Meeting Report

Twenty-second Meeting of the Technical Advisory Group on Immunization and Vaccine-Preventable Diseases in the Western Pacific Region

Manila, Philippines
25–27 June 2013
REPORT

TWENTY-SECOND MEETING OF THE TECHNICAL ADVISORY GROUP (TAG) ON IMMUNIZATION AND VACCINE-PREVENTABLE DISEASES IN THE WESTERN PACIFIC REGION

Manila, Philippines
25–27 June 2013

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NOTE

The views expressed in this report are those of the participants of the Twenty-second Meeting of the Technical Advisory Group (TAG) on Immunization and Vaccine-Preventable Diseases in the Western Pacific Region do not necessarily reflect the policies of the Organization.

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Keywords:

Immunization programmes/ vaccination/ vaccines/ poliomyelitis – prevention and control/ regional health planning/ measles/ rubella

This report has been printed by the Regional Office for the Western Pacific of the World Health Organization for the participants of the Twenty-second Meeting of the Technical Advisory Group on Immunization and Vaccine-Preventable Diseases in the Western Pacific Region, which was held in Manila, Philippines, 25–27 June 2013.
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACIP</td>
<td>Advisory Committee on Immunization</td>
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<tr>
<td>AEFI</td>
<td>adverse events following immunization</td>
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<td>AFP</td>
<td>acute flaccid paralysis</td>
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<td>bOPV</td>
<td>bivalent oral polio vaccine</td>
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<td>cVDPV</td>
<td>circulating vaccine-derived poliovirus</td>
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<td>CEA</td>
<td>cost-effectiveness analysis</td>
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<td>CRS</td>
<td>congenital rubella syndrome</td>
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<td>DoV</td>
<td>Decade of Vaccines</td>
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<td>DTaP</td>
<td>diphtheria-tetanus-acellular pertussis</td>
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<td>DTP</td>
<td>diphtheria tetanus pertussis vaccine</td>
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<td>DTwP</td>
<td>diphtheria tetanus whole-cell pertussis</td>
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<td>EPI</td>
<td>Expanded Programme on Immunization</td>
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<td>EVM</td>
<td>effective vaccine management</td>
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<td>FRR</td>
<td>financial resource requirements</td>
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<td>GVAP</td>
<td>Global Vaccine Action Plan</td>
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<tr>
<td>Hib</td>
<td>haemophilus influenza type b</td>
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<td>HPV</td>
<td>human papillomavirus</td>
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<td>HSCC</td>
<td>Health Sector Coordination Committee</td>
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<td>ICC</td>
<td>Interagency Coordinating Committee</td>
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<td>IPV</td>
<td>inactivated polio vaccine</td>
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<td>JE</td>
<td>Japanese encephalitis</td>
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<td>MCV1</td>
<td>first dose of measles-containing vaccine</td>
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<tr>
<td>MCV2</td>
<td>second dose of measles-containing vaccine</td>
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<td>MLM</td>
<td>mid-level managers</td>
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<td>mOPV</td>
<td>monovalent oral polio vaccine</td>
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<td>NIP</td>
<td>National Immunization Program</td>
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<td>NIPH</td>
<td>National Institute of Public Health</td>
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<td>NITAG</td>
<td>National Immunization Technical Advisory Group</td>
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<td>NRA</td>
<td>national regulatory authority</td>
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<td>OPV</td>
<td>oral poliovirus vaccine</td>
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<td>PICs</td>
<td>Pacific island countries and areas</td>
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<tr>
<td>RCC</td>
<td>Regional Certification Commission</td>
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</table>
REC  reaching every community
RED  reaching every district
SAGE  Strategic Advisory Group of Experts
SIA  supplementary immunization activity
TAG  Technical Advisory Group
tOPV  trivalent oral poliovirus vaccine
UNICEF  United Nations Children's Fund
VAPP  vaccine-associated paralytic poliomyelitis
cVDPV  circulating vaccine derived poliovirus
WHA  World Health Assembly
WPV  wild poliovirus
SUMMARY

The Twenty-second Meeting of the Technical Advisory Group (TAG) on Immunization and Vaccine-Preventable Diseases in the Western Pacific Region was held 25–27 June 2013 in Manila, Philippines and was attended by six TAG members, participants from 14 countries and areas, 41 representatives from partner organizations, and WHO staff from Headquarters, the Regional Office and country offices.

Dr Shin Young-soo, WHO Regional Director for the Western Pacific, welcomed all participants and asked TAG members to provide guidance on four main issues: implementation of the global polio endgame strategic plan in the Western Pacific Region; continued work on the regional goals for maintaining polio-free status, measles and maternal and neonatal tetanus elimination and accelerated hepatitis B control; newly proposed regional goals for rubella elimination, accelerated Japanese encephalitis control, achieving routine immunization coverage targets and evidence-based introduction of new vaccines; and implementation of the Global Vaccine Action Plan (GVAP) through a regional framework that incorporates the regional goals.

The Polio Eradication and Endgame Strategic Plan 2013–2018 was reviewed with emphasis on two critical actions for all oral polio vaccine (OPV)-using countries: introduction of one dose of inactivated polio vaccine (IPV) into the routine immunization schedule by October 2015 and replacement of trivalent OPV (tOPV) with bivalent OPV (bOPV) by April 2016. The TAG endorsed the urgent implementation of necessary steps to achieve these actions, along with improvements in acute flaccid paralysis (AFP) surveillance, identification of and action to reduce polio immunity gaps, and initiation of the second phase of poliovirus laboratory containment.

The TAG reinforced existing regional goals to remain polio-free, to eliminate measles and maternal and neonatal tetanus, and to achieve accelerated control of hepatitis B. The TAG noted progress in the elimination of measles and the remaining challenges of endemic transmission and endemic or imported outbreaks in several countries. For hepatitis B, 2017 is proposed as the target year for the less than 1% seroprevalence goal, and progress toward the goal is very promising. All but four countries in the Region have been validated to have eliminated maternal and neonatal tetanus.

The TAG recommended the establishment of four new regional goals: for rubella elimination, with the target year to be discussed and defined in the 2014 TAG meeting; for JE accelerated control; for increased routine vaccination coverage; and for evidence-based introduction of new vaccines.

A draft regional framework for implementation of GVAP was presented. This framework is built around the GVAP strategic objectives and proposes a series of priority actions to be taken by the countries and the WHO Regional Office for the Western Pacific. The framework also links achievement of the regional immunization goals with the GVAP strategic objectives. The TAG endorsed in principle the draft framework and the priority actions.
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1. INTRODUCTION

The 22nd Meeting of the Technical Advisory Group (TAG) on Immunization and Vaccine-Preventable Diseases in the Western Pacific Region was held in Manila, Philippines, from 25 to 27 June 2013.

1.1 Objectives

(1) to review and discuss the status of preparation and needs for implementation of Global Vaccine Action Plan (GVAP) in each Member State with national Expanded Programme on Immunization (EPI) managers in the Region and representatives from global and regional immunization partners;

(2) to consult on and further develop a draft "Regional Plan of Action from Implementation of Global Vaccine Action Plan in the Western Pacific; and

(3) to present the draft of the regional operational plan for polio eradication and endgame strategy 2013–2018 and review its implications for countries of the Region.

1.2 Organization

The meeting was attended by six TAG members, two temporary advisors, 25 participants from 14 countries and areas, 41 representatives from partner organizations, one consultant and WHO staff from headquarters, the Regional Office and country offices. The timetable of the meeting is provided in Annex 1. The list of participants is included in Annex 2.

1.3 Opening remarks

Dr Shin Young-soo, WHO Regional Director for the Western Pacific, welcomed TAG members and participants and summarized recent immunization achievements in the Western Pacific Region, highlighting the retention of polio-free status after China’s successful response to the polio outbreak in 2011; achievement of the 2012 regional milestone of less than 2% prevalence of hepatitis B in five-year-old children and the Region’s readiness to achieve the regional goal of less than 1% prevalence; the progress made towards measles elimination; the progress in maternal and neonatal tetanus elimination; and the successful support of continuously expanding high quality laboratory networks. Dr Shin also noted the significant progress made in strengthening national immunization regulatory bodies with the creation of the Regional Alliance of National Regulatory Authorities (NRA).

Addressing the TAG and country participants, Dr Shin asked for guidance on how this Region should implement two global initiatives recently presented at the World Health Assembly, the Polio Eradication and Endgame Strategic Plan and the Global Vaccine Action Plan. He requested that the TAG address what steps countries and areas in the Region should take to successfully implement the polio endgame plan, including activities to prevent the emergence and circulation of vaccine-derived polioviruses (cVDPV). He asked the TAG to review the proposed framework for implementation of the Global Vaccine Action Plan in the Western Pacific Region, including proposed regional immunization goals and priority actions, and the framework for monitoring, evaluation and accountability that includes reporting progress to the Regional Committee.
Dr Shin concluded by thanking participants for making the Expanded Programme on Immunization a vibrant and innovative force in the Western Pacific Region. He expressed his gratitude to all partners, donors and friends for their support to immunization, and wished TAG members and participants fruitful discussions during the meeting.

2. PROCEEDINGS

2.1 Polio Eradication and Endgame Strategic Plan 2013–2018

2.1.1 Presentation of the plan

Dr Roland Sutter, Coordinator, Research, Policy & Product Development, Polio Operations & Research Department, WHO Headquarters, presented on the Polio Eradication and Endgame Strategic Plan 2013–2018. There has been considerable recent progress towards polio eradication. The three polio-endemic countries (Afghanistan, Nigeria and Pakistan) reached their lowest polio incidence ever in 2013. In addition, more than six months have passed since the last wild poliovirus type 3 was detected in Africa (Nigeria) and more than one year since the last wild poliovirus was detected in Asia (Pakistan). In 2012, there was more circulating cVDPV than wild poliovirus outbreaks. These developments underline the urgent need for the endgame planning for polio eradication.

The Strategic Plan calls for the sequential cessation of Sabin strain use, starting with Sabin type 2. To do this, trivalent oral poliovirus vaccine (tOPV) will be replaced with bivalent OPV (bOPV) in a synchronized manner globally by April 2016. For risk mitigation purposes, at least one dose of inactivated polio vaccine (IPV) will be added to the routine immunization schedule, starting at least six months before the switch from tOPV to bOPV. Other components of the plan include surveillance for Sabin, Sabin-like and cVDPV type 2; affordable IPV options for all current OPV-using countries; global stockpile of monovalent OPV2 and response capacity; validation procedures; and laboratory containment.

The presentation summarized scientific data supporting the Strategic Advisory Group of Experts (SAGE) decision that immunization programmes should include at least one dose of IPV and administer this IPV dose with third dose diphtheria tetanus pertussis vaccine (DTP3) (and simultaneously with OPV), considering immunogenicity, coverage and risk of vaccine-associated paralytic poliomyelitis. Finally, the outcomes of recent GAVI Alliance board discussions were discussed; these include a commitment to play a leading role in the 73 GAVI-eligible and graduated countries.

2.1.2 Regional situation towards the endgame strategic plan

Ms Liliane Boualam, EPI Technical Officer, WHO Regional Office for the Western Pacific, presented an overview of the Western Pacific Region situation in relation to the polio endgame. The 18th Meeting of the Regional Commission for the Certification (RCC) of Poliomyelitis Eradication conclusions were shared confirming that the Western Pacific Region maintains its polio-free status after effectively controlling China polio outbreak in 2011. An update on the status of preparedness and vulnerability of countries based on the core surveillance data analysis was presented. The analysis showed immunity and surveillance gaps at subnational levels in Cambodia, the Lao People’s Democratic Republic, Papua New Guinea, the Philippines and Viet Nam. In addition, issues on completeness and timeliness of regular data reporting were
raised. A laboratory update noted that all 43 laboratories began using the recommended new algorithm.

The status of regional preparedness to achieve the objectives of the endgame strategic plan was summarized:

1. regional events that were used to introduce the endgame plan to authorities of ministry of health since early 2013;
2. polio vaccine types used in each country;
3. functional status of NRA;
4. poliovirus laboratory containment and implications for the replacement of tOPV with bOPV; and
5. elements to consider for legacy plan development.

Finally, Ms Boualam emphasized the regional assets and challenges for the advocacy, funding and human resources required to implement the endgame strategy.

2.1.3 Operational considerations for the tOPV/bOPV switch and related introduction of routine dose of IPV

Dr Roland Sutter delivered the presentation prepared by Mr Christopher Maher, Polio Operations & Research Department, WHO headquarters on programmatic considerations for the OPV switch and IPV introduction.

When considering switch from tOPV to bOPV, the following need to be in place: licensing of bOPV products in oral polio vaccine (OPV) producing and using countries; close coordination with manufacturers to ensure adequate bOPV availability; and coordination of bOPV tendering and shipments for replacement of tOPV to create a seamless supply. Likewise, the introduction of IPV into the routine schedule requires: (1) establishment of the schedule (i.e. single dose, intramuscular, with DPT3 and OPV3); (2) training of staff; (3) licensing of IPV products where needed; (4) close coordination with manufacturers to ensure adequate IPV availability; (5) securing a funding source; and (6) coordination of IPV tendering and shipments.

The presentation then discussed the importance of setting target dates for these changes as early as possible, the need for close coordination between manufacturers and policy-makers on bOPV and IPV needs, the availability of these products through a national tendering process or United Nations Children Fund (UNICEF), and the globally synchronized and coordinated switch from tOPV to bOPV. A resolution of the World Health Assembly (WHA) will be important to support these policy changes. Finally, the implications of these changes in terms of planning and implementation at the national, provincial and health centre levels were discussed, including what constitutes destruction of the remaining tOPV stocks and documentation requirements.
2.1.4 Country presentations

2.1.4.1 The Lao People's Democratic Republic: increasing immunity of high-risk populations

Dr Anonh Xeuatvongsa, National Immunization Program Manager, the Lao People’s Democratic Republic, presented on initiatives to increase immunity in high-risk populations. Despite having increased national coverage for most antigens in the routine immunization schedule by 20% since 2007, the Lao People’s Democratic Republic still faces many challenges that result in inadequate delivery of vaccination and other essential health services to some populations. Outbreaks of vaccine-preventable diseases have occurred in some areas where there are still important immunity gaps.

In the Lao context, most vaccinations are given through outreach services; national policy states that a minimum of four rounds should be provided annually to each community but this is not always feasible to implement. Supplementary immunization activities (SIAs) help to fill the gap and are also used to strengthen the system in many areas, through updating and improving microplans and providing additional trainings in vaccine safety, logistics and adverse events following immunization (AEFI). The availability of resources, political commitment, community involvement and very high health worker motivation are crucial factors for success.

The last subnational SIA provided five different vaccines to children according to age between birth and 14 years, a challenging undertaking. Both administrative coverage and rapid convenience assessment data showed that the multi-antigen approach was successful in most areas. Risk assessments have also been used to guide specific activities such as measles mop-up rounds, additional tetanus toxoid rounds and additional OPV vaccinations. These risk assessments were coupled with microplanning activities that identified the communities not receiving necessary health services.

2.1.4.2 Malaysia: experience with a sequential schedule

Dr Rohani Jahis, National EPI Manager, Ministry of Health, presented on the Malaysian National Immunization Programme’s experience with implementing a sequential IPV and tOPV schedule. The programme’s decision followed the 2007 WHA resolution on IPV introduction. The risks of vaccine-associated paralytic poliomyelitis (VAPP) and cVDPV, in an environment free from wild polio, were important factors in the policy-makers’ decision.

IPV was introduced as part of a five-antigen combination vaccine. The choice of vaccine aimed to minimize the number of injections per child during a single visit and accomplish several simultaneous changes in the infant immunization schedule: adding IPV in a sequential schedule with OPV, switching from whole-cell pertussis to acellular pertussis vaccine, adding a haemophilus influenzae type b (Hib) booster, and reducing the number of hepatitis B doses from four to three. The OPV sequential schedule contains four IPV doses at ages 2, 3, 5 and 18 months, and one OPV dose.

A DTaP-IPV/Hib pilot project was started in 2008 in seven of the most populous states and territories. Evaluation of the pilot led to a decision to expand the programme nationally. Communications materials and staff training used to implement this switch were briefly presented. Key elements of success were said to be strong stakeholder support and the availability of long-term funding to ensure sustainability. Parents’ acceptance of the new vaccine was very good and the number of reported AEFI decreased compared to the period of diphtheria tetanus whole-cell pertussis use.

2.1.4.3 Japan: experience with IPV introduction
Dr Koji Nabae, Ministry of Health, Japan, presented on the Japan experience with IPV introduction. In 1960, Japan had its largest wild poliovirus (WPV) outbreak with more than 5000 cases. To control the outbreak, Japan imported "unlicensed" OPV vaccines from the former Soviet Union and Canada. As result, the outbreak was controlled and OPV was introduced to the routine programme in 1962. The last indigenous WPV in Japan was reported in 1980. Since then, VAPP cases have been the only polio cases reported in the country’s case-based surveillance system. Domestic development of an IPV based on a Sabin poliovirus strain was initiated in 1998 and the resulting Sabin-derived IPV vaccine was approved by the NRA in July 2012 and introduced nationally in November 2012. This vaccine was the first IPV developed and used in the world, and was available in a combination vaccine (DTP-IPV) as well. Studies demonstrated the interchangibility of IPV with OPV and Salk-derived IPV. Finally, Dr Nabae noted the challenges and questions faced during the switch:

a. tight timeline to introduce IPV
b. had to introduce stand-alone vaccines for children who had completed the original combination vaccines
c. high price of IPV compared to OPV
d. ensuring a stable supply of vaccine
e. whether to use IPV or OPV in the outbreak response plan
f. whether an additional (fifth) dose was needed after age of four years.

2.1.5 Global and regional polio vaccine demand, supply and management within the current and future needs of the Endgame Strategic Plan

Dr Maya van den Ent, Health Specialist, UNICEF, presented information on demand and supply issues for IPV and OPV in the context of the polio eradication endgame. Implementation of the endgame strategy includes introduction of at least one dose of IPV in the infant immunization schedule and withdrawal of OPV type 2 by replacing tOPV with bOPV in routine immunization and campaigns. Although global production capacity for IPV is projected to be sufficient, current supply does not meet the expected demand. The timeline for increased demand for IPV vaccine must be forecasted and communicated to industry to enable scaling up of IPV production. Lead times for IPV vary between 6 and 18 months depending on recipient country and supplier. Globally, a prioritization process will be developed to match demand to supply. Current projections put annual IPV demand at around 74 million doses (if dose-sparing intradermal administration is used) to 156 million doses (if full-dose intramuscular administration is used) in countries currently using OPV, between 2015 and 2018.

The replacement of tOPV by bOPV is a complex activity and requires close coordination between the programme and industry to ensure sufficient supply of tOPV until the switch and sufficient bOPV after the switch. The lead time for bOPV bulk production is two years, so planning and demand forecasting is critical. For IPV introduction and the switch to bOPV, countries need to consider choice of product, registration timelines for each presentation (single-dose and multi-dose vials), dosing schedules (1 vs. 2 or more doses), requirements for supplemental immunization activities, forecasting of required devices, procurement channel (self-procurement or through UNICEF Supply Division), and funding source.
2.1.6 Regional perspectives and questions for the TAG

Ms Liliane Boualam presented regional perspectives on the Polio Endgame Strategic Plan. She noted the diversity among Western Pacific Region countries in relation to the four objectives of the endgame strategic plan. Objectives two and three were identified as most relevant in this Region. High priority operational considerations for the endgame strategy in the 17 OPV-using countries include:

a. immunization schedule (routine immunization, campaign, 1 or 2 IPV doses), mode of administration (intramuscular, intradermal or combination), licensure (of IPV, bOPV, mOPV1, mOPV2, and mOPV3), and the timeline of IPV introduction;

b. financial sustainability of the IPV introduction and long-term supply;

c. advocacy for key political and other stakeholders as well as communication strategies to reach health workers and the public prior to IPV introduction;

d. vaccine tendering, pricing and logistics (including cold chain capacity); and

e. NRA strengthening when required.

The status of polio laboratory containment was presented, along with the next steps to be taken in this area for the Endgame Strategic Plan. The existing and planned monitoring and coordination systems at the regional and global levels were also presented. Finally, country and regional challenges for implementing the endgame strategic plan were summarized and regional perspectives on how to address these challenges were given.

2.2 Global Vaccine Action Plan (GVAP)

2.2.1 Introduction of background, objectives, and agenda of the GVAP session

Dr Sergey Diorditsa, EPI Team Leader, WHO Regional Office for the Western Pacific, introduced the session on GVAP and the development of the regional framework for implementation of GVAP in the Western Pacific. GVAP outlines six strategic objectives aimed at reaching the five Decade of Vaccines goals: achieving a world free of polio; meeting global and regional elimination targets; meeting vaccination coverage targets in every region, country and community; developing and introducing new and improved vaccines and technologies; and exceeding the Millennium Development Goal 4 target for reducing child mortality. The WHO Regional Office for the Western Pacific developed a regional framework to implement GVAP in the Western Pacific Region, incorporating steps to achieve the regional immunization goals. The session is structured to review the regional immunization goals and then each of the strategic objectives, sharing country experiences in these areas and describing an intercountry consultation process leading to proposal of priority actions for achieving these objectives in the Western Pacific context.

2.2.2 Update on GVAP

Dr Jean-Marie Okwo-Bele, Director, Family and Community Health, Immunization Vaccines and Biologicals, WHO headquarters, presented an overview of GVAP and its role in shaping immunization programmes in the coming decade. GVAP builds on the success of the Global Immunization Vision and Strategy (2006–2015) to address new challenges and drive the efforts of the global immunization community during 2010–2020. The ultimate goal of GVAP is
a world in which all individuals and communities enjoy lives free from vaccine-preventable diseases.

GVAP is the new global framework to secure a world free of poliomyelitis and assure the global or regional elimination of measles, rubella and neonatal tetanus. GVAP aims to harness the full potential of existing vaccines as well as the potential for innovative vaccine products and delivery technologies. As the example of global measles elimination efforts has demonstrated, achievements are fragile and it is important to consider how to sustain the gains of global eradication and elimination programmes. GVAP also addresses how to accelerate progress towards universal access for vaccines currently available in routine national immunization programmes and increased introduction of new and underutilized vaccines. GVAP identifies five global immunization goals and uses a framework of six strategic objectives to guide the planning of national immunization programmes.

2.2.3 Western Pacific Region immunization goals 2014–2020

2.2.3.1 Regional overview

Dr Sergey Diorditsa, presented an overview of progress in the Western Pacific Region towards achieving the regional objectives of the EPI. Immunization programmes across the Western Pacific Region strive to protect every child from diseases that can be prevented with vaccines, and provide technical expertise to help ensure vaccine quality, monitor the impact of vaccinations, and promote rational vaccine introduction.

The Region has maintained polio-free status and has made remarkable progress towards achieving the measles elimination and accelerated hepatitis B control goals. More efforts are needed to achieve maternal and neonatal elimination in the Region. Providing critical contributions to the achievements in disease elimination, the Region has significantly strengthened laboratory capacity for poliovirus detection with a new algorithm and improved measles virus tracking by scaling-up molecular genotyping capacities in the Region’s network laboratories.

Two areas of emphasis in the Region from 2012 to 2013 were the rational introduction of new vaccines and keeping immunization safe with vaccines of assured quality. While the biggest future health impact of immunization will be achieved through expanded use of new vaccines, the vast majority of the Region’s population resides in middle-income countries that do not have access to external support for new vaccines and cannot afford to self-finance them.

The Region has achieved and maintained a high level of routine vaccination coverage over the last five years. However, despite national-level achievements, subnational data reveal gaps. For example, in 2012, only 18% of districts in the six EPI priority countries achieved DPT3 vaccine coverage of more than 80%. However, those districts were home to almost one third of the children living in these countries. Inequitable access to immunizations remains a major problem in many countries, with coverage gaps of up to 30% between the highest and lowest wealth quintiles. Achievement of the disease elimination and control goals requires very high levels of routine vaccination coverage. Greater efforts to identify and reach high-risk populations to close remaining immunity gaps are urgently needed.

2.2.3.2 Hepatitis B, measles and rubella

Dr Wang Xiaojun, EPI Medical Officer, WHO Regional Office for the Western Pacific presented the status of the Regional goals for accelerated hepatitis B control and measles elimination, and a proposed new goal for rubella elimination. In 2003, the Regional Committee
for the Western Pacific Region endorsed a resolution to call for measles elimination and hepatitis B control as new twin goals to strengthen EPI. In 2005, the Regional Committee set 2012 as the target year for eliminating measles and reducing the seroprevalence of hepatitis B surface antigen to less than 2% in 5 year-old children, as an interim milestone towards the regional goal of less than 1% hepatitis B surface antigen seroprevalence.

Remarkable progress has been made towards achieving the twin goals. As of 2013, the Region as a whole and at least 30 countries and areas have reduced chronic infection rates in children to under 2%. Ten countries and areas have been officially verified to have achieved the regional goal of reducing hepatitis B infection rates in children to less than 1%, including Australia, Brunei Darussalam, China, Hong Kong (China, SAR), Macao (China, SAR), Malaysia, Mongolia, New Zealand, Palau and the Republic of Korea. Building on this success, the Region’s Hepatitis B Expert Review Panel proposed to set 2017 as the target year to achieve the goal of reducing childhood hepatitis B prevalence to less than 1%. This proposal was endorsed by the TAG in 2012 and this goal has been included in the Regional Framework for Implementation of GVAP in the Western Pacific. Next steps include updating the strategic plan to reflect the target year for the 1% goal; supporting countries to increase hepatitis B vaccine birth dose and three-dose coverage; continuing to conduct seroprevalence surveys and verify achievement of targets; and increasing the focus on coordination with newborn care and strengthening of routine immunization.

The number of measles cases declined by 93% from 2008 to 2012. In 2013, however, measles remains endemic in at least three countries (China, Malaysia and the Philippines) and several countries have experienced outbreaks from endemic or imported measles virus, resulting in increased incidence for the Region. In 2012, the Regional Committee reviewed progress towards measles elimination and adopted a resolution calling for intensified efforts to interrupt endemic transmission as soon as possible in the countries concerned, and to close immunity and surveillance gaps and build systems and capacity for adequate outbreak preparedness and response. To assist countries with implementation of the 2012 Regional Committee resolution and to effectively address the remaining challenges, the WHO Regional Office for the Western Pacific has developed a Measles Elimination Field Guide and Guidelines on Verification of Measles Elimination in the Western Pacific Region.

In 2009, the TAG endorsed the 2015 targets for accelerating control of rubella and preventing congenital rubella syndrome (CRS), including reduction of rubella incidence to less than 10 per million population and CRS incidence to less than 10 per million live births. In order to take the opportunity of measles elimination efforts and to build on progress towards rubella control, a regional goal of rubella elimination has been proposed as part of Regional Framework for Implementation of GVAP in the Western Pacific, with the target year to be defined in the near future. The rationale for establishing a rubella elimination goal in the Western Pacific Region includes the following: (1) rubella is endemic in the Region with over 44 000 cases reported in 2012 and CRS has been recognized as an important public health issue; (2) rubella elimination is feasible based on the availability of effective interventions and successful experiences in the Region of the Americas; and (3) measles elimination activities provide a unique opportunity to achieve simultaneous rubella elimination through the use of combination vaccine. Important progress has been made towards accelerating rubella control in recent years, including an increased number of countries using combination measles-rubella vaccine and an increased number of countries integrating measles and rubella surveillance. As a way forward, countries are encouraged to integrate measles and rubella elimination activities whenever possible; build rubella case-based surveillance, ideally integrating with measles surveillance; and gain understanding of rubella epidemiology and population immunity profiles to help develop effective and feasible immunization strategies to achieve rubella elimination.
2.2.3.3 Maternal and neonatal tetanus elimination

Dr Jorge Mendoza-Aldana, EPI Technical Officer, WHO Regional Office for the Western Pacific reviewed the status of the regional goal for maternal and neonatal tetanus elimination. Dr Mendoza-Aldana summarized progress in reducing the number of deaths due to neonatal tetanus from 1988 to April 2013, noting the achievement of China, which was validated to have eliminated neonatal tetanus in 2012. Four countries in the Region (Cambodia, the Lao People’s Democratic Republic, Papua New Guinea and the Philippines) have yet to eliminate this disease. Dr Mendoza-Aldana presented maps indicating the subnational distribution of neonatal tetanus in the first three of these countries.

The proposed target for the Western Pacific Region is to achieve maternal and neonatal tetanus elimination in the four remaining countries of the Region by 2015. Key areas of work needed to reach this target have been identified as: boosting population immunity throughout the life course, including pregnant women and women of reproductive age; clean newborn deliveries and safe cord care practices; and high quality neonatal tetanus surveillance. Five of the GVAP strategic objectives contain strategies that address these challenges. Dr Mendoza-Aldana presented the activities planned for 2013 by the four countries that have yet to achieve maternal and neonatal tetanus elimination, highlighting the validation assessment to be conducted in the Lao People’s Democratic Republic at the end of the year.

2.2.3.4 Japanese encephalitis accelerated control

Dr Kimberley Fox, EPI Technical Officer, WHO Regional Office for the Western Pacific presented a proposal to develop a new regional goal for accelerated control of Japanese encephalitis (JE). JE virus is a leading cause of encephalitis in the Western Pacific Region, with more than half of the estimated 68 000 annual global cases occurring in this Region. JE has a high case fatality ratio (20%–30%) and up to half of survivors have long-term neurologic sequelae. However, JE control is feasible and several factors suggest that accelerated control in the Region can be now achieved. Experience in several countries demonstrates that the incidence of human disease can be reduced to very low levels by vaccination programmes achieving high coverage among young children. As of 2013, sentinel or national surveillance for JE has been established in all 12 countries in this Region with known endemic JE virus transmission, and a network of WHO-accredited JE laboratories provides quality testing for JE surveillance. Several effective JE vaccines are produced and licensed in the Region, and seven countries have introduced JE vaccine in some or all risk areas.

Several challenges to establishing and achieving a JE control goal remain: (1) expert consultation is needed to further define appropriate targets and the strategies and actions needed to achieve the goal; (2) no JE vaccine is WHO-prequalified yet, though several are undergoing review; (3) substantial financial and human resources would be needed to implement wide age-range campaigns as recommended by WHO for JE vaccine; and (4) fragmented JE surveillance systems and incomplete standardization of reporting make it difficult to monitor progress in JE control. Five of the GVAP strategic objectives contain strategies that address these challenges.

2.2.3.5 Regional Immunization Coverage Targets

Dr Yoshihiro Takashima, EPI Technical Officer, WHO Regional Office for the Western Pacific summarized the context for regional immunization coverage targets. Vaccination coverage targets in the Global Vaccine Action Plan (GVAP) and endorsed by the WHA in 2012 are ≥90% national vaccination coverage and ≥80% vaccination coverage in every district with three doses of DTP-containing vaccines by 2015, and with all vaccines in the national programme by 2020 (WHA65.17). Adequate vaccination coverage is critical for achieving
disease control and elimination goals. The regional measles elimination goal includes coverage targets of >95% at the national level and >95% in every district with two doses of MCV. The hepatitis B accelerated control goal includes coverage targets of >90% at the national level and >90% in every district for hepatitis B birth dose, and >95% at national level and >85% in every district with three doses of hepatitis B vaccine. Many national immunization programmes in the Region have already set routine vaccination coverage targets of ≥90% or ≥95% at the national level by 2015.

In this context, Dr Takashima proposed regional immunization coverage targets of ≥95% national coverage and ≥95% coverage in every district or equivalent unit for all vaccines in the national immunization programme unless otherwise recommended.

Key challenges to achieving these regional immunization coverage targets include: (1) unreliable population estimates at subnational levels in some countries, (2) consistently weak immunization programmes in some areas; (3) lack of a reliable system to monitor district-level immunization programme performance; (4) insufficient synergy between routine immunization systems and disease control or elimination initiatives; and (5) lack of reliable systems to track individuals’ vaccination status. Five of the GVAP strategic objectives contain strategies that address these challenges.

2.2.3.6 Evidence-based introduction of new vaccines

Dr Kimberley Fox presented the proposal to develop a new regional goal for evidence-based introduction of new vaccines. New and underutilized vaccines have the potential to greatly increase the impact of national immunization programmes in the Region. Substantial disease burden has been documented in countries of the Western Pacific Region for many diseases targeted by new vaccines, including JE, rotavirus diarrhoea, pneumococcal disease, cervical cancer and typhoid. However, progress in introducing new vaccines has been slow, particularly in middle-income countries. Evaluation of new vaccines for introduction requires analysis of epidemiologic and economic data; assessment of the role of comprehensive disease prevention and control approaches; consideration of vaccine safety, supply and other characteristics; and review of immunization system strength. Technical support and capacity building are needed to assist countries in evaluating new vaccines and prioritizing them for introduction.

One of the five goals of the Decade of Vaccines is to develop and introduce new and improved vaccines and technologies. The target for this goal is introduction of at least one new vaccine by all low-income and middle-income countries by 2020. The proposed regional goal focuses on the evidence-based process for making vaccine introduction decisions, and would have targets for developing evidence-based plans and for introducing at least one new vaccine. Key challenges to achieving this goal include: (1) a regional plan with specific strategies must be developed and will require engagement of external experts and additional resources; (2) disease burden data are limited for many countries; and (3) vaccine supply, particularly for countries that rely on domestic vaccine production. All six of the GVAP strategic objectives contain strategies that address these challenges.

2.2.4 GVAP implementation in the Western Pacific Region

2.2.4.1 GVAP Strategic Objective 1

Overview

Dr Yoshihiro Takashima reviewed GVAP Strategic Objective 1, “All countries commit to immunization as a priority” and summarized the three strategies and 13 activities given in GVAP
to achieve this objective. Participants from two countries presented their experiences as examples of Western Pacific Region achievements in this area: planning and commitment to immunization (Papua New Guinea) and national immunization programme reform and establishment of an Advisory Committee on Immunization Practices (Japan).

Dr Takashima then summarized the consultative process undertaken with countries and WHO country and regional officers, to identify priority actions for the Western Pacific Region in order to achieve Strategic Objective 1 and the regional immunization goals. As a result of this process, priority action to strengthen technical assistance and promote international exchange and collaboration in seven areas was proposed to be part of the Regional Framework for Implementing GVAP in the Western Pacific Region. The seven areas were: developing and disseminating evidence on the value of immunization; establishing independent national bodies to formulate immunization policies; strengthening national immunization planning; fostering commitment to immunization financing; strengthening national regulatory systems; involving civil society and professional associations; and promoting regional exchange of information, best practices and tools.

### National Commitment and National Immunization Planning

Dr William Lagani, Manager, Family Health Services, National Department of Health, presented on national commitment and planning for immunizations. Papua New Guinea has significant geographical constraints, with 17% of the population having no access to the road system, yet growing mineral and liquid natural gas wealth that has not yet translated into significant improvement in the country’s Human Development Index. The Government of Papua New Guinea has recently emphasized improvement of the health system through rural primary health services, including investment in midwifery schools and community health training. Papua New Guinea has a strong system of evidence-based decision-making through the Child Health Advisory Group and Interagency Coordination Committee (ICC). The commitment of the Government to research and development includes a partnership among the Papua New Guinea Institute of Medical Research, universities, WHO and the Australian Agency for International Development (AusAID). WHO and AusAID provide technical and financial support to improve the routine immunization system in collaboration with the Government and development partners. The Government’s funding of the third tetanus toxoid campaign round, full procurement of routine vaccines and around 50% (more than required) co-financing of pentavalent vaccine demonstrates the commitment of the Government to the immunization programme and the sustainability of this programme. The Government has integrated interventions such as deworming and vitamin A supplementation into the campaigns to use resources efficiently. Based on lessons learnt from this experience and with technical support from WHO, an integrated EPI and maternal and child health outreach activity will form the basis for strengthening the country’s routine immunization programme.

### National Immunization Programme Reform in Japan — Establishment of Advisory Committee on Immunization Practices, Japan

Dr Koji Nabae, Ministry of Health, Labor and Welfare, Japan, presented an overview of the establishment of an advisory committee on immunization practices, named the Immunization and Vaccine Committee of the Health Science Council. Partially due to a series of lawsuits against the government for adverse events following immunization (AEFI) in the 1990s, the national immunization programme in Japan lagged behind other developed countries in introducing new vaccines into the routine vaccination schedule. To address this gap, reform of national programme was initiated in 2010. After three years of deliberation, the Immunization Law was amended and enacted in April 2013. The reform has four major components: (1) development of a national immunization plan; (2) introduction of three new vaccines into the
routine vaccination schedule (human papillomavirus [HPV] vaccine, Hib vaccine and pneumococcal conjugate vaccine [PCV]); (3) establishment of a system for mandatory reporting of AEFI; and (4) creation of an advisory committee on immunization practices to provide technical advice to the Ministry of Health, Labour and Welfare for development of national immunization policies.

The committee has three subcommittees on: (1) overall direction of immunization policy; (2) research and development of vaccines; and (3) evaluation of AEFI. Members of the committee include medical experts, representatives from local government, a health economist, lawyer and media representative; governmental organizations, academia, manufacturers, wholesalers and consumer representatives are included as liaison or ex-officio members. Key issues presently under discussion in the committee include development of a five-year national immunization plan; introduction of additional new vaccines into the routine vaccination schedule (chicken pox, mumps, pneumococcal polysaccharide, hepatitis B and rotavirus vaccines); evaluation of AEFI; and future directions for vaccine research and development.

2.2.4.2 GVAP Strategic Objective 2

Overview

Mr Gabriel Anaya, EPI Programme Management Officer, WHO Regional Office for the Western Pacific reviewed GVAP Strategic Objective 2, "Individuals and communities understand the value of vaccines and demand immunization as both their right and responsibility" and summarized the three strategies and 12 activities given in GVAP to achieve this objective. Participants from two countries presented their experiences as examples of Western Pacific Region work on this area: incentives such as conditional cash transfers for households (Philippines) and social media tools and the use of National Immunization Week for immunization advocacy (China).

Mr Anaya then summarized the consultative process undertaken with countries and WHO country and regional officers, to identify priority actions for the Western Pacific Region in order to achieve Strategic Objective 2 and the regional immunization goals. As a result of this process, three priority actions were proposed to be part of the Regional Framework for Implementing GVAP in the Western Pacific Region: assess the use of cash incentives for households and for health care workers and their impact on improving and maintaining immunization coverage levels; evaluate the results of social media efforts during immunization week and develop a plan for use of the most effective tools in countries with the capacity to use social media; and develop a curriculum for health care workers on effective communication techniques.

Incentives for households (conditional cash transfer) in the Philippines

Dr Joyce Ducusin, National EPI Manager, Department of Health, Philippines, presented on the use of conditional cash transfers as household incentives for immunization. The Pantawid Pamilyang Pilipino Programme provides cash transfers to poor households, conditional upon investments in child education and health and use of maternal health services. The objective of the programme is to break the intergenerational transmission of poverty while providing immediate financial support to the household. Specific objectives are to keep children in school, keep children healthy and invest in the future of children. Poor households are identified through a transparent mechanism using a statistical model to estimate income. Households with children under 15 years old and/or a pregnant woman are identified and receive cash grants of Php 500 to 1400 per household per month, depending on the number of eligible children.
A 2012 World Bank evaluation found that the programme enabled poor households to keep children 3 to 11 years old in school; reduced severe stunting among young children (6–36 months); increased health facility visits of children under 5 years old for growth monitoring, vitamin A supplementation and deworming; and increased the use of antenatal and postnatal care services. The study did not find significant improvements in the use of skilled or facility-based child delivery or in immunization coverage. Stronger coordination with local health care providers may be required to ensure that mothers and children receive all the intended basic health services. To strengthen the programme, community health teams have been established to assess health needs, deliver health messages, and facilitate health service access.

**Social media tools and National Immunization Week for advocacy**

Dr Cui Fuqiang, Deputy Director, National Immunization Program, Chinese Center for Disease Control and Prevention, presented on social media tools and National Immunization Week for advocacy. The China National Immunization Program uses social media tools to promote immunization efforts for routine immunization and for polio and measles campaigns. The purpose of the China social media efforts is to improve parental awareness of the importance of immunization, allay parental anxiety about vaccines and immunization, increase vaccination coverage levels, and control vaccine-preventable diseases. Strategies used include advocacy among government leaders, cooperation across societal sectors, use of media tools, and international cooperation. Several powerful examples of the use of these strategies were provided, including the Xinjiang polio outbreak of 2011, the measles SIA of 2010, and vaccination response to the H1N1 influenza pandemic. China has been implementing Immunization Day annually since 1986. Each Immunization Day (later, Week) has been characterized by a theme. In 2013, the theme was “healthcare and immunization,” and involved television, the internet, and posters. The China national immunization programme has also promoted World Hepatitis Day with workshops, television, and internet communication. The programme is also working with the WHO China office and US CDC on a study of parental confidence in vaccines and immunization.

Challenges faced by the China national immunization programme include parental unfamiliarity with vaccine-preventable diseases, the ability of the Internet to spread misinformation about vaccines and immunization, and reaching migrant and minority children. China is conducting multi-year strategic planning on health risk communication to support immunization efforts. This planning includes media outreach, research on public and stakeholder concerns, and strengthening multisectoral collaboration.

**2.2.4.3 GVAP Strategic Objective 3**

**Overview**

Dr Yoshihiro Takashima reviewed GVAP Strategic Objective 3, “The benefits of immunization are equitably extended to all people” and summarized the two strategies and 11 activities given in GVAP to achieve this objective. Participants from four countries presented their experiences as examples of Western Pacific Region achievements in this area: a high-risk community strategy (Cambodia); a school health programme (Malaysia); engaging health workers, civil society and communities to reach every district (Mongolia); and accelerating control of Japanese encephalitis (the Lao People’s Democratic Republic).

Dr Takashima then summarized the consultative process undertaken with countries and WHO country and regional officers, to identify priority actions for the Western Pacific Region in order to achieve strategic objective 3 and the regional immunization goals. As a result of this process, seven priority actions were proposed to be part of the Regional Framework for
Implementing GVAP in the Western Pacific Region: improve vaccination coverage monitoring through national birth registries, national vaccination cards and coverage surveys; further develop initiatives to reach every district or community; promote the use of school-based strategies where appropriate; introduce IPV, rubella-containing vaccine, JE vaccine and other appropriate new vaccines; strengthen capacity for response to outbreaks of vaccine-preventable diseases; share experiences and lessons learnt among Member States implementing these actions; and accelerate collaboration among Member States and stakeholders to mobilize resources to implement these actions.

Reaching Every Community High-Risk Community Strategy in Cambodia

Dr Chheng Morn, Deputy Manager, National Immunization Programme (NIP), Ministry of Health presented on Cambodia’s reaching every community (REC) high-risk community strategy. This strategy is key for achieving national immunizations including measles elimination. In 2010, a national EPI review was used to identify characteristics of population groups that were underserved and marginalized and thus at risk for being under-immunized. These groups were found to be the urban poor, remote rural ethnic communities and migrant workers. Over 2000 high-risk communities were mapped and then prioritized during measles SIA in 2011. During one SIA, routine immunization data were collected from immunization cards of over 32 500 children under 2 years old. These data were used to assign a specific risk status to each community; 1600 communities were identified as high-risk for under-immunization.

The REC Strategy in Cambodia relies on microplanning at health centres to prioritize high-risk communities for immunization, especially for outreach. Oversight and management takes place at national, provincial and district levels, and implementation relies on close cooperation with community and village volunteers. The link with measles elimination occurs at the second routine measles (MCV2) dose during outreach sessions in high-risk communities. The MCV2 dose is given to children 18 to 23 months old and is used as an opportunity for systematic checks of immunization status and administration of missed vaccine doses. The results are encouraging: Cambodia has had no measles cases since November 2011 and 2012 national coverage for the third dose of DTP is 95%, with only 15% of districts having coverage below 80%.

Malaysian School Health Programme

Dr Rohani Jahis, National EPI Manager, Ministry of Health, Malaysia, presented an overview of the Malaysian school health programme and its immunization component. The Ministries of Health and Education established the Joint Committee on School Health in 1968 and school health teams in 1972. The Prevention and Control of Infectious Disease Act of 1988 provided further legislative support for the programme. The school health programme aims to create a healthy environment in the school, to optimize children’s health status, to detect health problems and disabilities in school children, and to build partnerships in health. To achieve these objectives, the Ministry of Health coordinates or provides health education, health screening, vaccination, curative and referral services, dental health services, and environmental health services, while the Ministry of Education addresses nutrition and health education through the curriculum.

The school health immunization programme is one component of school health services and is provided by school health teams including doctors, assistant medical officers, and public health and community nurses. Six vaccines are given by the school health team: diphtheria/pertussis, oral polio, measles and BCG (if no scar) for children in Grade 1; HPV for girls in Grade 7; and tetanus toxoid for Grade 9. Target coverage for each vaccine is 95%.
**Engagement of health workers, civil society and communities by reaching every district (RED) strategy in Mongolia**

Dr Dorj Narangerel, National EPI Manager, Mongolia, presented on the engagement of health workers, civil society and communities as part of the RED strategy in Mongolia. The country’s harsh climate and low population density makes the delivery of health services, including immunizations challenging. Mongolia initiated RED strategy implementation in 2008 with a goal of improving access to immunization and maternal and child health services in the most difficult-to-reach populations. Specific RED objectives are: (i) re-establishing outreach vaccination services; (ii) providing supportive supervision; (iii) linking services with communities; (iv) monitoring and using data for action; and (v) planning and managing resources.

Mongolia’s RED strategy goes beyond immunization to include other health programmes (Integrated Management of Childhood Illness, antenatal care and nutrition) and social welfare services. The strategy has engaged health care workers for local coordination and service delivery, international and national civil society organizations for social welfare services, and health volunteers and communities to map hard-to-reach populations. Currently, six provinces and five city districts are implementing the RED strategy with support from WHO, UNICEF and GAVI Alliance.

Areas implementing the RED strategy have reduced infant and child mortality and have improved coverage for routine vaccination and antenatal care. However, the absence of mechanisms for partnership and joint funding between the health and social sectors remains a challenge. To address these challenges, Mongolia plans to link social welfare and health services for communities through a “one window” approach, assign a national RED focal point, and provide financial sustainability for RED implementation by revising health care financing formulas.

**The Lao People's Democratic Republic: introduction of Japanese encephalitis vaccines (accelerated JE control)**

Dr Anonh Xeuatvongsa, Manager, National Immunization Programme, presented on recent activities to accelerate Japanese encephalitis (JE) control in the Lao People’s Democratic Republic. JE was first identified in the Lao People’s Democratic Republic in the 1980s and became widely recognized as laboratory testing became increasingly available and surveillance systems strengthened. JE has been identified in most of the northern provinces, occurs with a strong seasonal pattern peaking during the rainy season (May to September) and affects primarily children under 15 years old. Approximately 50% of acute encephalitis syndrome cases in surveillance since 2010 were confirmed to be JE. Few cases have been identified in southern or central provinces, but this may reflect poor sensitivity of the surveillance system rather than absence of transmission.

The Ministry of Health decided to conduct a JE immunization activity targeting the six northern provinces that reported most of the laboratory-confirmed JE cases. Through an agreement between PATH and the vaccine producer, Chengdu Institute of Biological Products, doses of the live attenuated SA 14-14-2 JE vaccine were provided for the six provinces’ estimated target population of 570,000 children one to 14 years old. After health workers were trained and a JE communications strategy implemented, the immunization activity was conducted. Strong political commitment and community participation resulted in high community demand for the vaccine. Administrative data showed high coverage (99% overall), which was confirmed by external monitoring teams deployed to participating provinces. The Ministry of Health plans to continue JE vaccination and efforts to strengthen encephalitis
surveillance in these areas, and is exploring options to expand JE vaccination to other regions of the country.

2.2.4.4 GVAP Strategic Objective 4

Overview

Dr Jorge Mendoza-Aldana reviewed GVAP Strategic Objective 4, “Strong immunization systems are an integral part of a well-functioning health system” and summarized the four strategies and 15 activities given in GVAP to achieve this objective. Participants from four countries presented their experiences as examples of Western Pacific Region achievements in this area: improvement of data quality and data use to improve programme performance within the context of a reaching every district strategy (Mongolia); the impact of introducing a web-based surveillance reporting system (Cambodia); establishing an AEFI surveillance system and causality assessment capacity (China); and capacity building for mid-level managers and frontline health workers (Pacific island countries).

Dr Mendoza-Aldana then summarized the consultative process undertaken with countries and WHO country and regional officers, to identify priority actions for the Western Pacific Region in order to achieve Strategic Objective 4 and the regional immunization goals. As a result of this process, five priority actions were proposed to be part of the Regional Framework for Implementing GVAP in the Western Pacific Region: strengthening surveillance systems; strengthening AEFI surveillance systems; building the managerial capacity of mid-level managers; conducting effective vaccine management assessments; and using a comprehensive approach to control childhood diarrhoea and pneumonia.

Improving administrative and immunization data at all levels by RED strategy in Mongolia

Dr Gantulga Dugerjav, Head, Immunization Department, National Centre for Communicable Diseases, presented on the improvement of administrative and immunization data through the RED strategy in Mongolia. Software called RED 2.0 was developed by a district RED team and a local technology company to monitor RED-related activities at the health facility level. The main database comprises data from district hospitals, outpatient clinics and family clinics. The software has sub-databases for children, reproductive-aged women, pregnant women, elderly, disabled persons, citizens with civil registration documentation violations and others. Entry of a citizen’s civil registration number leads to automatic filling of age and sex fields and placement of the record in the relevant sub-database. The software includes search functions and automatic error correction. Dr Gantulga also noted the population mapping and reporting functions of the software. Each citizen’s residence is mapped through Google Maps even if the address is not officially registered. Reports by name or address can be produced automatically at specified frequencies.

The software was developed through a bottom-up approach, based on field staff needs and input, so it covers not only the immunization programme but is also comprehensive across public health centre programmes. Most importantly, the database covers all populations and provides real-time information. Next, the RED 2.0 software will be linked with the Ministry of Health’s e-Heath initiative and introduced into all health facilities nationwide in a phased manner.
Web-based surveillance data collection and reporting in Cambodia

Dr Chheng Morn presented on Cambodia’s web-based measles surveillance data collection and reporting system. This system was developed in order to overcome three fundamental problems: (1) there was no link between the surveillance and laboratory databases; (2) the existing database was not consistent with programme indicators; and (3) since the database was very large and difficult to back up. The first phase of improvement was to update the case investigation form to align with measles elimination data requirements. With assistance from the WHO Regional Office for the Western Pacific, an online database was developed based on the new case investigation form. Since the database is online, all staff can access it from any computer at any time. This reduces the errors of staff working on different versions simultaneously. The website includes reporting functions linked to measles elimination indicators and to the Regional Office for the Western Pacific’s measles and rubella bulletin. The second phase of improvement was to integrate the laboratory and surveillance databases, and link cases through an identification number. After case data are entered by National Immunization Program (NIP) staff, the laboratory at the National Institute of Public Health (NIPH) receives an electronic notification. NIPH then completes the testing, enters the result, and an automatic email is sent to NIP with the results. NIP then enters the final classification. The new online database has resulted in timelier reporting of laboratory results due to integration the surveillance and laboratory datasets. In addition, the new system allows convenient review of data by authorized persons from any location, facilitating rapid feedback.

Strengthening the national AEFI surveillance system and capacity for causality assessment in China

Dr Xu Disha, National Immunization Programme, Chinese Center for Disease Control and Prevention presented on strengthening national AEFI surveillance and causality assessment capacity. China established a national AEFI surveillance system in 2005 based on WHO guidelines. The surveillance system was pilot tested in 10 provinces during 2005–2006 and expanded to all provinces in 2008. During the course of nationwide vaccination campaigns for influenza H1N1 in 2009 and measles in 2010, work toward the successful WHO assessment of the national regulatory authority (NRA) in 2011, and increasing government financial support for AEFI reporting, the AEFI surveillance has been strengthened in several ways. Key achievements include: (1) improved laws, regulations and guidelines that clarify the institutions’ authorities and responsibilities for AEFI case identification, investigation and reporting; (2) preparation of an institutional development plan for the NRA; (3) creation of an online reporting system to archive data; (4) onsite supervision, training, and regular institutional coordination among stakeholders to review vaccine safety signals, serious AEFI cases and vaccine quality; (5) strengthening the capacity for causality assessment; and (6) enhanced information feedback to health staff and the public concerning vaccine safety. By the end of 2012, over 90% of counties had reported about 100 000 AEFI compared with 1000–2000 cases reported by 5% of counties in 2005. Performance indicators for timeliness of investigation and reporting increased from 75% in 2005 to 90% in 2012. AEFI surveillance plays a critical role in maintaining public confidence in the quality of vaccines delivered through the national programme. Future priorities include enhancing capacity for causality assessment, vaccine safety signal detection, and risk communication.

Pacific island countries and areas: Capacity-building for mid-level managers and front line workers

Dr Jayaprakash Valiakolleri, Division of Pacific Support, WHO Regional Office for the Western Pacific, presented on capacity-building in the 21 Pacific island countries and areas, which have populations ranging from 52 to 850 000. To build immunization programme capacity
in the Pacific island countries and areas (PICs), WHO and UNICEF jointly conducted two training workshops for national immunization programme staff in Fiji in 2010 and 2011 using the new WHO mid-level managers (MLM) training modules. Following country requests to provide training access to additional national and local staff, in-country training workshops were held in 2012 in Cook Islands, Kiribati, and Palau, and planned for 2013 for American Samoa, the Federated States of Micronesia, Christmas Island in Kiribati, Samoa, and Tokelau. In Kiribati, the training was organized jointly by WHO, UNICEF, and Japan International Cooperation Agency (JICA), whereas in other countries it was organized by WHO. Training courses were tailored to country-specific needs; for example, in Palau, training for the immunization programme core team covered all eight WHO MLM modules while training for clinic staff covered areas relevant to frontline immunizations work. In the Federated States of Micronesia, training on the Centers for Disease Control and Prevention web-based data registry software was added to the monitoring section of the training.

A key challenge in the PICs is that trained personnel move away and so repeated trainings are required. In addition, there are limited human resources so coordination of training activities is critical. In Fiji and the Solomon Islands, MLM training was coordinated with effective vaccine management (EVM) assessment and training and in Solomon Islands with an international EPI review. Plans were made to strengthen supportive supervision, cold chain, and programme data quality.

2.2.4.4 GVAP Strategic Objective 5

Dr Md. Shafiqul Hossain reviewed GVAP Strategic Objective 5, “Immunization programmes have sustainable access to predictable funding, quality supply and innovative technologies”. He summarized the five strategies and 15 activities given in GVAP to achieve this objective. Participants from two countries presented their experiences as examples of Western Pacific Region work in this area: strengthening regulatory capacity with a regional alliance for national regulatory authorities (NRAs) for vaccines (Republic of Korea); and commitment of the government to invest in immunization and innovative financing mechanisms (Philippines).

Dr Hossain then summarized the consultative process undertaken with countries and WHO country and regional officers, to identify priority actions for the Western Pacific Region in order to achieve Strategic Objective 5 and regional immunization goals. As a result of this process, eight priority actions were proposed as part of the Regional Framework for Implementing GVAP in the Western Pacific Region: implementing comprehensive EPI reviews; engaging new partners and diversifying sources of funding; establishing a new regional financing mechanism for immunization services and pooled negotiation or procurement mechanisms; strengthening capacity in budgeting and financial management; promoting the use of cost and cost-benefit arguments; promoting coordination among national and international immunization partners through immunization interagency coordinating committees; strengthening regulatory capacity through the Regional Alliance for NRAs for Vaccines in the Western Pacific; and strengthening NRAs through self-assessment and institutional development plans.

Commitment of the government to invest in immunization and innovative financing mechanisms in the Philippines

Dr Maria Joyce Ducusin, Medical Specialist IV, Department of Health presented on commitment of the government and innovative financing mechanisms for immunization. The Philippines national EPI was initially funded primarily by donations from partners such as Rotary International, Canadian International Development Agency, WHO and others. Subsequent introduction of additional vaccines lead to a gradual increase in the EPI budget, with substantial increases since 2010 under the government’s universal health care focus. The
“Mandatory Infants and Children Health Immunization Act of 2011” forms the legal basis for the immunization programme and budget. In 2012, there were 12 antigens included in the EPI with an annual budget of almost US$ 45 million which will expand to between 13 and 14 antigens in 2013 and almost US$ 50 million. National funding provides for the vaccines and immunization supplies, but there is no provision for capital outlay and operational costs are shared by the local government, depending on its priorities, or supported by development partners.

While the proportion of children that are fully immunized was steady at a relatively high level from 2003 to 2008, this proportion has recently decreased. Possible causes include human resources constraints at all levels, multiple responsibilities of health service delivery staff and the lack of prioritization of immunization services at the local level. A recently signed “Sin Tax” law (taxes imposed on alcohol and tobacco products) may provide new opportunities. Of the new tax revenues 80% will be allocated for universal health care under the National Health Insurance Program and 20% will be allocated nationwide for medical assistance and health facility enhancement. In addition, basic immunization services will be included in the Philippine Health Insurance Corporation’s benefit package.

**Strengthening regulatory capacity with Regional Alliance for NRAs for Vaccines in the Western Pacific**

Dr Seung-Tae Chung, Senior Scientific Officer, Biologics Research Division, Ministry of Food and Drug Safety presented on strengthening regulatory capacity through the Regional Alliance for NRAs for Vaccines in the Western Pacific (Regional Alliance). Dr Seung described the WHO Collaborating Centre for Biological Standardization and activities conducted by Ministry of Food and Drug Safety as a WHO Collaborating Centre. He also described the Regional Alliance as a collaborative platform to build regulatory capacity in the Region.

Dr Chung summarized the steps of formulating the Regional Alliance, including a request from Member States and a series of activities to develop a concept paper. The TAG in 2012 stated its support for this initiative. Documents to establish the Regional Alliance were prepared and reviewed during the second workshop for NRAs for vaccines in the Western Pacific. Member States attending the workshop endorsed its development, and the Regional Alliance for NRAs for Vaccines in the Western Pacific was officially launched on 14 March 2013.

Dr Chung described the governance of the Regional Alliance. He detailed the roles and functions of Regional Alliance Steering Committee, Regional Alliance Working Groups and secretariat. A website for the Regional Alliance has been developed and relevant documents will be posted there. Finally, he shared how the Korea Ministry of Food and Drug Safety will support other countries in the Region through the platform of the Regional Alliance.

2.2.4.6 GVAP Strategic Objective 6

**Overview**

Dr Kimberley Fox reviewed GVAP Strategic Objective 6, “Country, regional and global research and development innovations maximize the benefits of immunization.” She summarized the four strategies and 19 activities given in GVAP to achieve this objective. A participant from Viet Nam presented experience with immunization-related research contributing useful information to inform immunization programme decisions.

Dr Fox then summarized the consultative process undertaken with countries and WHO country and regional officers, to identify priority actions for the Western Pacific Region in order to achieve Strategic Objective 6 and the regional immunization goals. As a result of this process,
four priority actions were proposed to be part of the Regional Framework for Implementing GVAP in the Western Pacific Region: building capacity to conduct immunization-related research; conducting epidemiological, social, operational and impact studies; performing operational research on improved delivery approaches for life-course immunization and vaccination in outbreak settings; and supporting pilot testing of vaccine delivery technologies and diagnostic tests for surveillance.

*The role of research in relation to the immunization programme, Viet Nam*

Professor Nguyen Tran Hien, Director, National Institute of Hygiene and Epidemiology, Viet Nam presented the role of research in the immunization programme. Research can address issues that arise in the immunization programme such as defining disease burden and trends of vaccine-preventable diseases; measuring the immunogenicity and reactogenicity of vaccines and alternate vaccine schedules; cost-effectiveness analysis (CEA) of vaccines; impact assessment of the immunization programme; effectiveness of vaccine delivery strategies such as school-based versus community-based delivery; and acceptability of vaccines and delivery systems for the community.

During the last 10 years, immunization-related research in Viet Nam has included: (1) seroprevalence of hepatitis B nationwide and measles in selected provinces, measuring a baseline and evaluating progress toward control and elimination goals; (2) immunogenicity studies of measles second-dose vaccination, HPV vaccination by an alternate schedule, and a fourth (booster) dose of DTP vaccine; (3) CEA of rubella and rotavirus vaccines showing that both vaccines would produce health benefits and would be cost-effective; (4) overall impact assessment of the national EPI (1980–2010) estimating that the programme has averted 6.7 million episodes of illness and 42 900 deaths from five vaccine-preventable diseases; (5) usability and acceptability of an aerosol device for measles vaccine delivery showing high compliance with use; and (6) typhoid incidence study showing high-risk areas where vaccination is needed. The evidence resulting from this research has been used not only to advocate for government policy and investment in immunization, but also in communications and advocacy with other stakeholders and with communities. The research results have also contributed to the evaluation and monitoring of EPI activities and to planning for future introduction of vaccines.

*2.2.5 Monitoring and reporting of GVAP implementation in the Western Pacific Region*

*Global overview*

Dr Thomas Cherian, Coordinator, Immunization, Vaccines and Biologicals presented a global overview of monitoring and reporting for GVAP. While endorsing GVAP, the 65th World Health Assembly requested the WHO Director-General to monitor progress with its implementation and to report annually to the Health Assembly through the Executive Board, using a monitoring and accountability framework. This framework was developed through a consultative process and presented to and noted by the 66th World Health Assembly. In developing the framework, care was taken to use existing structures and processes as far as possible, not increase the reporting burden on countries and to align with other monitoring and accountability processes, in particular that for the United Nations Secretary-General’s Global Strategy for Women’s and Children’s Health.

The proposed framework for monitoring and reporting for GVAP at the global level follows the approach used by the Commission on Information and Accountability, using a cycle of monitoring, reviewing and corrective action. It aims to monitor progress against the indicators for GVAP goals, strategic objectives, resources invested and commitments made to immunization. Reports on annual global progress will be compiled by a secretariat housed in
WHO and submitted along with other independent reports from stakeholders to a working group of the Strategic Advisory Group of Experts (SAGE) for an independent detailed review. The assessment report and recommendations for corrective action, vetted by SAGE will form the basis of the annual report to the WHO Governing Bodies. The report submitted to the World Health Assembly will also be shared with the independent Expert Review Group for the Global Strategy for Women’s and Children’s Health for inclusion in their report to the United Nations Secretary-General.

Regional approach

Dr Jorge Mendoza-Aldana presented on the proposed approach for monitoring and reporting on the implementation of GVAP in the Western Pacific Region. Resolution WHA65.17 of the Sixty-fifth meeting of the World Health Assembly in 2012 called countries to report on the progress of implementing GVAP and a framework was developed to guide this process.

Following recommendations of the SAGE, there are three components of the framework: (1) monitoring results (progress towards achieving GVAP goals and strategic objectives); (2) monitoring commitments for immunization (financial pledges, policy and service delivery), a process that follows the guidelines stated in the framework of the Global Strategy for Women's and Children's Health; and (3) monitoring resources invested in immunization, using the framework of the Organisation for Economic Co-operation and Development/WHO system of health accounts and creating a single platform to collect and analyse health expenditures. Detailed steps for implementation of the framework were described in the preceding presentation. Potential roles of the National Immunization Technical Advisory Groups (NITAG) and Interagency Coordination Committees in GVAP monitoring were noted.

Countries in the Western Pacific Region will contribute data to the global monitoring and reporting framework. In addition, a process is being developed to monitor progress towards achieving regional immunization goals and implementing the regional priority actions identified for GVAP strategic objectives. An early preliminary outline of this process was presented.

2.2.6 Interagency Coordinating Committee

The Interagency Coordinating Committee meeting was held during the last part of the TAG meeting with the attendance of all TAG meeting participants. Mr Gabriel Anaya presented a regional overview of the financial situation for 2013, noting the continued decline in WHO assessed contribution funding. At mid-year, the financial resources are in line with the planned activities for the year. However, there is uncertainty for 2014 as some of the traditional donors to the Region are facing financial constraints.

Seventeen representatives from donor and partner organizations spoke during the session: Asian Development Bank, Dr Jean-Jacques Bernatas; Asian Liver Center, Dr Samuel So; GAVI Alliance, Dr Raj Kumar; Japan International Cooperation Agency, Mr Shin’ichi Takenaka; Korean Centers for Disease Control and Prevention, Dr Ok Park; National Center for Global Health and Medicine, Japan, Dr Masahiko Hachiya; National Institute of Infectious Diseases, Japan, Dr Makoto Takeda; PATH Viet Nam, Dr Vu Minh Huong; Rotary International District 2650, Mr Kingo Iwamoto; Rotary International District 3810, Dr Ismael Mercado; UNICEF, Dr Maya Van Den Ent; United Nations Foundation, Dr Andrea Gay; US Centers for Disease Control and Prevention, Dr Rebecca Martin.

The donors and partners presented some of their current activities and highlighted their continuous commitment to immunization in the Region. They praised the results achieved in the Region by WHO. The TAG chair thanked donors and partners for their support and
acknowledged the importance of their work in collaboration with ministries of health, WHO and other partners at country level.

3. CONCLUSIONS AND RECOMMENDATIONS

3.1 Polio Endgame Strategy

Conclusions

1. The TAG welcomes the Regional Certification Commission (RCC) conclusion that Western Pacific Region maintains its polio-free status, and commends China for the highly successful 2011 outbreak response they have conducted.

2. The TAG acknowledges the Polio Eradication and Endgame Strategic Plan 2013–2018 that was noted by the World Health Assembly in May 2013.

3. The Western Pacific Region has been certified polio-free since 2000; however, many countries are still facing immunity and acute flaccid paralysis (AFP) surveillance gaps, as identified and discussed during previous RCC meetings. Risk assessments demonstrate that the Philippines and Papua New Guinea are at highest risk for poliovirus importation and spread. The current international spread of poliovirus of Nigerian origin to Somalia and Kenya is increasing this risk to these and other countries in the Region.

4. The TAG acknowledges the special efforts made to increase surveillance sensitivity in Papua New Guinea as well as activities in the Lao People's Democratic Republic and China and planned in Cambodia and the Philippines to increase immunity protection by adding OPV delivery to other interventions. Other countries facing similar challenges could consider similar good practices. Regular data analysis should be used to identify areas that need to be addressed.

5. To operationalize the Endgame Strategic Plan at the national level, a multisectoral sequenced and coordinated effort will be required to get political and other key stakeholders’ endorsement and commitment. Therefore, coordinated partnership support will be critical to successfully implement endgame strategies on the very tight timeline required (coordinated introduction of IPV by October 2015; replace tOPV with bOPV by April 2016). Some countries may wish to convene a task force to coordinate this effort.

6. Timely and close follow-up through the polio endgame reporting system is crucial to ensure coordination of activities at all levels in order to meet the regional and global targets, especially for OPV-using countries.

Recommendations

WHO Western Pacific Region countries and areas

The TAG recommends that countries and areas:

1. Ensure that any wild or vaccine-derived polioviruses are detected in a timely fashion and appropriate control measures are initiated (country outbreak response plans should be updated).
2. Improve AFP surveillance sensitivity by:
   a. Providing special support to improve AFP surveillance indicators to meet the
      recommended surveillance performance standards, especially for the stool
      adequacy rates, completeness and timeliness of reports and 60-day follow-up
      examination.
   b. Considering additional special activities to increase surveillance sensitivity (e.g.
      environmental surveillance in selected areas).
   c. Conducting external surveillance reviews in selected high-risk areas based upon
      the regional risk assessment methodology and developing an action plan to
      address the gaps identified (Cambodia, the Lao People's Democratic Republic,
      the Philippines and Viet Nam).
   d. Reporting on at least a bi-weekly basis on core surveillance indicators to the
      Regional Office for the Western Pacific to comply with the global reporting
      requirements.

3. Identify immunity gaps by age and geographic area based on AFP data analysis and
   risk assessment, and consider special activities to target under-vaccinated groups
   (strengthening routine, or adding OPV to any campaign).

4. Initiate implementation of Phase II of the laboratory containment plan in Western
   Pacific Region countries by 2014, according to the draft Global Action Plan for Poliovirus
   Laboratory Containment, Version III.

5. Initiate registration of IPV, bOPV and mOPVs as soon as possible.

6. Start developing a draft national polio endgame strategic plan of action. The global
   Polio Eradication and Endgame Strategic Plan 2013–2018 should serve as a blueprint for
   developing country-specific plans, with emphasis on introduction of at least one dose of
   IPV by October 2015 and replacing tOPV with bOPV by April 2016.
   a. By November 2013, each country should provide to the RCC a provisional
      schedule for IPV and dates for introduction of IPV and bOPV to facilitate
      regional vaccine forecasting, and a provisional estimate of resource
      requirements.
   b. The plan should include the financial resource requirements (FRR) needed to
      support implementation of the country endgame strategic plan.
   c. The plan should include a timeline and reporting system to monitor the progress
      of country plan implementation.
   d. A report on progress in developing the draft plan of action should be provided
      at the November 2013 RCC meeting.

OPV-using countries and areas (17)

1. The TAG encourages countries to initiate, as soon as possible, dialogue to develop
   national consensus with NITAGs and other relevant technical committees and multisectoral
departments, and share information of the details of the national plan (including additional activities considered to fulfil immunity and surveillance gaps, national vaccine switch consensus: timeline, sequence, vaccine presentation, supply required, vaccine schedule).

2. The TAG recommends that countries planning introduction of IPV make provisions to secure long-term financing for the vaccine.

3. Following review of the regional risk assessment at the subnational level, the 18th RCC Meeting concluded that areas in several countries (Cambodia, the Lao People’s Democratic Republic, Papua New Guinea, the Philippines and Viet Nam) are vulnerable to poliovirus importation. In the current context of the polio endgame, The TAG urges each of these countries to develop a comprehensive plan of action to mitigate this risk, as part of the national polio endgame strategic plan.

WHO Regional Office for the Western Pacific

1. The TAG requests the Regional Office to develop a template and timeline for national polio endgame strategic plans of action and provide it to all Member States as soon as possible (see country recommendation #5).

2. The TAG requests the Regional Office and partners to provide technical support as needed in any Western Pacific Region countries to develop their national polio endgame strategic plans of action.

3. The TAG requests the Regional Office to develop a regional endgame strategic plan of action, including information on the licensure status by country of bOPV and IPV, and compiling the financial, human and technical resources required, by mid-2014.

WHO headquarters and all WHO Member States

The TAG recommends that polio immunization be made a requirement for all travellers coming from and going to polio-infected countries, under the International Health Regulations.

3.2 Regional Framework for Implementation of the Global Vaccine Action Plan

3.2.1 General

Committing to immunization as a priority first and foremost means recognizing the importance of immunization as a critical public health intervention and the value that immunization represents in terms of health and economic returns for all countries of the Western Pacific Region. Moreover, the TAG recognizes that strong immunization systems are an integral part of a well-functioning health system and play a major role in improving child survival and the health and well-being of communities.

In this regard, the TAG has reviewed and appreciates the Secretariat’s work to prepare a draft Regional Framework for Implementation of the GVAP in the Western Pacific.

The TAG notes that the draft Regional Framework for Implementation of GVAP in the Western Pacific reaffirms or updates the existing regional immunization goals and proposes regional immunization goals in order to ensure equity of immunization for every individual and every community and to protect them from vaccine-preventable diseases with existing and newly available vaccines.
Therefore, the TAG endorses the draft Regional Framework for Implementation of GVAP in the Western Pacific for supporting the countries to implement GVAP, achieving GVAP Strategic Objectives and accelerating progress towards achievement of the regional immunization goals.

Recommendation

The TAG requests the WHO Regional Office for the Western Pacific to finalize the draft Regional Framework for Implementation of GVAP in the Western Pacific in consultation with WHO country offices and Member States and to submit this framework to the Regional Committee for its endorsement.

3.2.2 Regional immunization goals

3.2.2.1 Sustaining polio-free status and implementing polio endgame strategy

The TAG welcomes the report of the 18th Regional Certification Commission that concluded that the Western Pacific Region retains its polio-free status after the 2011 polio outbreak in China. The TAG takes note of the Polio Endgame Strategic Plan 2013–2018 presented during the May 2013 World Health Assembly and the global timeline outlined. Because of their certified polio-free status, Western Pacific Region countries will be mainly focusing on objective 2 of this plan. Implementing the plan within the tight timeline will require a substantial coordinated multi-sectoral effort at all levels, especially for OPV-using countries. Limited financial and technical regional and country resources dedicated to the operationalization of this plan are currently the main challenge.

Recommendations

1. The TAG recommends that Western Pacific countries start developing national polio endgame strategic plans of action. These plans will include: formulating an advocacy and communications strategy, linking the endgame with routine immunization strengthening activities, evaluating bOPV and IPV demand and supply, determining technical assistance needs, identifying financing for IPV, and outlining a timeline for implementation.

2. In keeping with the Polio Eradication and Endgame Strategic Plan 2013–2018, the TAG reinforces the need to eliminate type 2 vaccine-derived poliovirus risk by introducing in OPV-using countries at least one dose of IPV by October 2015, and replacing tOPV with bOPV by April 2016.

3. The TAG recommends that the WHO Regional Office for the Western Pacific initiate and compile a regional endgame strategic plan of action including the resources required for its implementation by mid-2014.

3.2.2.2 Maternal and neonatal tetanus elimination

The TAG takes note of the global and regional progress towards maternal and neonatal tetanus elimination. The TAG congratulates China on its validation of neonatal tetanus elimination in 2012. As of May 2013, maternal and neonatal tetanus remains a problem in 28 countries globally and four countries in the Western Pacific Region. However, all four in the Western Pacific Region have completed assessments and are in the process of implementing various control measures. If these control measures are successful, the TAG feels confident that the four remaining countries should be able to eliminate maternal and neonatal tetanus by 2015.
Recommendation

The TAG recommends that the four remaining countries that have not yet validated the elimination of maternal and neonatal tetanus (Cambodia, the Lao People’s Democratic Republic, Papua New Guinea and the Philippines) continue implementing necessary actions to eliminate maternal and neonatal tetanus by 2015 with completion of validation assessments by 2016.

3.2.2.3 Measles elimination

The TAG notes that the Western Pacific Region has made remarkable achievements in eliminating measles with a >99% reduction in measles cases from 2003 (the year the measles elimination resolution passed) to 2012. Remaining challenges include the following: (i) in 2013, measles remains endemic in at least three countries; and (ii) several countries and areas have experienced endemic or imported outbreaks. Rapid and effective strategies and actions are needed to detect and interrupt measles virus transmission through more sensitive surveillance combined with immediate outbreak response and to close the remaining population immunity gaps across the age spectrum.

Recommendations

1. The TAG urges countries to make sustained, intensified efforts to accelerate progress towards achieving and sustaining measles elimination, in accordance with the Regional Committee Resolution WPR/RC63.R5.

2. The TAG encourages the WHO Regional Office for the Western Pacific and Member States to continue to use the Regional Verification Guidelines for Measles Elimination, and the roles of the Regional Verification Commission and national committees as an active means of monitoring progress and providing recommendations where needed to improve performance.

3.2.2.4 Hepatitis B accelerated control

The TAG is looking forward to the outcome of the 2013 Regional Committee Meeting where 2017 is proposed as the target year for the <1% Regional hepatitis B control goal. The significant achievements in reaching high birth dose and three-dose vaccination coverage bring an opportunity for hepatitis B control to support access to newborn care and increase of routine immunization coverage.

Recommendation

The TAG requests the WHO Regional Office for the Western Pacific to draft an updated strategic plan for reaching the Regional hepatitis B control goal of <1% seroprevalence in five-year-old children by the target year set by the Regional Committee, to be reviewed at the next TAG meeting.

3.2.2.5 Rubella and congenital rubella syndrome elimination

The TAG takes note of the following: (i) the feasibility of rubella elimination and the platform of measles elimination provide an opportunity to work toward simultaneous elimination of rubella; (ii) the remaining high burden of rubella and congenital rubella syndrome in the Western Pacific Region, noting that during 2011–2013, at least three countries in the Region (Japan, Mongolia and Viet Nam) have experienced large rubella outbreaks resulting in increased numbers of children born affected with congenital rubella syndrome; and (iii) the opportunity
that as of 2013, six countries and areas have not yet introduced rubella vaccine into their routine immunization programmes, but that five of the six countries are eligible to apply for GAVI financial support to conduct wide age range catch-up campaigns with measles-rubella (MR) vaccine.

Recommendations

1. The TAG recommends establishing a regional goal of eliminating rubella, with a target date to be determined, and including it in the Regional Framework for Implementation of the Global Vaccine Action Plan in the Western Pacific (2013–2020).

2. The TAG requests the Regional Director to advocate for endorsement of the regional rubella elimination goal (target date is yet to be determined) by Member States by including it as an agenda item in the Regional Committee Meeting in 2014.

3. The TAG requests all countries and areas to submit rubella case-based data on a monthly basis to the WHO Regional Office for the Western Pacific from January 2014.

4. The TAG requests the WHO Regional Office for the Western Pacific to provide comprehensive analysis of rubella epidemiology in the Region, including age-specific rubella case data, congenital rubella syndrome (CRS) data and serosurveys where available, and to dialogue with countries to develop a consensus on the appropriate target year for rubella elimination in the Region, for consideration during the 2014 TAG meeting.

5. The TAG requests the WHO Regional Office for the Western Pacific to provide technical assistance to Member States for developing tailored strategies to achieve the rubella elimination goal based on country-specific situations. The TAG also recommends that Member States develop joint action plans to synergize activities for eliminating measles and rubella.

6. To minimize the risk of CRS prior to achieving rubella elimination, the TAG urges those countries that have not introduced rubella-containing vaccine into the routine childhood immunization schedule to do so as soon as possible, in conjunction with a measles-rubella catch-up campaign in children under 15 years of age. All countries should consider targeted vaccination of rubella-susceptible older age groups, based on local epidemiology.

3.2.2.6 Japanese encephalitis accelerated control

The TAG notes the importance of Japanese encephalitis (JE) virus as a cause of encephalitis in Asia, including risk areas in 12 countries of the Western Pacific Region. JE vaccine has been a highly successful tool in controlling JE in several countries of the Region, reducing the incidence to very low levels. While several countries in the Region produce JE vaccine, most are not marketed internationally and no vaccine is yet WHO-prequalified. However, WHO prequalification of one or more JE vaccines is anticipated in the next year, and GAVI support for vaccine purchase for eligible countries is anticipated. These developments make it possible to consider an accelerated control goal for JE in the Western Pacific Region. Expert consultation is needed to review the technical feasibility of achieving JE control across the Region, to determine the appropriate targets and timeframe for a goal, and to identify strategies for and cost of achieving it. Current weaknesses in surveillance, which limit efforts to estimate burden of disease, define target populations for vaccination, and measure impact of vaccination in some countries, are noted.
Recommendations

1. The TAG advises the WHO Regional Office for the Western Pacific to develop a Japanese encephalitis accelerated control goal and the targets, timeline and strategies to achieve it through consultation with experts and Member States during the coming year. The TAG requests that progress be reported during the 2014 meeting of the TAG.

2. The TAG recommends that JE surveillance should be further strengthened in endemic countries of the Western Pacific Region; sentinel surveillance should be systematized to facilitate reporting at the Regional level.

3. The TAG recommends that the WHO Regional Office for the Western Pacific continue efforts to strengthen laboratory diagnostic capacity for Japanese encephalitis.

3.2.2.7 Meeting regional vaccination coverage targets

With consideration of (i) the vaccination coverage targets set by the Global Vaccine Action Plan for national and district levels of all countries by 2020, (ii) the national vaccination coverage targets already set by countries in the Western Pacific Region, and (iii) coverage of MCV1 and MCV2 required at national and district levels for achieving and maintaining measles elimination, the TAG supports the following coverage targets proposed for the Western Pacific Region:

- Reach >95% national coverage for each vaccine used in the national immunization programme; and
- Reach >90% in every district or equivalent administrative unit for each vaccine used in the national immunization programme unless otherwise recommended.

The TAG reaffirms that the key challenges to meeting the above coverage targets raised by the Secretariat should be more actively addressed by all the countries and partners in the Western Pacific Region to ensure equitable access to immunization by all children. The TAG concurs that these challenges could be well addressed through pursuit of GVAP strategic objectives in the Regional Framework of GVAP Implementation in the Western Pacific. Documenting achievement of the coverage targets will rely on obtaining more accurate administrative coverage data.

Recommendations

1. The TAG urges countries, WHO and partners to work together in identifying provinces and districts with sub-optimal performance in routine vaccination programmes.

2. The TAG encourages countries, WHO and partners to work together in expanding “Reaching Every” District, Community or Child strategies to engage underserved and marginalized communities to participate in developing locally tailored, targeted strategies for reducing inequities.

3. The TAG encourages countries to adopt a life-course approach to immunization; school-entry screening and vaccination is an example of this approach.

4. The TAG urges WHO and countries to strengthen capacity for measurement of vaccination coverage to better identify immunity gaps by age and geographic area.
3.2.2.8 Evidence-based introduction of new vaccines

The TAG notes the potential of new vaccines to greatly increase the impact of national immunization programmes in the Region and recognizes the Decade of Vaccines goal for introduction of new and improved vaccines. Introduction of new vaccines in the Region has been slow due to a set of factors including cost, limited disease burden data, and competing priorities. The complexity of the new vaccine landscape makes it increasingly difficult for countries to evaluate new vaccines for introduction. Evidence-based introduction of new vaccines requires evaluating data on disease burden including surveillance data, estimating costs and cost-effectiveness, assessing the role of other disease prevention and control measures, and considering vaccine characteristics, vaccine supply and immunization programme and health system strength. To facilitate a systematic approach to the process, and to achieve the Decade of Vaccines goal, countries need to have national plans for evidence-based introduction of new vaccines. WHO plays an important role in providing technical support and capacity building for the development and implementation of these national plans.

Recommendations

1. The TAG advises each Member State to develop a national plan for evidence-based introduction of new vaccines in coordination with NITAGs or similar groups (could be part of the comprehensive multi-year plan for immunization). This plan should take into consideration the use of disease burden data, cost and cost-effectiveness data and WHO recommendations for vaccine use; the role of comprehensive disease prevention approaches for pneumonia, diarrhoea and cervical cancer; vaccine characteristics, safety and supply; and immunization programme and health system strength. Progress in development of these plans should be reported to the TAG in 2014.

2. The TAG requests WHO to develop a template and guidance for development of national plans for evidence-based introduction of new vaccines.

3. The TAG requests WHO to provide technical support and capacity-building for countries to develop and implement plans for evidence-based introduction of new vaccines. WHO will need to develop a pool of experts and obtain additional resources to implement this recommendation.

3.2.3 Priority actions for implementation of GVAP in the Western Pacific Region

The TAG acknowledges and supports the priority actions proposed by the WHO Regional Office for the Western Pacific in order to achieve GVAP strategic objectives in the Western Pacific and accelerate progress towards achievement of regional immunization goals.

Recommendations

1. The TAG urges WHO, countries and other stakeholders to actively coordinate and collaborate with each other in implementing priority actions proposed in the Regional Framework for the Western Pacific;
2. The TAG recommends that countries consider and, if necessary, incorporate priority actions proposed in the Regional Framework into planning, developing and implementing their national immunization programmes;

3. The TAG recommends that the WHO Regional Office for the Western Pacific and WHO country offices coordinate with national immunization programmes in estimating the annual cost to implement necessary priority actions proposed in the Regional Framework for the Region from 2014 to 2020;

4. The TAG recommends that WHO mobilize both technical and financial resources to support the Region to implement the necessary priority actions proposed in the Regional Framework; and

5. The TAG recommends that the WHO Regional Office for the Western Pacific foster alignment of Regional partners to advocate for allocation of additional financial and technical resources to support national immunization programmes in the Region.

3.2.3 Monitoring and Reporting GVAP Implementation in the Western Pacific Region

The TAG supports a framework proposed by the Secretariat for the Region to monitor and report the progress in implementation of GVAP in the Western Pacific Region.

Recommendations

1. The TAG recommends the WHO Regional Office for the Western Pacific and WHO country offices further work with countries in finalizing the proposed framework for monitoring and reporting the progress in implementation of GVAP;

2. The TAG recommends countries to provide the WHO Regional Office for the Western Pacific with necessary information on an annual basis for summary in an annual regional progress report on GVAP implementation in the Western Pacific to be submitted to the Regional Committee.
## TENTATIVE TIMETABLE

<table>
<thead>
<tr>
<th>Time</th>
<th>Tuesday, 25 June 2013</th>
<th>Time</th>
<th>Wednesday, 26 June 2013</th>
<th>Time</th>
<th>Thursday, 27 June 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00–09:00</td>
<td>REGISTRATION</td>
<td>08:00–09:00</td>
<td>9. Introduction of background, objectives and agenda of the Global Vaccine Action Plan (GVAP)</td>
<td>12:00–12:30</td>
<td>12. GVAP implementation in Western Pacific Region</td>
</tr>
<tr>
<td>09:00–09:30</td>
<td>1. Opening</td>
<td>08:55–08:35</td>
<td>10. Update on Global Vaccine Action Plan</td>
<td>08:15–08:20</td>
<td>Continuation</td>
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<tr>
<td>09:00–09:30</td>
<td>• Opening speech</td>
<td></td>
<td>• Background, five Decade of Vaccines Goals, six strategic objectives, strategic activities, monitoring framework, indicators, etc.</td>
<td>08:20–08:35</td>
<td>12.5 GVAP strategic objective 4</td>
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<tr>
<td></td>
<td>• Self–introduction</td>
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<td>• Report, discussion and resolutions in WHA65 (2012), EB132 (2013) and WHA66 (2013)</td>
<td>08:35–08:50</td>
<td>• Overview of GVAP strategic objective 4</td>
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<td></td>
<td>• Election of officers: Chairperson, Vice–Chairperson and Rapporteur</td>
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<td>• Progress in other regions</td>
<td>08:50–09:05</td>
<td>• Country experiences:</td>
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<td></td>
<td>• Administrative announcements</td>
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<td>a. Mongolia: Improving administrative and immunization data at all levels by RED strategy</td>
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<td>• Group photo</td>
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<td>b. Cambodia: Web-based surveillance data collection and reporting</td>
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<td>09:30–09:35</td>
<td>2. Objectives of the session</td>
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<td>c. China: Establishing and strengthening a national adverse events following immunization (AEFI) surveillance system and capacity for causality assessment</td>
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<td></td>
<td>a. Presentation of the plan</td>
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<td>• Regional overview</td>
<td>09:20–09:35</td>
<td>e. Lao People's Democratic Republic: Immunization infrastructure and logistics</td>
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<td>b. Oral polio vaccine (OPV) 2 cessation: rational, prerequisites and risk mitigation (inactivated poliovirus vaccine [IPV] introduction)</td>
<td>09:20–09:35</td>
<td>• Current regional immunization goals</td>
<td>09:35–10:05</td>
<td>• (1) GVAP activities for the Regional Immunization Goals, (2) status of and needs for implementation of GVAP activities at country level, and (3) proposed regional action</td>
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<td>c. Affordable IPV: Status, supply and financing</td>
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<td>• Proposed regional immunization goals</td>
<td>10:05–10:20</td>
<td>Discussion</td>
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<td>10:15–10:30</td>
<td>Discussion</td>
<td>10:10–10:30</td>
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<td>10:30–10:40</td>
<td>COFFEE BREAK</td>
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<td>10:30–11:00</td>
<td>COFFEE BREAK</td>
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<td>10:20–10:40</td>
<td>COFFEE BREAK</td>
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<td>11:00–11:30</td>
<td>4. Regional situation towards the endgame strategic plan</td>
<td>10:30–10:35</td>
<td>12. GVAP implementation in the Western Pacific Region</td>
<td>10:40–10:45</td>
<td>12.6 GVAP strategic objective 5</td>
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<td>11:30–12:00</td>
<td>5. Operational considerations for the IPV/bOPV switch and related introduction of a routine dose of IPV</td>
<td>10:35–10:50</td>
<td>12.1 GVAP strategic objective 1</td>
<td>10:45–11:00</td>
<td>• Overview of GVAP strategic objective 5</td>
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<td>Discussion</td>
<td>10:50–11:05</td>
<td>• Overview of GVAP strategic objective 1</td>
<td>11:00–11:15</td>
<td>• Country experiences:</td>
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<td>11:00–11:15</td>
<td>• Country experiences:</td>
<td>11:15–11:45</td>
<td>a. Philippines: Government commitment to invest in immunization and innovative financing mechanism</td>
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<td>11:15–11:45</td>
<td>a. Papua New Guinea: National commitment and national immunization planning</td>
<td>11:45–12:00</td>
<td>b. Republic of Korea: Strengthening regulatory capacity with Regional Alliance for national regulatory authorities (NRAs) for Vaccine in Western Pacific</td>
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<td>b. National Immunization Technical Advisory Group (NITAG)</td>
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<td>(1) Priority GVAP activities for the Regional Immunization Goals, (2) status of and needs for implementation of GVAP activities at country level, and (3) proposed regional action for the Western Pacific Region</td>
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<td>11:35–11:50</td>
<td>Discussion</td>
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<td>14:00-14:15</td>
<td>6. Country presentations</td>
<td>12.2 GVAP strategic objective 2</td>
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| 14:15-14:30| a. Lao People's Democratic Republic: Increasing immunity of high-risk populations | - Overview of GVAP strategic objective 2  
- China: Social media tools & National Immunization Week for advocacy |
| 14:30-14:45| b. Malaysia: Experience with a sequential schedule                       | 12.3 GVAP strategic objective 3                                                                                                        |
| 14:45-15:30| c. Japan: Experience with IPV introduction                               | - Overview of GVAP strategic objective 3  
- Country experiences: a. Cambodia: Reaching Every Community (REC) / high risk community strategy  
- b. Malaysia: School-based Immunization Programme  
- c. Mongolia: Engaging health workers, civil society and communities by Reaching Every District (RED)  
- d. Lao People's Democratic Republic: Introduction of Japanese encephalitis (JE) vaccines (accelerated JE control) |
| 15:30-16:00| **COFFEE BREAK**                                                         |                                                                                                                                         |
| 16:00-16:20| 7. Global and regional polio vaccine demand, supply and management within the current and future needs of the endgame strategic plan | 12.4 GVAP strategic objective 6  
- Overview of GVAP strategic objective 6  
- Country experience: Viet Nam: The role of research in relation to immunization programmes  
- (1) GVAP activities for the Regional Immunization Goals, (2) status of and needs for implementation of GVAP activities at country level, and (3) proposed regional action for the Western Pacific Region |
| 16:20-16:35| Discussion                                                               |                                                                                                                                         |
| 16:35-16:50| 8. Regional perspectives and questions for the Technical Advisory Group (TAG) |                                                                                                                                         |
| 16:50-17:15| Discussion                                                               |                                                                                                                                         |
| 17:30-17:45| **COFFEE BREAK**                                                         |                                                                                                                                         |
| 16:00-16:20|                                                                           | 15. TAG Conclusions and Recommendations                                                                                               |
| 16:20-16:35|                                                                           | Closing                                                                                                                                  |
| 16:35-17:05|                                                                           |                                                                                                                                         |
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