HEPATITIS B
26/08/09 from Amy Wales, PATH:
Progress toward a heat- and freeze-stable hepatitis B vaccine
In partnership with Arecor and the University of Colorado Denver School of Pharmacy, PATH published findings in this month’s issue of Human Vaccines (volume 5, issue 8) that describe a new hepatitis B vaccine formulation exhibiting nine week stability at 55°C and at least six month stability at both 37°C and 45°C. The data indicate that the new hepatitis B vaccine formulation will be better able to withstand disruption in the cold chain and could potentially be stored at controlled room temperature for a significant part of its shelf life.
Additionally, PATH scientists and partners combined the heat-stable hepatitis B vaccine formulation with the freeze-protection technology developed earlier this year. In collaboration with Arecor and the University of Colorado Denver School of Pharmacy, PATH tested this new hepatitis B vaccine formulation and found it to be heat-stable for 12 months at 37°C in addition to proving freeze-stable at −20°C. According to research findings recently published in Vaccine (volume 27, issue 34), this freeze- and heat-stable formulation was found to be well tolerated in animal models without any significant local or systemic side effects.
To date, PATH and collaborators have completed additional laboratory and preclinical studies validating the science and technology behind the new heat- and freeze-stable hepatitis B vaccine formulations. A commercial vaccine producer is in the process of applying the formulation methods to the development of a second-generation hepatitis B vaccine. Key clinical trials of this new product are scheduled for early 2010.
The development of these formulation methods and the research described in both published studies were conducted in conjunction with PATH’s broad project work in vaccine stabilization, funded by the Bill & Melinda Gates Foundation.

POLIO
26/08/09 from Rod Curtis, WHO/HQ:
Evaluation determines critical barriers to polio eradication
The work of the independent evaluation of the major barriers to interrupting polio transmission is well underway, and team leaders are expected to present their recommendations to the Oversight Committee at the end of September 2009. Five fully-constituted sub-teams have been formed, four travelling to the remaining endemic countries - Afghanistan, India, Nigeria, and Pakistan - with the final team considering issues relating to wild poliovirus' international spread.
The evaluation was requested by WHO’s Executive Board in January, two years after the start of the 'Intensified Eradication Effort'. It has been charged with identifying area-specific solutions to the barriers to interrupting polio transmission in each country.
Sub-teams have already returned from their missions to Afghanistan, India and Nigeria, with the missions of the Pakistan and international spread sub-teams ongoing.
In each country, the missions are meeting with relevant Ministry of Health and other government representatives, WHO and UNICEF, as well as relevant security and aid organization staff.
The sub-team chairs will be meeting in mid-September to consolidate their findings and prepare their report, which will be submitted to an Oversight Committee by the end of September. This report will then be presented and discussed at the relevant Technical Advisory Group meetings at global and national level in the latter part of 2009. The recommendations will lead to area-specific action plans which will be incorporated into the 2010-2014 Strategic Plan of the Global Polio Eradication Initiative. For further information on the evaluation, go to www.polioeradication.org.

SAGE EXTRAORDINARY MEETING ON INFLUENZA A(H1N1) VACCINES
26/08/09 from Hayatee Hasan, WHO/HQ:
The Strategic Advisory Group of Experts on Immunization held an extraordinary meeting in Geneva, Switzerland on 7 July 2009 to discuss issues and make recommendations relating to influenza A(H1N1) immunization and vaccine production capacity, and considered potential options for vaccine use. The experts identified three different objectives that countries could adopt as part of their pandemic vaccination strategy: (a) protect the integrity of the health-care system and the country's critical infrastructure; (b) reduce morbidity and mortality; and (c) reduce transmission of the pandemic virus with communities. Countries could use a variety of vaccine deployment strategies to reach these objectives, but any strategy should reflect the country's epidemiological situation, resources and ability to access vaccine, to implement vaccination campaigns in the targeted groups, and to use other non-vaccine mitigation measures.

Although the severity of the pandemic is currently considered to be moderate with most patients experiencing uncomplicated, self-limited illness, some groups such as pregnant women and persons with asthma, other chronic medical conditions and morbid obesity appear to be at increased risk for severe disease and death from infection. Since the spread of the pandemic virus is considered unstoppable, vaccine will be needed in all countries. SAGE emphasized the importance of striving to achieve equity among countries to access vaccines developed in response to the pandemic (H1N1) 2009. For more information on the SAGE meeting, visit http://www.who.int/wer/2009/wer8430.pdf.

VACCINE MANAGEMENT
26/08/09 from Jessica Winn, UNICEF:
Cold Chain & Logistics (CCL) Task Force
This is the third of regular updates in the GIN from the CCL Task Force to help coordinate our collective work in cold chain and logistics (CCL) systems strengthening. Other partners who are also interested to join the Task Force, or in sharing information about CCL, please write to jwinn@unicef.org.

On 17 July 2009, partners including UNICEF Supply Division, WHO, UNEP, PATH, World Bank, Greenpeace, Danish Technical Institute, Vestfrost, Bright Light Solar, and GTZ met to discuss the new SolarChill direct-drive solar vaccine refrigerator. To date, traditional solar refrigerators with battery-stored power have provided an alternative to regular refrigeration but have met with a variety of challenges including relatively short lived batteries with high replacement cost and complicated logistics. The new SolarChill direct-drive solar vaccine refrigerator hopes to change that. While both traditional and direct-drive solar fridges collect energy through solar panels, traditional solar powered vaccine refrigerators rely on lead acid batteries to store solar electricity throughout the day and night to power the compressor. In contrast, direct-drive solar refrigerators use daytime solar electricity to directly power the compressor and build up a cold storage ice bank inside the refrigerator, much like an ice lining, which functions as an energy reservoir. This ice allows the SolarChill fridge to maintain vaccine safe temperatures even during periods without sunshine. The SolarChill vaccine refrigerator is currently being tested under the WHO PQS testing protocol for direct-drive vaccine refrigerators and pending approval by WHO, it will be available for purchase by UN agencies through UNICEF for vaccine storage in temperate climates by the end of 2009. UNICEF, through generous Japanese funding, was able to procure a few SolarChill units for piloting. Their performance will be evaluated in three countries in Asia as part of the evaluation being performed under the Japan contribution, which will take place in the last quarter of 2009.

For more information on SolarChill, please visit: http://www.solarchill.org/
Any feedback to the CCL Task Force on SolarChills is welcome.

VACCINE QUALITY & SAFETY
26/08/09 from Lahouari Belgharbi, WHO/HQ:
Monitoring doses of assured quality database
A WHO global lot release database funded by GAVI to monitor all doses of vaccines produced, distributed and administered in national immunization programmes has been developed and is currently under testing with several countries. A first prototype is currently under testing with the Cuba National
Regulatory Authority (NRA). This database was developed by the IT Department in WHO/EMRO and will be hosted in Geneva but accessible to users (NRAs and vaccine manufacturers, WHO and institutions) that will collaborate to this project. The first phase of testing should be completed by the end of 2009, then expanded to NRAs in 2011 and to manufacturers by end of 2012. The internet database will allow a monitoring of all batches of vaccines produced and released by the relevant NRAs. The database shall be gradually accessible to all countries using vaccines and features to use optimally this information will be gradually developed in close consultation with all representatives of NRAs, NCLs, immunization programme and manufacturers. A meeting will be organized to see the added value of such a system and consultation will be kept wide to ensure full support from all stakeholders.

**PUBLICATIONS**

**WHO PUBLISHED DOCUMENTS**

26/08/09 from Mario Conde, WHO/HQ:

Response to measles outbreaks in measles mortality reduction settings (WHO/IVB/09.03)


This document is targeted for use in countries in measles mortality reduction settings. It provides guidance to public health workers at the national and regional levels on the appropriate measles outbreak prevention and response practices. More specifically, this document provides guidance on detecting and confirming a measles outbreak; investigating and managing an outbreak; and communications and public awareness during a measles outbreak (see table of contents for more details).

**GAVI-RELATED INFORMATION**

Next GAVI Review Dates:

**PROPOSAL REVIEWS - ISS, HSS, INS, New Vaccines & Measles 2nd Dose:**


**MONITORING IRC**

21 September - 3 October 2009
15-30 June 2010 and 20-24 September 2010
Submission deadline: 14 May 2010 for both rounds.
AFRICAN REGION

GAMBIA

26/08/09 from Kebba Gibba, WHO/Gambia:
Launch of Pneumococcal Conjugate Vaccine in The Gambia

After successful clinical trials over the years, the pneumococcal conjugate vaccine (PCV7) was launched in the Gambia on 19 August 2009, marking full scale introduction of the vaccine into the national Expanded Programme on Immunization (EPI) services.

The Vice President and Minister of Women's Affairs, Dr. Ajaratou Isatou Njie-Saidy presided over the launch on behalf of the Head of State, His Excellency, Dr Alhaji Yahya A.J.J. Jammeh at the Kanifing Municipality Headquarters in Serekunda. Hundreds of people from all walks of life - women, caregivers, children, representatives of Government departments and institutions, non-governmental organizations and international organizations, civil society groups, and members from UN organizations attended the launch.

The Vice President reiterated the Gambia Government’s unwavering commitment to the successful introduction of the new vaccine into the EPI services in particular, and to the overall health development in the country at large. She asserted that this commitment is demonstrated by her Government’s contribution to the co-financing agreement with the GAVI Alliance to provide affordable and quality immunization services to the Gambian community.

Shortly after the launch, the Honorable Minister of Health and Social Welfare vaccinated the first child on behalf of the Vice President, marking the official introduction of the vaccine.

AMERICAS

REGIONAL INFORMATION

26/08/09 from Beatrice Carpano & Carolina Danovaro, PAHO:
Report of the ProVac HPV Costing Workshop:

The Caribbean ProVac Meeting on HPV Costing was convened in Kingston, Jamaica, from 20-21 July 2009. ProVac's objective is to enhance national capacity to make evidence-based decisions regarding new vaccine introduction. All participants recognize that costs will play a major role in the decision-making process to assess the introduction of the HPV vaccine. To that end, the workshop focused on identifying the different kinds of costs associated with cervical cancer prevention and control, including an

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1 HSS= Health Systems Strengthening;
IST = Inter Country Support Team;
ISS = Immunization Services Support;
INS = Injection Safety Support;
NVS = New Vaccine Support;
DQA = Data Quality Audit;
DQS = Data Quality Self Assessment;
RED = Reach Every District;
cMYP = Fully costed multi-year plan;
NITAG = National Immunization Technical Advisory Group;
NRA = National Regulatory Authority
adolescent HPV vaccine and screening, using tools to measure and estimate these costs, and refining an instrument to gain insight into costs associated with different strategies for delivery.

**Training of trainers in preparation for the introduction of a pandemic influenza vaccine:**

A workshop was held in Bogota, Colombia from 27-31 July 2009, as part of PAHO’s Regional Plan for the Preparation of the Introduction of a Pandemic Influenza Vaccine. Participants included staff from WHO and PAHO headquarters as well as PAHO country consultants in immunization. The goal of the workshop was to prepare for future trainings on pandemic vaccine introduction at sub-regional and national levels with participation of EPI Managers and individuals responsible for national pandemic plans. This was a participatory meeting designed to build on past experiences and lessons learned. A variety of pandemic vaccine-related topics were reviewed. Two main documents, a draft PAHO Technical Operational Manual in preparation for the introduction of a pandemic influenza vaccine and the WHO Guidelines for the Deployment of a Pandemic Influenza Vaccine, were presented and reviewed. As a result of the workshop, PAHO decided to merge both documents and create the “Technical Guidelines for the Introduction of a Pandemic Vaccine” to be used in future trainings.

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**EASTERN MEDITERRANEAN**

**REGIONAL INFORMATION**

26/08/09 from Nahad Sadrazodi, WHO/EMRO:

Since January 2009, the WHO Regional Office for the Eastern Mediterranean has supported the establishment of an additional four National Immunization Technical Advisory Groups (NITAGs), bringing the total number to 16 in region. Moreover, 9 existing national immunization technical bodies are currently strengthening their structure and capacity based on the regional framework. Additionally, to further support these efforts and help facilitate information sharing and best practices for the EPI managers, NITAG members and other partners and constituents, a webpage (http://www.emro.who.int/vpi/nitag/) has been launched. Finally, for the first time in the Eastern Mediterranean Region, a briefing session for NITAG chairpersons was organized by EMRO VPI and co-sponsored by NESI. On 28 and 29 July, thirteen NITAG chairpersons and members, as well as members of the Regional Technical Advisory Group, technical partners (CDC, SIVAC, and NESI) and WHO HQ participated in this two-day session in Tunis, Tunisia to discuss and exchange information on the latest immunization policies, strategies and practices.

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**WESTERN PACIFIC**

**REGIONAL INFORMATION**

26/08/09 from Manju Rani WHO/WPRO:

**Training workshop on real-time PCR for polio**

A hands-on training course on implementing real time polymerase chain reaction technique for rapid detection and characterization of polioviruses is being held in the Victorian Infectious Disease Reference Laboratory (VIDRL), Melbourne, Australia from 25 -28 August 2009. This training course was intended to provide hands-on-training on the new real time PCR technique which has been developed by US CDC for rapid detection and characterization of polioviruses. Country participants and facilitators from US CDC, WHO HQ and WHO regional office discussed problems/challenges and updates of the global polio laboratory network including new laboratory performance indicators. Future implementation plans of real time PCR among polio ITD laboratories in the region have also been addressed.

**Pandemic vaccine deployment workshops**

WPRO will be organizing two workshops on pandemic vaccine deployment guidelines. The first workshop will be held in Manila, Philippines for the 16 non-pacific island countries from 31 August - 4 September. A second workshop will be held in Fiji for the 20 pacific islands countries (PIC) from 19-23 October 2009. The Manila workshop will be held simultaneous with another regional meeting on emerging infectious disease programme managers and national focal points for international health regulation, with some common sessions between the two meetings.

26/08/09 from Lahouari Belgharbi, WHO/HQ:

**Ensuring Vaccine quality: Strengthening the Chinese NRA and preparing for future prequalification of JE S14.14.2 vaccine**

A WHO team composed of WHO/HQ, WHO/WPRO, WR Office China and NRA Indonesia visited China from 20-27 July 2009 to review the progress achieved by the vaccine regulatory system and prepare for the next year formal NRA assessment in order to grant clearance for starting prequalification of JE live
SA-14-14-2 vaccine produced by the Chengdu Institute of Biological Product. This vaccine is already exported to Nepal, Sri Lanka, Thailand and South Korea, and will soon be used in Indonesia, Cambodia and Laos. In order to ensure that the vaccine is ongoing appropriate regulatory oversight by the State Food Drug Administration (SFDA), WHO has agreed with Government of China on a detailed institutional development plan (IDP) to address gaps or constraints identified during the visit. A major progress has been documented in the area of post-marketing and AEFI surveillance where the system is now implemented in all 31 provinces and has improved its detection and reporting and management. A series of WHO follow up visits will be planned, and SFDA will set up a special task force to monitor the recommendations. Several in country trainings will be organized, and WHO GMP experts will assist SFDA inspectors in enhancing their inspections in all eight major vaccine manufacturers. WHO is expected to re-assess the NRA in China by end of August 2010. The SFDA and Ministry of Health have supported the above recommendations and are actively engaging in meeting this challenging deadline.

CAMBODIA

26/08/09 from Manju Rani, WHO/WPRO:
Introduction of JE vaccine in Cambodia
Cambodia is planning to introduce JE vaccine in September/October 2009 in three provinces on a pilot basis. It will use the live attenuated SA-14-14-2 vaccine in single dose, administered one month after the measles vaccine at 10 months of age. Depending upon the results of pilot introduction in terms of safety and programmatic feasibility, the vaccine is planned to be introduced nationwide in the next two years.

CHINA

26/08/09 from Manju Rani, WHO/WPRO:
International consultation on Hib vaccines in China
The China Ministry of Health will host an international consultation on Haemophilus influenza type b (Hib) from 22-23 September 2009. The purpose of this consultation is to review methodological considerations in measuring Hib and pneumococcal disease burden and to define key issues pertinent to future introduction of Hib vaccination into the EPI in China, such as the measurement of vaccine impact and effectiveness. This consultation will be attended by key persons from the China Centers for Disease Control and Prevention, the China Ministry of Health, and other relevant Chinese experts, as well as subject matter experts from WHO regional and headquarters offices and the US Centers for Disease Control and Prevention.

China polio labnet workshops, August 2009
The Regional Polio reference laboratory hosted the polio laboratory network workshop from 10-12 August 2009, and is also hosting a polio hands-on training workshop from 14-29 August 2009. These workshops reviewed the performances of the laboratory network during the last 12 months, and identified impediments to maintain the high quality of labnet. This will help improve the technical capacity of new staff in selected provincial polio laboratories. These workshops are convened annually, and the former was attended by senior polio laboratory staff from Centers for Disease Control and Prevention (CDC) in 31 provinces, as well as experts from WHO regional and China offices; the latter was attended by junior polio laboratory staff from CDC in selected provinces.

China measles labnet workshop:
The workshop for the Chinese Measles laboratory network will be conducted from 21-23 September 2009. During this workshop, laboratory surveillance data from 31 provincial and national labs will be presented. The workshop will discuss the performances and challenges/problems of the Chinese Measles laboratory network in 2008 including laboratory biosafety and management issues. About 60 participants from 31 provincial Measles laboratories are expected to join the workshop and experts from the national level and WHO WPRO and country offices will give presentations to provide national/regional overview and updates.

JAPAN

26/08/09 from Lahouari Belgharbi, WHO/HQ:
The Government of Japan has accepted a visit from WHO HQ to prepare for the WHO formal assessment of the vaccine regulatory system by end of 2010. The team visited the Ministry of Health officials and the National Institute of Infectious Disease that act respectively as National Regulatory Authority (NRA) and National Control Laboratory (NCL). The discussions were aimed at introducing the new WHO NRA indicators and to brief the officials in charge of the different regulatory functions about the use of the WHO NRA assessment tools and software for preparing the self evaluation and the formal assessment. It was agreed that a follow up visit would be conducted by WPRO to monitor progress of the planning and to answer any concerns about the assessment.
## LIST OF MEETINGS & KEY EVENTS RELATED TO IMMUNIZATION

### 2009 Meetings

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<th>Location</th>
<th>Region</th>
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<tr>
<td>Regional EPI Lab Network Meeting</td>
<td>Sept</td>
<td>Sept</td>
<td>Manila, Philippines</td>
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<tr>
<td>16th Meeting of the GAVI Eastern Mediterranean Regional Working Group</td>
<td>06-Sep</td>
<td>07-Sep</td>
<td>El Gouna, Egypt</td>
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<tr>
<td>15th WPRO Regional Committee Meeting</td>
<td>21-Sep</td>
<td>25-Sep</td>
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<tr>
<td>PAHO Workshop on documentation and elimination of measles and rubella and ISIS</td>
<td>24-Sep</td>
<td>25-Sep</td>
<td>Nicaragua</td>
<td>PAHO</td>
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<tr>
<td>Workshop to monitor the implementation of GIVS and cMYPs in West &amp; Central Africa</td>
<td>29-Sep</td>
<td>01-Oct</td>
<td>Ouagadougou, Burkina Faso</td>
<td>AFRO</td>
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<tr>
<td>WHO Regional Committee for the Eastern Mediterranean Regional Office</td>
<td>03-Oct</td>
<td>06-Oct</td>
<td>Cairo, Egypt</td>
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<tr>
<td>Intercountry training workshop on surveillance of vaccine preventable diseases and monitoring &amp; evaluation of national immunization programmes</td>
<td>07-Oct</td>
<td>09-Oct</td>
<td>Cairo, Egypt</td>
<td>EMRO</td>
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<tr>
<td>DCD sub regional meeting for countries in South-West Asia (Afghanistan, Iran, Iraq, Pakistan)</td>
<td>18-Oct</td>
<td>20-Oct</td>
<td>Tehran, Iran</td>
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<tr>
<td>Strategic Advisory Group of Experts (SAGE) meeting</td>
<td>27-Oct</td>
<td>29-Oct</td>
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<tr>
<td>West &amp; Central African Sub-Regional Working Group Meeting</td>
<td>10-Nov</td>
<td>11-Nov</td>
<td>Bamako, Mali</td>
<td>AFRO</td>
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<tr>
<td>26th Meeting of the Caribbean Expanded Program on Immunization Managers</td>
<td>16-Nov</td>
<td>20-Nov</td>
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<tr>
<td>GAVI Board Meeting</td>
<td>17-Nov</td>
<td>18-Nov</td>
<td>Hanoi, Vietnam</td>
<td>Global</td>
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<tr>
<td>GAVI Partners Meeting</td>
<td>18-Nov</td>
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<td>Hanoi, Vietnam</td>
<td>Global</td>
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<tr>
<td>DCD sub regional meeting for countries in the Horn of Africa</td>
<td>23-Nov</td>
<td>25-Nov</td>
<td>Djibouti</td>
<td>EMRO</td>
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<tr>
<td>Global Advisory Committee on Vaccine Safety (GACVS)</td>
<td>02-Dec</td>
<td>03-Dec</td>
<td>Geneva</td>
<td>Global</td>
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<tr>
<td>Global Vaccine Research Forum (GVRF)</td>
<td>06-Dec</td>
<td>10-Dec</td>
<td>Bamako</td>
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<tr>
<td>17th Task Force on Immunization Meeting &amp; 16th Meeting of the African Regional Inter-Agency Coordination Committee</td>
<td>14-Dec</td>
<td>17-Dec</td>
<td>Harare, Zimbabwe</td>
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<tr>
<td>EMRO Workshop on invasive bacterial diseases surveillance network</td>
<td>15-Dec</td>
<td>17-Dec</td>
<td>Cairo, Egypt</td>
<td>EMRO</td>
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<tr>
<td>PAHO ProVac Meeting on Cervical Cancer Costing</td>
<td>TBD</td>
<td>TBD</td>
<td>Jamaica</td>
<td>PAHO</td>
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<tr>
<td>Expert Consultation on Mumps</td>
<td>TBD</td>
<td>TBD</td>
<td>Washington DC</td>
<td>PAHO</td>
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<tr>
<td>Data Management Workshop</td>
<td>TBD</td>
<td>TBD</td>
<td>Manila, Philippines</td>
<td>WPRO</td>
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</tbody>
</table>

### 2010 Meetings

<table>
<thead>
<tr>
<th>Title of Meeting</th>
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<th>Location</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Immunization Meeting (2010)</td>
<td>01-Feb</td>
<td>03-Feb</td>
<td>CICG, Geneva</td>
<td>Global</td>
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<tr>
<td>First Annual Immunization Week in the Eastern Mediterranean Region</td>
<td>April</td>
<td>April</td>
<td>Regional</td>
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<tr>
<td>Global Meeting on Implementing New and Under-utilized Vaccines</td>
<td>June</td>
<td>June</td>
<td>Switzerland</td>
<td>Global</td>
</tr>
</tbody>
</table>
LINKS RELEVANT TO IMMUNIZATION

GLOBAL WEBSITES

Department of Immunization, Vaccines & Biologicals, World Health Organization
http://www.who.int/immunization/en/

WHO New Vaccines
http://www.who.int/nuvi

Immunization Financing
http://www.who.int/immunization_financing/en/

Agence de Médecine Préventive
www.aamp.org

EPIVAC
www.epivac.org

GAVI Alliance Website
http://www.gavialliance.org/

IMMUNIZATIONbasics (JSI)
www.immunizationbasics.jsi.com

PATH Vaccine Resource Library
http://www.path.org/vaccineresources

UNICEF Supply Division Website
http://www.unicef.org/supply/index_immunization.html

Hib Initiative Website
http://www.hibaction.org/

Japanese Encephalitis Resources
http://www.path.org/vaccineresources/japanese-encephalitis.php

Malaria Vaccine Initiative
http://www.malariavaccine.org

Measles Initiative
http://www.measlesinitiative.org/

Meningitis Vaccine Project
http://www.meningvax.org/index.htm

Multinational Influenza Seasonal Mortality Study (MISMS)
http://origem.info/misms/index.php

RotaADIP
http://www.rotavirusvaccine.org/

RHO Cervical Cancer (HPV Vaccine)
http://www.rho.org

WHO/ICO Information Center on HPV and Cervical Cancer
http://www.who.int/hpvcentre/en/

SIGN Updates
http://www.who.int/injection_safety/sign/en/
Technet
http://www.technet21.org/

REGIONAL WEBSITES

New Vaccines in AFRO
http://www.afro.who.int/newvaccines/

PAHO’s website for Immunization
http://www.paho.org/english/ad/fch/im/Vaccines.htm

Vaccine Preventable Diseases in EURO
http://www.euro.who.int/vaccine

New Vaccines in SEARO
http://www.searo.who.int/en/section1226.asp

Immunization in WPRO
http://www.wpro.who.int/health_topics/immunization/

NEWSLETTERS

PAHO/Comprehensive Family Immunization Program-FCH: Immunization Newsletter
http://www.paho.org/english/ad/fch/im/Epi_newsletter.htm

Produced by WHO, in collaboration with UNICEF and the GAVI Alliance: