slovak Presidency of the Council of the European Union in July 2016 to educate experts, health workers and the general public on the importance of vaccination in preventing serious diseases. Developed with financial and technical support from WHO/Europe as part of its biennial collaborative agreement with the Ministry of Health, the document entitled “Importance of vaccination: diseases we can prevent thanks to vaccination”, provides information on:

- the historic development of vaccination;
- its importance for public health, including in providing data on morbidity and vaccination coverage for selected communicable diseases;
- experiences with vaccination in Slovakia;
- development of the national immunization programme in Slovakia;
- activities, programmes and strategies of the European Union bodies and Member States in the area of immunization;

Communicable diseases do not respect state borders, which is why exceptional attention must be paid to cooperation, coordination of procedures, information sharing and common rapid response to these threats among countries. This new publication will be used to draw attention to these issues for the duration of Slovakia’s Council Presidency (through 31 December 2016) and beyond. Available in English and Slovak.

New Immunization eLearning courses on Microplanning & Supply Chain now available!

WHO announces the availability of two new e-learning courses: “Immunization Supply Chain Management” (ISCM) and “Microplanning for Immunization”. Developed in collaboration with UNICEF, these online learning opportunities will help all immunization staff strengthen the support they provide.

The ISCM course (approximately 4 hours) emphasises the role played by strong immunization supply chain systems in achieving global immunization. The format of the course requires staff to engage in an interactive journey through a fictional country’s immunization supply chain. Through this journey, they will acquire the skills and knowledge for identifying problems and opportunities to improve efficiency, as well as plan for the introduction of new vaccines and campaigns.

The microplanning mini-course (~ 45 minutes) will help staff strengthen every step of the microplanning process to ensure that immunization services reach all communities. They will be able to evaluate their own health centre microplanning maps, forms, and tables in order to improve each part of the process.

The Immunization eLearning Initiative courses are available to WHO staff as well as consultants and external partners supporting immunization. The courses are an opportunity for everyone within the immunization community to align their knowledge and get up-to-date on the latest immunization systems and protocols. The curriculum also provides an excellent professional development opportunity.

Courses available now on ilearn include: Immunization Staff Orientation; Immunization Supply Chain Management; Immunization Coverage Data; Microplanning; and, Multi-Dose Vial Policy.

Courses coming soon include: Communications for Immunization; Vaccine Vial Monitors; and, Temperature Monitoring.

WHO staff should access the courses on ilearn.

Consultants and external partners can access the courses on UNICEF’s Agora platform. (Register as “guest”).
**VIEW-hub Report: Global Vaccine Introduction and Implementation – June 2016**

Kirthini Muralidharan, International Vaccine Access Center (IVAC) at the Johns Hopkins Bloomberg School of Public Health

The June 2016 **VIEW-hub Report on Global Vaccine Introduction and Implementation** from IVAC at Johns Hopkins is now available [here](#).

**VIEW-hub**, IVAC’s newly launched data visualization platform, and its supporting databases provide the data and maps that were used in this report.

**New content updates:**
- Additional countries conducting PCV impact evaluations globally and in Gavi countries, since March 2016 (including updates from the 2016 International Symposium on Pneumococci and Pneumococcal Diseases, ISPPD-10, in June)
- The Hib section of the VIEW-hub report has been removed due to a lack of recent vaccine introduction, but any new introductions will be covered in future reports, as updates become available.

**Recent vaccine introduction updates (from March 2016 through June 2016) include:**
- Rotavirus vaccine has been introduced in Liberia.
- Inactivated polio vaccine (IPV) has been introduced in Argentina, Djibouti, Lesotho, Sao Tome and Principe, and Uganda.

**What is the VIEW-hub Report?**

The VIEW-hub report displays data and figures on the introduction, use, and coverage status of pneumococcal, rotavirus, and inactivated polio vaccines both globally and in the 73 Gavi countries. The images and text in the report describe:
- How many countries have introduced each vaccine or plan to in the future
- National levels of vaccine coverage and access, globally and in Gavi countries
- Vaccine introduction trends over time
- Vaccine product and dosing schedule
- Countries that are conducting PCV impact evaluation

The report uses data in the VIEW-hub database and maps generated by the online VIEW-hub data visualization platform, maintained by IVAC at the Johns Hopkins Bloomberg School of Public Health with support from Gavi, The Vaccine Alliance and the Bill & Melinda Gates Foundation.

For any VIEW-hub-related inquiries, please email Linh Nguyen.

Thank you and please enjoy!

The VIEW-hub team at Johns Hopkins

**New Global Polio Eradication Initiative (GPEI) E-Learning Course at agora.unicef.org**

Ahmet Afsar, UNICEF New York

This e-learning course will help build capacity of programme managers in handling polio vaccines in supplementary immunization activities (SIA). This dynamic and interactive course builds on the “GPEI/UNICEF Guidance note on Cold Chain Logistics & Vaccine Management during polio SIA” and allows the learner to ‘learn by doing’ through simulated exercises. On successful completion, the learner is awarded a GPEI certificate. The learner can download all the resources used in the course for future reference.

The course is highly recommended to all polio consultants.
New guidance document: How to respond to vocal vaccine deniers in public
Katrine Habersaat and Philipp Schmid, WHO Regional Office for Europe

Country experience shows that vocal vaccine deniers can influence people’s perceptions of vaccines and erode trust in vaccines and health authorities.

Facing a vocal vaccine denier in public is challenging, as the scientific evidence must be presented in a way that appeals to and is understood by the public. It must also be done in a way that rises above the often strong rhetoric of a vocal vaccine denier, who may refer to alleged or quasi-scientific evidence and play on emotions that raise concerns in the audience.

Following repeated requests from Member States for guidance in this area, the WHO Regional Office for Europe has developed a new best practice guidance document to support health authority spokespersons in facing vocal vaccine deniers in public. The document introduces a new algorithm that enables spokespersons to design key messages which (1) debunk misconceptions about vaccination, (2) equip the audience with the necessary knowledge to counter the arguments of the denier and (3) sustain trust in health authorities and the immunization programme. The document also supports the spokesperson in deciding whether (s)he should attend the public discussion or not.

The guidance document was reviewed by the members of the European Technical Advisory Group of Experts on Immunization (ETAGE) at their 2015 annual meeting and by participants of the WHO European Regional Meeting of National Immunization Programme Managers in Antwerp, Belgium, in 2015. It was pilot tested by national immunization managers of Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Montenegro, Serbia and the former Yugoslav Republic of Macedonia during a technical consultation on addressing vaccination opposition in Belgrade, Serbia, in 2016.

Designing responses to vaccine denialism is a constant developmental process that benefits from input of researchers and practitioners alike. Feedback on the document is welcome and can be sent by email.
## Calendar

### 2016

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>September</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-7</td>
<td>10th Vaccine Congress</td>
<td>Amsterdam, the Netherlands</td>
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<tr>
<td>5-9</td>
<td>Regional Committee for SEARO</td>
<td>Colombo, Sri Lanka</td>
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<tr>
<td>7-9</td>
<td><strong>Twelfth International Rotavirus Symposium</strong></td>
<td>Melbourne, Australia</td>
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<tr>
<td>12-14</td>
<td>AFRO IST Central - EPI Managers meeting</td>
<td>Douala, Cameroon</td>
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<tr>
<td>12-15</td>
<td>Regional Committee for EURO</td>
<td>Copenhagen, Denmark</td>
</tr>
<tr>
<td>12-16</td>
<td>Sixth Meeting on Vaccine-Preventable Diseases Laboratory Networks in the Western Pacific Region</td>
<td>Manila, Philippines</td>
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<td>19-21</td>
<td>AFRO IST West - EPI Managers meeting</td>
<td>TBD</td>
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<tr>
<td>19-23</td>
<td>Fifth Annual Meeting of the Regional Verification Commission for Measles Elimination in the Western Pacific Region</td>
<td>Japan</td>
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<tr>
<td>26-28</td>
<td>AFRO IST East &amp; South - EPI Managers meeting</td>
<td>Harare, Zimbabwe</td>
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<tr>
<td>26-30</td>
<td>Regional Committee for the Americas</td>
<td>Washington DC, USA</td>
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<tr>
<td><strong>October</strong></td>
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<tr>
<td>3-6</td>
<td>Regional Committee for EMRO</td>
<td>Cairo, Egypt</td>
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<tr>
<td>5-7</td>
<td>Gavi High Lever Review Panel</td>
<td>Geneva, Switzerland</td>
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<tr>
<td>10-14</td>
<td>16th European Technical Advisory Group of Experts (ETAGE)</td>
<td>TBD</td>
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<tr>
<td>10-14</td>
<td>Monitoring and analysis of National Immunization Performance meeting</td>
<td>Kigali, Rwanda</td>
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<tr>
<td>12-14</td>
<td>Regional Committee for WPRO</td>
<td>Manila, Philippines</td>
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<tr>
<td>18-20</td>
<td>Meeting of the Strategic Advisory Group of Experts (SAGE) on Immunization</td>
<td>Geneva, Switzerland</td>
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<tr>
<td>24-26</td>
<td>5th Meeting of the European Regional Verification Commission (RVC) for Measles and Rubella Elimination</td>
<td>TBD</td>
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<td><strong>November</strong></td>
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<td>2-3</td>
<td>EURO Regional NITAG meeting</td>
<td>TBD</td>
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<tr>
<td>9-11</td>
<td>Twenty-Second Regional Commission for the Certification of Poliomyelitis Eradication in the Western Pacific Region</td>
<td>Australia</td>
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<td>14-18</td>
<td>Global Sentinel Site Surveillance and Laboratory Meetings</td>
<td>Geneva, Switzerland</td>
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<tr>
<td>17-18</td>
<td>Technical Advisory Group meeting of the WHO/PATH Maternal Influenza Immunization Project</td>
<td>Geneva, Switzerland</td>
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<td>21-24</td>
<td>9th Meeting of the South-East Asia Regional Commission for the Certification of Polio Eradication (SEA-RCCPE)</td>
<td>New Delhi, India</td>
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<tr>
<td>29-30</td>
<td>Costing of Vaccine-Preventable Disease Surveillance</td>
<td>TBD</td>
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<tr>
<td><strong>December</strong></td>
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<td>7-8</td>
<td>Gavi Board Meeting</td>
<td>TBD</td>
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<tr>
<td>8-9</td>
<td>AFRO Technical Advisory Group meeting</td>
<td>Brazzaville, DRC</td>
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## Links

### Organizations and Initiatives
- American Red Cross
  - [Child Survival](http://www.redcross.org/health/preventative-health/immunization/)
- Agence de Médecine Préventive
  - [Africhol](http://africhol.org/)
  - [EpiVacPlus](http://www.epivacplus.org/)
  - [LOGIVAC Project](http://www.logivac.org/)
- National Immunization Technical Advisory Groups Resource Center
- [SIVAC](http://www.sivac.org/)
- Centers for Disease Control and Prevention
  - [Polio](http://www.cdc.gov/polio/)
  - [Global Vaccines and Immunization](http://www.cdc.gov/vaccines/
- Johns Hopkins
  - [International Vaccine Access Center](http://vaccinaccess.org/)
  - [Vaccine Information Management System](http://www.immunize.org)
- JSI
  - [IMMUNIZATION basics](http://www.immunizationbasics.org/)
  - [Immunization Center](http://www.jsi.com/immunization/)
  - [Maternal and Child Health Integrated Program (MCHIP)](http://www.mCHIP.org/)
  - [Publications and Resources](http://www.jsi.com/immunization/publications-and-resources/)
  - [Universal Immunization through Improving Family Health Services (UI-FHS) Project in Ethiopia](http://www.jsi.com/immunization/universal-immunization-through-improving-family-health-services-ui-fhs-project-in-ethiopia/)
- PAHO
  - [ProVac Initiative](http://www.who.int/provac/en/)
- PATH
  - [Vaccine Resource Library](http://www.path.org/vr/)
  - [Rotavirus Vaccine Access and Delivery](http://www.path.org/rotavirus-vaccine-access-delivery/)
  - [Malaria Vaccine Initiative](http://www.path.org/malaria-vaccine-initiative/)
  - [Meningitis Vaccine Project](http://www.path.org/ meningitis vaccine project/)
  - [RH0 Cervical Cancer](http://www.path.org/rh0-cervical-cancer/)

### WHO Regional Websites
- [Routine Immunization and New Vaccines (AFRO)](http://www.afro.who.int/)
- [Immunization (PAHO)](http://www.paho.org/)
- [Vaccine-preventable diseases and immunization (EMRO)](http://www.emro.who.int/)
- [Vaccines and immunization (EURO)](http://www.euro.who.int/)
- [Immunization (SEARO)](http://www.searo.who.int/)
- [Immunization (WPRO)](http://www.wpro.who.int/)

### UNICEF Regional Websites
- [Immunization (Central and Eastern Europe)](http://www.unicef.org/)
- [Immunization (Eastern and Southern Africa)](http://www.unicef.org/)
- [Immunization (South Asia)](http://www.unicef.org/)
- [Immunization (West and Central Africa)](http://www.unicef.org/)
- [Child survival (Middle East and Northern Africa)](http://www.unicef.org/)
- [Health and nutrition (East Asia and Pacific)](http://www.unicef.org/)
- [Health and nutrition (Americas)](http://www.unicef.org/)

### Newsletters
- [Immunization Monthly update in the African Region](http://www.afro.who.int/)
  - (AFRO)
- [Immunization Newsletter](http://www.paho.org/)
- [The Civil Society Dose](http://www.gavi.org/civil-society-dose/)
  - (GAVI CSO Constituency)
- [TechNet Digest](http://www.technet.org/)
- [RotaFlash](http://www.path.org/)
- [Vaccine Delivery Research Digest](http://www.universityofwashington.edu/)
  - (Uni of Washington)
- [Gavi Programme Bulletin](http://www.gavi.org/)
  - (Gavi)