Report of the Meeting of EPI Managers of South-East Asia Region

New Delhi, India, 3-4 August 2011

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Abbreviations

AFP	acute flaccid paralysis
AEFI	adverse events following immunization
CRS	Congenital Rubella Syndrome
DTP	diphtheria –- tetanus- pertusis vaccine
DoV	Decade of Vaccine
EPI	Expanded Programme of Immunization
GAVI	Global Alliance for Vaccines and Immunization
GIVS	Global Immunization Vision and Strategy
HLP	high-level preparatory meeting
IHR	International Health Regulations
ITAG	Immunization Technical Advisory Group
IVD	imunization and vaccine development
MCV	measles containing vaccine
MR	measles and rubella vaccine
MNTE	maternal and neonatal tetanus elimination
NCC	National Certification Committee
NIP	national immunization programme
NRA	national regulatory authority
NUVI	New and Underutilized Vaccine Initiataive

OPV	oral polio vaccine
RI	routine immunization
RC	Regional Committee
SAGE	Strategic Advisory Group of Experts in Immunization
SIA	supplementary immunization activity
SEAR	South-East Asia Region
UNICEF	United Nations Children's Fund
VPD	vaccine preventable disease
WHO	World Health Organization

1. Introduction

Considerable progress has been made in protecting children in countries of the WHO South-East Asia (SEA) Region against vaccine-preventable diseases. The Global Immunization Vision and Strategy (GIVS) adopted at the Fifty-eighth World Health Assembly envisages achieving 90% DTP3 coverage at national level and 80% coverage at district level by Member States. The reported global immunization coverage for the third dose of diphtheria, tetanus and pertussis vaccine (DTP3) in 2010 was 85% and in the South-East Asia Region the coverage was 77%. Globally, this means that about 19.6 million children did not receive the third dose of DTP3 vaccine during their first year of life with approximately 8.3 million (42%) of these children living in the South-East Asia Region. Coverage with DTP3 is commonly used as an indicator for assessing the effectiveness of routine childhood immunization services, as a child that has received DTP3 would have had at least four contacts with the healthcare system.

In the South-East Asia Region, seven Member States have reached the target by the Global Immunization Vision and Strategy (GIVS) of 90% DTP3 coverage at the national level. Out of these seven, only four have reached the second goal of GIVS of at least 80% coverage at the district level. Three-quarters of the children born every year in the Region are in the four countries that have yet to achieve 90% coverage at the national level. The WHO Regional Office for South-East Asia is considering declaring 2012 as the year of intensification of routine immunization.

2. High-level minsterial meeting on increasing and sustaining immunization coverage

In order to obtain the support from the Member States in the Region the Immunization and Vaccines Development (IVD) unit of the WHO Regional Office for South-East Asia organized a high-level ministerial meeting prior to the EPI managers' meeting on 2 August 2011.

The objective of the meeting was to renew the political commitment for increasing and sustaining immunization coverage in the South-East Asia Region. Five ministers and two deputy ministers of health from Bangladesh, Bhutan, India, Maldives, Myanmar, Nepal and Sri Lanka attended the meeting and pledged their continued commitment. It was expected that other ministers of health would pledge their commitment during the Regional Committee meeting in September 2011.

As the ministers of health expressed their continued commitment for increasing and sustaining routine immunization coverage, a large number of immunization partners who attended the meeting also pledged their support for strengthening routine immunization and helped to identify challenges and strategies for enhancing coverage. Partners urged the respective ministers of health to address national immunization programme deficiencies as early as possible to ensure that children in the Region receive the maximum benefit of the currently available vaccines. The ministerial panel discussion and the partners' panel discussion highlighted the importance of:

- using the experiences of Member States that have achieved high routine immunization coverage
- learning lessons from polio eradication and measles mortality reduction
- focusing on marginalized populations
- providing synergy between vertical programmes
- managing vaccine procurement of assured quality, delivery and storage
- understanding the social determinants of health as they relate to immunization coverage
- managing adverse events following immunization (AEFI) and the associated rumours about vaccine safety
- ensuring government ownership and political commitment for routine immunization
- correcting infrastructure deficiencies
- enhancing utilization of funds

- scaling-up regional vaccine production targeting price reduction of vaccines in the global market.

The meeting endorsed the "Delhi call for action for intensification of routine immunization" for consideration at the sixty-fourth session of the Regional Committee. The health ministers and immunization partners pledged their commitment to achieve the GIVS targets by intensifying activities at all levels to increase and sustain routine immunization coverage in the Region. The detailed report of the High-level Ministerial Meeting has been published and is available at http://www.searo.who.int.

3 The South-East Asia EPI managers' meeting

Dr Poonam Khetrapal Singh, Deputy Regional Director, WHO South-East Asia Region, welcomed the participants and highlighted the importance of contributions of all stakeholders under the leadership of the respective Member States to intensify routine immunization in 2012. Dr Monir Islam, Director, Family Health and Research, WHO-SEARO, presented the objectives of the meeting as follows:

- To renew commitment of Member States and partners to support increasing and sustaining routine immunization coverage in the South-East Asia Region.
- To share and review best practices and lessons learned by using different strategies for increasing and sustaining immunization coverage.
- To develop a roadmap for implementing a strategic frame work for increasing routine immunization coverage.

The meeting brought together immunization stakeholders such as representatives of the ministries of health, national immunization programme managers, members of technical advisory groups, and representatives from immunization partners and donor organizations. The list of participants is available in Annex 1 and the agenda is available in Annex 2.

Dr Ajay Khera, Deputy Commissioner (Child Health and Immunization) from the Ministry of Health and Family Welfare, India was

selected as the chairperson, Dr Shyamraj Upereti, Director, Child Health Division from the Ministry of Health and Population, Nepal was the co-chair and Dr Paba Palihawadena, Chief Epidemiologist/ EPI Manager from Ministry of Health, Sri Lanka was the rapporteur. The participants discussed the strategies for increasing and sustaining immunization coverage in the Region and how key areas related to immunization such as VPD surveillance, vaccine safety and quality, capacity building as National Regulatory Authorities (NRA), laboratory surveillance, health system development, polio eradication, measles elimination, and new vaccine introduction could contribute to increasing and sustaining immunization coverage. Through group discussions each country identified specific activities for the intensification of routine immunization in 2012.

A summary of the outcomes of the High-level Ministerial Meeting on "2012- the year of intensification of routine immunization in the South-East Asia Region" was presented. The key expected outcome of the year of intensification of routine immunization in the South-East Asia Region is to help the four countries (India, Indonesia, Nepal and Timor-Leste) that have not yet achieved the GIVS target of national immunization coverage of 90%. Out of the seven other countries in the Region that have achieved 90% coverage at the national level, only four have achieved 80% coverage in all districts. Hence, all countries have pockets of under-immunized children that need to be closely monitored for intensification of routine immunization.

3.1 Identifying vulnerable populations and planning for increasing routine immunization coverage

The specific objective of the session was to review best practices and to share lessons learned in order to identify innovative strategies to increase and sustain immunization coverage in all districts.

In SEAR, the DTP3 vaccine coverage increased from 66% in 2000 to 77% in 2010. Seven countries (Bangladesh, Bhutan, DPR Korea, Maldives, Myanmar, Sri Lanka and Thailand) have achieved >90% coverage for DTP3 at national level. The coverage varies within the countries from district to district. However, approximately 8.3 million children born in SEAR in 2010 did not get DTP3; 85.6% of them are from India. Though many states in India have very high coverage, some are still lagging behind. Four countries

in the Region (Bhutan, DPR Korea, Maldives and Sri Lanka) have more than 80% coverage in all districts. In Bangladesh 96% of districts have more than 80% coverage.

Bangladesh and Myanmar provided overviews of their immunization programmes and shared their strategies for increasing routine immunization coverage.

Country experience: Bangladesh

The immunization system in Bangladesh is based on outreach sites with most of the EPI sessions held in outreach clinics in communities. In rural areas, immunization services are delivered by health assistants and family welfare assistants. In urban areas, immunization services are provided through the Ministry of Local Government and nongovernmental organizations. There are specific mechanisms in place for supervision and monitoring to ensure that high quality services are being provided.

There are several indicators that are being used to identify low performing districts with vulnerable populations:

- districts that have an evaluated coverage of <80% for fully immunized children
- districts with a large number of drop-outs for the third dose of pentavalent vaccine
- geographically or socially inaccessible areas (e.g., hilly areas, riverine, urban slums, transient populations, working mothers and high-rise buildings)
- areas with staffing shortages.

The country is using micro-planning with the RED (reach-every-district) strategy as a guiding principle to address immunization deficiencies. There are three main areas that are being focused on:

- strengthening the micro-planning process including
  - conducting ward-level analysis of the plans
  - prioritizing interventions based on the local situation
  - ensuring participation of field workers at all levels

  - involving community leaders
  - defining vaccine and logistics distribution plans for outreach centres
- providing supportive supervision
- monitoring and analyzing data at district levels to provide monthly feedback to field workers.

Bangladesh has utilized GAVI funds to strengthen routine immunization activities through following key interventions:

- recruitment of district immunization medical officers (DIMOs)
- training for middle-level managers and field workers
- construction and renovation of EPI stores at all levels
- procurement of vehicles, motorcycles and bicycles for immunization services
- improvement of cold chain capacity and management.

The Government of Bangladesh has demonstrated a high commitment that resulted in an increase in DTP3 coverage from 83% in 2000 to 95% in 2010.

Country experience: Myanmar

Myanmar has a number of vulnerable populations and areas that make the intensification of routine immunization is challenging. The Ministry of Health has developed a "crash" programme to reach these communities and areas.

Myanmar introduced the "crash" programme in 1999 to target children under three years of age and pregnant women with EPI activities, vitamin A and de-worming. The programme was implemented in 24% of the townships. The health staff was given additional support for detailed micro-planning, cold chain capacity, social mobilization, transportation and supervision with a focus on geographically remote areas. Currently, in addition to the "crash" programme, a routine immunization strengthening plan was developed in June 2011 targeting weak areas, which is in line with the Comprehensive Multi Year Plan (cMYP).

The action plan for strengthening routine immunization includes micro-plans with special sections for vulnerable populations, flexible timing for immunization sessions in urban slums and similar settings, and outreach sessions that are coordinated with local authorities and communities. Other components of the plan include strengthening supportive supervision and cold chain capacity to facilitate outreach sessions; strengthening coordination for advocacy meetings between the central, regional and local authorities as well as WHO, UNICEF and other international organizations; strengthening the capacity of staff through Mid Level Managers' training and awareness campaigns. This action plan will be implemented with the activities identified for introduction of pentavalent vaccine following the government's decision to co-finance pentavalent vaccine introduction, confirming the commitment to intensify immunization activities in Myanmar.

Recommendations

- All Member States should identify pockets of under-immunized or un-immunized children and develop an intensification plan for 2012 by the end of 2011. The plan should include:
  - Priority areas and vulnerable populations
  - Staff and logistics requirements
  - Budget estimates
  - Innovative ideas for vaccine delivery
  - Support from all stakeholders for implementation
  - Targets for specific activities in 2012

3.2 Linking polio eradication and improving immunization coverage

Polio eradication continues to be a priority in the South-East Asia Region. In the first seven months of 2011, only one wild poliovirus case (subtype 1) was detected in India. The wild poliovirus cases detected in Nepal in 2010 in the adjoining districts of the state of Bihar in India and the large wild poliovirus outbreak in Tajikistan, which was epidemiologically linked to India, indicates that key challenges remain for other countries to protect

their polio-free status by preventing re-infection. A strong routine immunization programme that can deliver and maintain OPV3 coverage greater than 80% in all districts will help to maintain high herd immunity. Additionally, all polio-free countries must conduct periodic risk assessments to determine the level of risk of re-infection and circulation and to decide whether or not polio immunization campaigns are required to boost population immunity.

Finally, polio eradication requires sustained funding. A substantial proportion of the funding is being met through external donors; Member States can help the eradiation effort by committing funds for surveillance, outbreak response and strengthening routine immunization delivery.

Recommendations:

- all countries in the Region remain susceptible to the importation of wild poliovirus and should assess their risk of importation and circulation on a regular basis (semi annually at the national and sub-national levels)
- all countries in the Region should continue efforts to maintain high immunity against the poliovirus through routine immunization in order to achieve regional polio eradication
- all countries in the Region should start to develop plans to address issues related to transition from polio endemic to polio free status (i.e., certification and laboratory containment activities)
  - poliovirus laboratory containment activities for certification should be initiated in India (endemic) and verified in Bangladesh, Indonesia, Myanmar and Nepal (re-infected)
  - polio certification documents need to be submitted by National Certification Committees (NCC) every year for review by the Regional Certification Committees (RCC) and discussed at the annual meeting
- all countries in the Region should have an emergency/ contingency plan for importation of wild poliovirus.

3.3 Synergizing measles elimination with improving routine immunization

WHO-SEARO held a regional consultation on measles in August 2009 and agreed that measles elimination by 2020 was technically, biologically and programmatically feasible for all countries in the Region. In 2010, the sixty-third session of the Regional Committee for South-East Asia recommended that Member States should consider adopting interim goals towards measles elimination to be achieved by 2015 (as approved by the Sixty-third World Health Assembly).[1]

The interim goals are:

- To exceed 90% coverage with the first dose of measles-containing vaccine nationally, and exceed 80% vaccination coverage in every district or equivalent administrative unit.
- To reduce annual measles incidence to less than five cases per million and maintain that level.
- To reduce measles mortality by 95% or more in comparison with 2000 estimates.

There has been significant progress in the Region:

- India started implementing plans to immunize 134 million children (9 months to 10 years) in 14 states through catch-up campaigns between 2010 and 2013. In the remaining 21 states, an annual cohort of 10 million children from 1-2 years would be targeted every year with a second dose of measles vaccine in RI.
- In 2009 and 2010, Bangladesh, Indonesia and Timor-Leste completed successful mass vaccination campaigns immunizing 23 million children and in India the catch-up campaigns have so far immunized more than 9 million children.
- In 2011, Indonesia and Myanmar plan to immunize approximately 18 million children through SIA.
- Coverage with the first dose of measles vaccine in routine immunization (RI) in the Region increased from 62% in 2000 to

[1] Global eradication of measles Report by the Secretariat. Sixty-third World Health Assembly. A63/18

79% in 2010. Six countries in the Region, Bangladesh, Bhutan, DPR Korea, Maldives, Sri Lanka and Thailand had achieved more than 90% coverage with the first dose of routine measles vaccination nationally.

- Four countries (Bhutan, Maldives, Sri Lanka and Thailand) in the Region have introduced rubella-containing vaccine (RCV) into their routine immunization programmes. Two additional countries (Bangladesh and Nepal) are planning to introduce rubella vaccine through mass campaigns and routine immunization in the next 12-24 months.
- Laboratory supported measles surveillance is generating evidence that there is rubella transmission in the Region. Following the successful completion of the mass measles campaigns, both Bangladesh and Nepal have confirmed that most fever and rash outbreaks are now due to rubella.

The Nepal measles campaign had tremendous impact in helping to improve its routine immunization programme. Nepal conducted mass immunization campaigns with measles vaccine in 2005 and 2008. The percentage of MCV 1 coverage increased from 74% in 2005 to 88% in 2009. Nepal will be introducing the first dose of measles-rubella (MR) vaccine into its routine immunization schedule in 2013 and the second dose in 2016.

In the discussions subsequent to the presentation of Nepal, it was highlighted that a second dose of rubella vaccine was probably not needed. However, for programmatic and operational convenience, a two-dose measles-rubella (MR) schedule should be considered.

The current WHO position on rubella vaccines and the opportunities to accelerate rubella control is built on a successful measles control programme. Countries should take the opportunity of the two-dose measles vaccine strategy to introduce measles-rubella (MR) or measles-mumps-rubella (MMR) vaccine. The SAGE has stated that "every dose of single antigen measles vaccine is a missed opportunity for the prevention of congenital rubella syndrome (CRS)".

Countries introducing rubella containing vaccine (RCV) should achieve and maintain immunization coverage of 80% or more with RCV delivered

through routine services and/or regular SIAs to avoid a paradoxical increase in the incidence of CRS.

Member States have utilized measles catch-up campaigns and follow–up campaigns to strengthen routine immunization by improving micro-plans for routine immunization, training of vaccinators, expanding cold chain capacity, and accelerating the establishment of an AEFI management system.

Currently, there is no evidence to justify prioritizing mumps antigen along with measles and rubella in the Region unless country-specific data on disease burden due to mumps is available. Member States should balance costs against expected benefits before making a decision. The position paper leaves the choice between measles-rubella (MR) and measles-mumps-rubella (MMR) open.

Recommendations:

- Member States should pursue the recommendation made by the sixty-third session of the Regional Committee targeting 95% measles mortality reduction by 2015 as compared to 2000.
- Member States that are implementing accelerated measles control interventions including supplementary immunization campaigns, should utilize such interventions as opportunities to improve routine immunization activities (micro-plans, training, and cold chain strengthening).
- Member States that do not have rubella vaccine in their national immunization programmes should carefully consider opportunities to introduce rubella vaccine in their countries as part of their measles control programme.
- The introduction of rubella vaccine should be in line with current WHO recommendations for rubella vaccine

3.4 Vaccine-preventable disease (VPD) surveillance and strengthening laboratory surveillance

VPD surveillance network

The VPD surveillance network in six countries (Bhutan, DPR Korea, Maldives, Sri Lanka, Thailand and Timor-Leste) is managed exclusively by the national governments. The surveillance system in the remaining five countries (Bangladesh, India, Indonesia, Myanmar and Nepal) is technically and financially supported by WHO. In the five countries with WHO-supported networks, VPD surveillance activities include:

- Bangladesh: AFP, measles/rubella, diphtheria, pertussis, childhood tuberculosis, tetanus and Japanese encephalitis
- India: AFP, measles/rubella (in 11 states)
- Indonesia: AFP, measles/rubella and tetanus
- Myanmar: AFP, measles/rubella, tetanus, Japanese encephalitis and influenza
- Nepal: AFP, measles/rubella, Japanese encephalitis, tetanus and influenza.

Measles surveillance: Measles case-based data is collected by all countries except India and Thailand. Line lists for sporadic cases are sent to SEARO by Bangladesh, Indonesia, Myanmar and Nepal on a monthly basis. Line lists for outbreaks are sent from all countries except Thailand. India is sending information from the 11 states where measles surveillance has been initiated.

There are four measles surveillance indicators: reporting rate, laboratory confirmation, sample adequacy and adequacy of investigation. Member States have achieved the following:

- Reporting rate: Bangladesh, Bhutan and Nepal achieved a rate of >2 discarded measles cases per 100,000 population in 2010. None of the countries in the Region achieved the target of >80% district-level reporting >2 discarded measles cases per 100,000 population in 2010.

- Laboratory confirmation: Bangladesh, Bhutan, Myanmar and Nepal achieved >80% adequate specimen (throat swabs, urine, serum or oral fluid) collection and testing of suspected measles cases in 2010.
- Samples adequate for detecting measles virus: Bangladesh, Indonesia, Myanmar, Nepal, Sri Lanka and Thailand collected samples that were adequate for testing in an accredited laboratory in 2010.
- Adequacy of investigations: None of the countries were reporting data to calculate this indicator till 2010. Despite not achieving the minimum target of 80% adequately investigated outbreaks initiated within 48 hours of notification, Bangladesh, Bhutan, Myanmar and Nepal have started reporting data in 2010.

Neonatal Tetanus surveillance and validation of maternal and neonatal tetanus (MNT): The process of validating countries for the elimination of MNT continued in the Region. Neonatal Tetanus is considered eliminated in all countries in the Region except India, Indonesia and Timor-Leste. Indonesia has initiated region wise elimination. The validation of third region of Indonesia comprising Kalimantan, Sulawesi, Nusa Tenggara Timur and Nusa Tenggara Barat was completed in July 2011, thereby validating over 98% the population of Indonesia. Fifteen states of India have validated MNT elimination

Japanese encephalitis surveillance: Japanese encephalitis surveillance is being conducted in Bangladesh, Bhutan, India, Nepal, Thailand and Sri Lanka. Available data indicate that outbreaks have occurred in Bangladesh, India, Nepal, Thailand and Sri Lanka. Most cases have occurred during the rainy season in June to July and October to December. While JE is a disease occurring predominantly among children, in countries that have introduced vaccine, the cases are increasingly reported among adults as well.

As countries introduce or plan to introduce new vaccines into their immunization schedule, the VDP surveillance network will need to expand and accommodate surveillance for additional diseases. The limited sentinel site surveillance for diseases prevented by Haemophilus influenza b, Pneumococcal Conjugate, Rotavirus, hepatitis B and influenza vaccines

need to be integrated into the existing national and sub-national VDP surveillance systems.

Recommendations:

- The VPD surveillance networks are important in promoting routine immunization and achieving regional immunization goals such as polio eradication and measles elimination. The national governments of the five countries with WHO supported networks are encouraged to identify strategies and resources to ensure sustainability.
- All countries are encouraged to improve and expand case-based measles surveillance.
- India, Indonesia and Timor-Leste are encouraged to initiate or to finalize plans to complete MNTE validation exercises by 2012.
- All countries are encouraged to integrate the surveillance of new and underutilized vaccine with existing VPD surveillance systems.

Vaccine-preventable disease laboratory network

The regional polio laboratory network despite the huge workload and the introduction of new algorithms has maintained high performance standards and achieved WHO accreditation throughout the network. The capacity of the network has substantially increased over the past two years to keep up with the maturity of the programme and the need to provide timely results for programmatic decision-making.

The regional measles and rubella laboratory network has expanded and been strengthened over the last two years as countries have set elimination goals. All measles and rubella laboratories in the network are WHO accredited. Twenty-two laboratories are performing serology and 13 are capable of detecting measles and rubella virus. There is sufficient capacity (staff and equipment) but inadequate financial resources for the network to handle additional serology testing and virus detection to support programmatic decision-making.

The Japanese encephalitis, IBD and rotavirus sentinel surveillance sites and laboratories are providing regular data to programme managers. Due to financial difficulties and the uncertainty of funding beyond 2011, sustaining this laboratory network is an challenge that needs to be addressed with governments, partners and donors.

Recommendations:

- All countries should attempt to achieve the laboratory indicators for measles mortality reduction and eventually measles elimination. Countries are required to document measles virus genotypes from at least 80% of the reported outbreaks and specimens (throat swabs, urine, serum or oral fluid) should be collected and transported to a designated laboratory with proper reverse cold chain procedures.
- Programme managers need to ensure that measles and rubella surveillance data are linked with laboratory data for timely programme action.
- National governments, partners and donors need to ensure that adequate funding is available to sustain the laboratory network.

3.5 Vaccine safety and quality

The goal of WHO is to ensure that 100% of vaccines used in all national immunization programmes (NIPs) are of assured quality. The NRAs are responsible for ensuring the quality, safety and efficacy of vaccines used in NIPs. Given the importance of strengthening the role of the NRA, WHO has identified five steps for capacity building to ensure that NRAs are fully functioning: (1) Benchmarking regulatory system; (2) conducting assessments of NRA against indicators; (3) developing Institutional Development Plans for NRA capacity building to address gaps; (4) providing technical and training support and, (5) conducting monitoring visits through re-assessments. The NRAs in the three vaccine-producing countries although, are performing all of the six regulatory functions, they still need support especially for market authorization and evaluation of clinical trials especially with introduction of more sophisticated vaccines. The NRAs in two countries that directly procure vaccines are performing four functions

and the remaining six countries that procure vaccines through the United Nations are performing two of the regulatory functions.

The Regional Office has developed a strategic plan for capacity building and systems strengthening of the NRA in Member States, which was officially endorsed by governments. While supporting various activities to strengthen NRAs in Member States, AEFI detection and reporting and establishing vaccine post-marketing surveillance systems is still a challenge in many countries. Given the importance of national AEFI committees in monitoring vaccine safety, continuous technical support and advocacy for financial support is vital.

Technical support has been extended to national AEFI committees to review national guidelines regarding new vaccine introduction, regulatory requirements and post-marketing safety studies. Causality assessments have been enhanced through problem-based workshops for local experts with guidance from regional and global experts.

Since the goal of WHO is to ensure all vaccine used in national immunization programmes are of assured quality, NRAs play vital role in guaranteeing quality, safety and efficacy of vaccines. The Regional office for South-East Asia has taken a strategic lead in achieving these goals. In-country training and workshops on vaccine quality have provided opportunities to link global, regional and international experts from high-income, middle-income, and low-income countries.

Country experience: Sri Lanka

Sri Lanka was a pioneer among developing countries to introduce a vaccine safety surveillance system in 1996. All reported AEFI cases are investigated at different levels according to the severity.

All serious AEFI cases (e.g., hospitalization, deaths) are investigated at the national level by the epidemiology unit and national experts committee on AEFI. When necessary, assistance is provided by international organizations (e.g., WHO). The follow-up actions are based on the investigation findings and are used as an opportunity to strengthen the immunization programme. If the AEFI is minor and not serious, then only a staff training is conducted and no investigation is carried out. If the vaccine quality or safety is questioned, the vaccine is withdrawn (temporary or

permanently). It is re-introduced only after a rigorous investigation by the national AEFI committee.

Risk communication needs to address the needs of various groups: medical professionals/academics, health staff at all levels, politicians, journalists and the general public and be used to gain their support. Because the needs of these groups vary, different activities were planned:

- Discussion of the risk-benefits of vaccine at various academic forums (seminars, workshops).
- Dissemination of the AEFI investigation findings.
- Expansion of national expert committee structures to accommodate a wide representation of professionals/academics to provide a more scientific level of risk communication.
- Confidence-building through staff training focusing on vaccine risk-benefit and role plays.
- Sensitization of key politicians and parliamentarians.
- Development of vaccine safety modules in local language using GAVI/HSS funds.
- Media seminars for senior journalists of print and electronic media including chief editors, news editors and regional journalists.

Strengthening Vaccine Delivery and Cold Chain Management: country experience: India

The Government of India initiated cold chain strengthening since 1985 with the launching of the Universal Immunization Programme. There was no major impact on cold chain capacity in initial 10 states following introduction of hepatitis B vaccine. Subsequently, cold chain points were established which are now functional up to Primary Health Care centre level. However, the States that are underperforming do need cold chain expansion. Each year, around USD 160 million is provided by the government for cold chain maintenance to ensure expansion of cold chain points to meet national norms. Effective vaccine management assessments are conducted and recommendations followed to improve cold chain and vaccine management and quality of immunization services.

Key initiatives taken for strengthening cold chain and vaccine management include (1) Vaccine delivery; (2) Infrastructure development; (3) Equipment maintenance; (4) Human resource capacity building, and (5) Management information system.

In addition, different initiatives have been introduced at state level. Orissa has deployed semi volunteers for delivering vaccines from the last cold chain point to the session site and to bring back the unused vaccines and the performance report.

Recommendations:

- Although countries including Sri Lanka, Bangladesh and Thailand have made significant progress to establish a vaccine safety monitoring system, vaccine producing countries especially India and Indonesia need strong support to establish a system to detect and monitor AEFI.
- Countries have established AEFI committees but they need government support to make them operational by providing them with a secretariat and budget to enable them to conduct regular meetings and vaccine post-marketing safety studies.
- Vaccine safety concerns in the public remain a serious threat to immunization programmes and the ministry of health needs to develop a communication plan to address these concerns especially with the introduction of new vaccine for which very little post-marketing safety data are available.

3.6 Introduction of new and underutilized vaccines (NUVI)

Member States of the Region have made considerable progress in introducing new and underutilized vaccine. All countries in the Region have introduced hepatitis B vaccine. Bangladesh, Bhutan, Nepal and Sri Lanka have introduced Haemophilus influenzae type B vaccine and Bhutan has also introduced Human Papilloma virus vaccine for adolescent girls. Maldives is planning to introduce Hib vaccine. Sri Lanka will be introducing measles-mumps-rubella (MMR) vaccine replacing measles and measles-rubella (MR) vaccines in October 2011 while Maldives and Thailand have already added MMR into their immunization schedules. Bangladesh and

Nepal are planning to introduce rubella vaccine combined with measles vaccine. By 2013 DPR Korea, India, Indonesia, Maldives, Myanmar and Timor-Leste will have introduced Haemophilus influenzae type B vaccine and Bangladesh will have also introduced pneumococcal vaccine. It will be the first country to introduce pneumococcal vaccine in the Region. Except for Maldives all the above countries have or will introduce new and underutilized vaccines with the support of GAVI Alliance. However, in addition to Maldives and Thailand, Bhutan and Sri Lanka will not receive GAVI support as these countries have exceeded the GDP cut off point for receiving GAVI assistance.

The regional strategy is to intensify routine immunization while introducing new and underutilized vaccines (NUVI). The external assistance receiving during introduction of new and underutilized vaccines is being used to strengthen routine immunization. The ultimate aim is that all vaccines (new, underutilized and routine) introduced in the Region achieve at least >90% coverage at the national level and >80% coverage at the district level.

Global progress in introduction of new and underutilized vaccines

At the GAVI Alliance pledging conference, nine donors pledged US$ 4.3 billion for the introduction of new and underutilized vaccines exceeding the initial target of US$ 3.7 billion. The government of the United Kingdom and the Bill and Melinda Gates Foundation each pledged more than US$ 1 billion, which should allow GAVI to reach more than 250 million children. GAVI currently supports the introduction of pentavalent, pneumoncoccal, rotavirus, meningitis A, and yellow fever and measles (second dose) vaccines as well as meningitis and yellow fever vaccine stockpiles. For future support, GAVI is prioritizing human papillomavirus (HPV), Japanese encephalitis, rubella and typhoid vaccines. They are also monitoring the development of vaccines for malaria and dengue fever.

During the most recent round of proposals, GAVI received a record number of applications. Over two-thirds of the applications were recommended for approval or clarifications. There were a large number of requests to support introduction of pneumoncoccal and rotavirus vaccines as well as measles (second dose), pentavalent, meningococcal type A and yellow fever vaccines. The funding implication to support these proposals is

over US$ 1 billion. In the South-East Asia Region, Bangladesh, DPR Korea, India, Indonesia, Myanmar, Nepal, and Timor-Leste have applied for support:

During the application review process, there were several areas that emerged as critical issues associated with vaccine introduction. The most important issue identified was the limited logistics and cold chain capacity of countries to accommodate vaccines especially those coming in single dose; and therefore requiring additional storage space. Future applications presented to the New Vaccine Independent Review Committee for funding consideration should include a report on recent Effective Vaccine Management assessment and an improvement plan. Other issues highlighted during the review process included the capacity for countries to introduce multiple vaccines in a short period, the need to support routine immunization service delivery, and the need to simplify/streamline the application process and to strengthen vaccine safety surveillance.

The key findings from the Independent Review Committee were that the quantity of new vaccines used is increasing; the introduction and adoption of new vaccines is increasingly successful; and, that there has been a progressive expansion in the use of new vaccines in eligible countries. However, although the vaccine coverage is increasing, the rate of increase has slowed down over the last three years; innovative approaches to reach the unreached are needed.

There has been an improved contribution of immunization expenditures in 2010, governments (36%) and GAVI (25%). The co-financing policy is working well and most countries are also providing additional financial support for NUVI (eight countries have volunteered to provide more than the standard rates of co-financing). In the future, the Independent Review Committee would like to see co-financing verification in proposals for further assistance for financial support.

Several issues were raised as emerging needs for countries as they introduce additional new vaccines:

- Role of cash-based grants
- Immunization system strengthening and health systems strengthening should be a part of the overall NUVI support

- Engagement of civil society
- Role of the Health Sector Coordination Committee/Inter-agency Coordinating Committee
- Issues related to anti-vaccine movements and adverse events following immunization (AEFI)
- Strengthening advocacy and strategic communication.

In addition to addressing the above issues, it was felt that the partners need to assist countries by providing technical assistance for new vaccine introduction as well as feedback on cold chain and supply logistics.

Opportunities for intensification of routine immunization through new and underutilized vaccine introduction (NUVI):

The global action plan for NUVI has clearly outlined the collaborative efforts of partners and consists of five main areas of work: (1) norms and standards; (2) decision making information for countries; (3) planning, financing and procurement; (4) delivery in synergy with VPD control; and, (5) monitoring and surveillance.

There are projects currently looking at the effects of new vaccine introduction on routine immunization. The preliminary results show that there are many challenges for the immunization system when a new vaccine is introduced. There are, however, many potential opportunities for improving the system by using new vaccine introduction to promote an integrated approach to controlling vaccine-preventable diseases. The potential list of opportunities includes: improving the capacity of the health workforce, improving information systems, providing access to new vaccine technologies, providing new innovative financing mechanisms and improving leadership/good governance.

The Global NUVI meeting held in June 2011 highlighted several important points:

- Sustaining gains from NUVI requires government ownership of the national immunization programme and engaging all immunization stakeholders.

- Acknowledging the current progress towards polio eradication and measles mortality reduction.
- Engaging and informing communities about EPI and generating demand for vaccines.
- Taking into account the specific needs of low and middle income countries.

In conclusion, the global action plan for NUVI is an outline for partnership focusing on the five main work areas described in the paragraph above. NUVI, while representing some challenges offers many opportunities to countries that should capitalize on the current efforts to address those challenges and thus to mitigate any potential negative effects.

Recommendation

- Cold chain and logistics should be improved to accommodate new vaccine introduction:
  - National supply chains should be optimized (20% reduction in operating costs.)
  - Cold rooms/refrigerators should have continuous temperature monitoring with data communicated to a share point (5%-15% reduction in damaged vaccines).
  - Vaccine stocks should be minimized by using real-time management (>2 million doses of vaccine expired in the last 12 months across 24 countries).
- Country-specific strategies should be developed to reach unreached children.
- All Member States should start documenting NUVI efforts and study the impact of NUVI on routine immunization.
- All partners should coordinate with ICC at national level to support the Member States ensuring their NUVI plans are implemented.

3.7 Reducing health inequities and health system development

Everyone has the right to equal access to public services in his or her country. A review of the under-five mortality data shows that progress

towards achieving MDG 5 targets is unequal in at least two-thirds of countries. Coverage inequality was highest in the lowest economic quintiles. The distribution pattern for mortality was classified in 15 countries and the highest reduction in under-five mortality was in the wealthiest quintile irrespective of the typology.

DTP_3 coverage rates for the wealthiest quintiles were discussed and it was noted that the poorest are less likely to be immunized. Likewise, levels of nutrition for children belonging to the poorest households have remained stagnant for several years.

Equity must be considered as part of any plan of action to reach the goals of MDG4. Reaching the unreached, the most vulnerable and the poorest groups are a key focus of the intensification of routine immunization in 2012.

Health system strengthening and routine immunization: There are several issues and challenges in the area of health system strengthening as it relates to routine immunization. GAVI has extensive experience in financing health system strengthening. Opportunities are available for routine immunization strengthening using the six core health system functions as building blocks: governance, information, financing, service delivery, human resources, medicine and technology. Improving health systems in these core areas could be used to improve routine immunization.

According to the regional conceptual framework of rapid health system assessment, it is necessary to identify needs and gaps in routine immunization at the national and sub-national levels. The needs and gaps should then be related to the six health system building blocks and addressed in an integrated manner. Health system strengthening initiatives offer strategies that lead to better access, coverage, quality and efficiency. A wide range of issues and challenges exist for routine immunization, but with coordinated efforts, they can be successfully addressed and solved.

3.8 Roadmap to intensify routine immunization in 2012

Participants from each country developed a draft roadmap to intensify routine immunization in 2012 and presented them in a plenary session. The information related to each country is summarized in Annex 4. The

participants considered the strategic frame work developed by SEAR and adopted it to the country context.

Using immunization coverage information brought to the workshop each country identified the priority districts for intensification of routine immunization in 2012. Countries which have not achieved 90% national coverage, and with several districts less than 80% coverage identified these districts for intensification of routine immunization. Countries which have more than 90% national coverage generally identified districts with less than 90% coverage for intensification of routine immunization. Both groups of countries have acknowledged the necessity of reaching hard-to-reach areas, marginalized populations, and migrant populations to improve the coverage.

The Member States also identified the key challenges to improve immunization coverage and possible solutions to address these challenges. Potential partners for engagement in intensification of routine immunization were listed by each group. Member States prioritized the new, different and innovative vaccine delivery mechanisms to increase immunization coverage and advocacy. Finally, they prioritized the preparatory activities to launch 2012 as the year of intensification of routine immunization. Member States concluded that these draft roadmaps will be reviewed at national level and detailed plans for intensification of routine immunization prepared.

4. Overall conclusions and recommendations:

- All Member States of SEAR endorsed the framework for increasing and sustaining immunization coverage and recognized the need for intensification of routine immunization (IRI) in 2012 and thereafter, in order to reach the 8.3 million children that are either under-immunized or un-immunized in the Region. All Member States should identify pockets of under-immunized or un-immunized children and develop an intensification plan for 2012 by the end of 2011. The plan should include:
  - Priority areas and vulnerable populations;
  - Staff and logistics requirements;
  - Innovative ideas for vaccine delivery;

  - Support from all stakeholders for implementation;
  - Target for specific activities in 2012; and
  - Budget estimates.

- The plan and strategy for implementation should be discussed and endorsed by immunization stakeholders so that it can be launched in January 2012.
- The coordination mechanisms such as ICC should be strengthened or established for intensification of routine immunization. WHO and partners should take an active role in resource mobilization for identified activities.
- The progress of implementation of the plans for intensification of routine immunization should be reviewed by June 2013 and reported to the EPI managers' meeting.

Annex 1

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Annex 2

Agenda

1. Linking polio eradication with improving immunization coverage

- Global update on polio eradication
- Progress and challenges to polio eradication in India- country experience
- Regional update and discussion on linking polio eradication initiative to improve routine immunization

2. Synergizing Measles elimination with improving routine immunization

- Updated WHO position on rubella: opportunities to accelerate measles and rubella control
- Regional progress towards measles elimination and opportunities to synergize with improving routine immunization coverage
- Use of measles mortality reduction experience in intensifying routine immunization

3. VPD surveillance and strengthening laboratory surveillance

- Improving Vaccine Preventable Diseases surveillance to guide identifying pockets of low RI coverage and monitoring impact
- Regional laboratory networks: the challenge

4. Vaccine safety and quality

- Strengthening vaccine delivery and cold chain management
- Strengthening national regulatory authorities (NRA) in SEAR
- Risk communication in management of adverse events following immunization (AEFI) : country experience: Sri Lanka

5. Introduction of new and underutilized vaccines

- Progress of New and Underutilized Vaccines introduction (NUVI) : Issues & Challenges

- Opportunities for intensification of routine immunization through new and underutilized vaccine introduction based on current evidence

6. Group work to review each country situation to intensify routine* immunization *in 2012

Plans for 2012: year of intensification of Routine Immunization in SEAR: Introduction to group work

- Vulnerability assessment
- Identifying main barriers
- Developing road map including strategies and a time line
- Presentations on group work

7. Integrating influenza surveillance with Vaccine Preventable Diseases surveillance

- Integrating influenza surveillance with vaccine Preventable diseases surveillance
- Presentation & discussion

8. Reducing health inequities & healthy system development

- Country-programming on reducing inequities in health access/outcomes, including for EPI
- Strengthening health systems: opportunities for increasing immunization coverage

9. Conclusions & recommendations

Annex 3

Road map for implementing strategic framework for intensifying routine immunization in SEAR

1. Member States with more than 90% national DPT coverage

Country	Geographical prioritization	Increasing immunization coverage		Human resources		New and innovative vaccine delivery mechanisms	Advocacy and communication strategies	Priority activities to launch 2012: year of intensification of routine immunization
		Issues	Solutions	Issues	Solutions			
Bangladesh	Only 2 out of 70 districts have less than 80% coverage. 10 districts have more than 10% DPT1-DPT3 drop out rate. These 12 districts will be the priority districts for intensification.	1. Some areas are not covered by Upazila Health Complexes, specially remote areas near administrative borders of upazilas. 2. Inadequate cold chain storage capacity for new vaccines at national level. 3. Inadequate reporting and investigation of AEFI. 4. In hard-to-reach unions, inadequate outreach supervisory visits due to inadequate staff, logistics and funds.	1. Better micro-planning in priority upazilas. 2. Ensure supportive supervision for low performing unions in priority districts. 3. Identify space to install Walk-In-Coolers. 4. Sensitize mid-level managers in data analysis and feed back. 5. Ensure adhering to supervision plans. Utilization of other alternate funding such as HSS and new vaccine	1. Vacant posts due to recent promotion of Health Assistants to Assistant Health Inspectors. 2. High turnover of second-level supervisors in some districts.	1. Recruitment of HAs is being discussed, as a interim measure will be managed by trained volunteers. 2. In-service training for new supervisors and supportive supervisory visits from upper level.	1. Providing country boats for hard to reach areas 2. Increasing number of porters for hard to reach unions 3. Providing solar refrigerator for remote Upazilas 4. Using mobile phones for tracking vaccine delivery	1. National level launching with Polio NIDs. 2. Expand the role of polio and measles steering committee for intensification of routine immunization. 3. Intensify implementation of communication strategies using national and local media. 4. Ensure inter-personal communication before the day of vaccination.	1. High-level advocacy meeting for relevant stake-holders. 2. Form a working group including representatives from GoB and partners. 3. Reprogramming GAVI HSS funds for priority activities.
Bhutan	Only two out 20 districts have less than 80% coverage. These two districts and the migratory populations will be the priority for intensification.	1. Migratory population. 2. Vaccine stock-out in some districts. .	1. Establish mechanism to track the migratory population and train village health workers about that. 2. Improve the forecasting and procurement plan with support from partners.	1. Inadequate human resources in basic health units in remote, difficult to reach areas.	1. Increasing the number of staff in remote, difficult to reach areas. As an interim measure have more mobile clinics.	1. List mobile telephones of parents to follow the drop outs	1. Media campaign 2. Sensitization of local governments and parliamentarians. 3. Develop new IEC materials.	1. Launch "2012 year of intensification of Routine Immunization" at the 2011 Annual Health Conference.

Country	Geographical prioritization	Increasing immunization coverage		Human resources		New and innovative vaccine delivery mechanisms	Advocacy and communication strategies	Priority activities to launch 2012: year of intensification of routine immunization
		Issues	Solutions	Issues	Solutions			
Maldives		1. Coordination of newly decentralized health system to deliver immunization services. 2. AEFI reporting is not fully functioning. 3. Supervision system is not well defined.	1. Develop coordination mechanism for immunization, between relevant ministries and health service corporations. 2. Expedite development of new AEFI guidelines, monitoring and regular feedback to reporting units. 3. Integrated supervision with other programmes.	1. Inadequate technical expertise at national level	1. One more staff for immunization and technical expertise from WHO through a consultant.	1. Identifying a focal point at each island. 2. Analyze the vaccine refusal database and develop a plan to address the issues. 3. Conduct client satisfaction survey. 4. Introduce solar refrigerators.	1. Integrate communication plan for intensification of routine immunization with "communication action plan for pentavalent vaccine".	1. High-level advocacy meeting for improving immunization in newly decentralized health system. 2. Develop action plan for intensifying routine immunization in the Maldives -2012.
Sri Lanka	Only two out of 26 districts have < than 90% coverage. These two districts and other districts in the conflict affected areas will be the priority for intensification.	1. Access and service delivery in the areas which were affected by the conflict.	1. Strengthening the health care infra-structure in conflict-affected areas. 2. Strengthening cold chain capacity by installing solar refrigerators.	1. Lack of skilled staff in war-affected areas	1. Filling the vacancies with new recruitments and provide incentives to staff who are going to conflict-affected areas.	1. Establishing e-based cold chain monitoring system. 2. Providing new technology (log tags, freeze tags) to all levels. 3. Designated cold chain manager in all districts.	1. Intensified risk communication targeting different groups like, parents, school children, media, policy makers and health staff.	
Thailand	Priority for intensification would be conflict areas in southern part, areas near borders and hill tribe groups in mountain areas.	1. Inadequate coverage in conflict areas, border areas and in hill tribes. 2. Religious belief about life and illness. 3. Parents concern about AEFIs.	1. Improving micro-plan in areas with low coverage. 2. Inform and communicate with public about VPDs, benefit of Immunization and AEFIs. 3. Motivate co-operation with community leaders, religious leaders and NGOs to increase access to immunization services.			1. Outsource the logistics to public/private enterprise. 2. Pharmacists are involved in the cold chain management, vaccine storage and distribution.	1. Intensify public awareness about need of intensifying immunization in 2012.	1. Political endorsement about commitment to 2012: Year of intensification of immunization. 2. Develop national policy to intensify RI

2 Member States with less than 90% DPT3 coverage nationally

Country	Geographical prioritization	Increasing immunization coverage		Human resources		New and innovative vaccine delivery mechanisms	Advocacy and communication strategies	Priority activities to launch 2012: year of intensification of routine immunization
		Issues	Solutions	Barriers	Solutions			
India	Priority would be eight northern states with DPT3 coverage below national level and eight north eastern states with areas difficult to access.	There are several issues including inadequate access for communities to reach immunization services, poor coordination at district level, stock-out of vaccines and public demand for immunization.	Approach will be to analyze issues by states and identify solutions through state and district level forums. Government and development partners will work together at all levels to ensure optimum utilization of funds from National Rural Health Mission for intensification of routine immunization.	1. Shortage and in-equitable distribution of staff, specially in urban areas.	1. Increased coordination with the private sector 2. Mapping of human resources. 3. Re-distribution of available staff.	1. Alternative vaccine delivery system (*Teeka* Express) will be implemented in the entire country. 2. Exclusive cadre of supervisors for immunization. 3. Providing AEFI treatment kit for every session site.	1. Develop an advocacy package for immunization. 1. Branding of Immunization. 2. Advocacy with partners for a joint workplan 4. National Immunization intensification launch.	1. Documentation of best practices. 2. Regional consultation meetings for preparation of strategy. 3. All 35 states will have functional micro-plans. 4. Use of existing polio network and resources for intensifying RI in India. 5. Planning for Immunization weeks.
Indonesia	Priority would be the districts which have less than 80% coverage.	1. Access issues in difficult-to-reach and sparsely populated areas 2. Barriers due to deprived socio-economic situation and migration. 3. Drop-outs in highly populated areas. 4. Commitment from some local governments is not as high as before. 5.Limited communication and information: to mothers and care givers, on AEFI and to counter anti-vaccination lobbies.	1. Set up new immunization posts in difficult to access areas 2.Active tracking for drop out and unimmunized mothers and children 3. Intensify IEC at all levels, 4. Improve health workers IPC skills and response to anti vaccine lobbies	1. High turn-Over of staff, vacant positions and unequal distribution. 2. Inadequate knowledge in some staff.	1. Increase the number of health workers from the local areas, outsourcing staff in priority areas and collaboration with NGOs and the private sector. 2. Improve pre- service and in-service training and supportive supervision and monitoring.	1. SOS strategy: conducted once every three months targeting rural nomadic populations. During the visit health workers provide integrated services in the morning and health education night.	1. Establish area-specific vaccine delivery mechanism for clustered Islands. 2. Improved stock management using SMS.	1. High-level advocacy meeting for national and provincial policy makers. 2. Advocate and orient the RI intensification at launching of Measles follow-up campaign in October. 3.Extensive media engagement for advocacy.
Myanmar	Priority would be the townships which have less than 80% coverage.	1. Geographically hard-to- reach populations, sparsely populated areas and ethnic population. 2. Inadequate awareness of community. 3. Urban high risk areas. 4. Limited cold chain and vaccine storage facilities. 5. Limited facility to transport vaccines.	1. Conduct periodic immunization campaigns (3-4 times a year) with other basic health services. 2. Engagement of community leaders and IEC campaigns using local dialects. 3. Detailed micro planning. 4. Reallocation of available equipment and possibility of expanding use of solar powered refrigerators.	1. Shortage of vaccinators. 2. Limited staff with multiple duties.	1. Assigning public health supervisors to be involved in vaccination. 2. Involvement of community health workers in immunization, assigning staff from other ministries.	1. Effective utilization of HSS window for immunization. 2. Micro-plan with the involvement of local community. 3. Community involvement for vaccine delivery. 4. Outsourcing for alternate mechanisms for delivery of vaccines and other logistics.	1. Advocacy to new regional governments for intensification of immunization. 2. Engagement with local authorities to ensure access to insecure areas. 3. IEC materials in local languages. 4. Involvement of local, traditional cultural events to promote immunization.	1. I.C.C meeting on IRI. 2. Special session on IRI at Mid-Term EPI review in August 2011. 3. Advocacy meeting with S/R governments. 4. Development of guideline for IRI. 5. Donors meeting and fund raising. 6. Identification of local resources.

Country	Geographical prioritization	Increasing immunization coverage		Human resources		New and innovative vaccine delivery mechanisms	Advocacy and communication strategies	Priority activities to launch 2012: year of intensification of routine immunization
		Issues	Solutions	Barriers	Solutions			
Nepal	Priority would be the districts which have less than 80% coverage.	1. Some micro-plans are not updated or appropriately implemented. 2. Inadequate planning and implementations in urban areas. 3. Defaulter tracing mechanism not functioning adequately. 4. Inadequate information to create demand from community. 5. Decision makers are not fully aware about importance and benefits of immunization. 6. EPI logistics is under separate management. 7. Stock management below regional (provincial) level is weak.	1. Training of health personnel in micro-plan development and monitoring the implementation of micro- plans. 2. Improved coordination between Child Health Division and Logistic Management Division. 3. Vaccine supply to be based on demand (using computer-based system).	1. National immunization section is under-staffed. 2. Several vaccinator posts are vacant. 3. The number of vaccinators is not propionate to VDC size and population. 4. Inadequate supervision and monitoring.	1. While perusing long-term human resource reforms hire staff on short term contracts. 2. Redistribute based on population and size of the area. 3. Improved supportive supervision.	1. Consider outsourcing delivery in hard- to-reach areas. 2. Increase sub centres in geographically remote areas using solar power refrigirators. 3. Review urban vaccine delivery mechanism. 4. Ensure contingency planning.	1. Social mobilization targeting hard-to-reach and marginalized population. 2. Evaluate IEC materials and strategies. 3. Develop IEC materials to reach migrant populations. 4. Mobilize schools, community, teachers, leaders and other relevant stakeholders. 5. Establish partnership with media.	1. Advocacy on RI intensification at all levels of forums including parliamentarians, local governments and human rights groups.
Timor- Leste	Priority will be three districts with < 85% BCG coverage and >10 % drop-out rate (inadequate access and utilization), four districts with < 85% BCG coverage (inadequate access) and 3 districts with >10% drop-out rate (inadequate utilization).	1. Developing heath system (moving from conflict to development). 2. Geographical access. 3. High drop-out rate. 4. Technical capacity of health workers. 5. Vaccine management and logistics.	1. Development of National Strategic Development Plan and National Health Sector Strategic Plan which have prioritized routine Immunization. 2. Investment in health infrastructure and increase in outreach sessions. 3.Capacity building at all levels including building Institutional capacity of National Training Institute. 4. Development of system for stock management, vaccine indenting and distribution. EVM assessment in 2011 with development of Improvement plan.	1. Shortage of health care providers. 2. Distribution of providers among districts is not uniform.	1. Increasing number of midwives and nurses through recruiting Midwives from Indonesia and developing in-country pre-service training. 2. Rational distribution of available health workforce according to the needs. 3. Proposal for incentives for difficult areas	1. Involving community mobilizers to develop "due lists" and mobilize parents. 2. integrated service delivery (SISCa) is strengthened through quality assurance system. 3. Tracking of target group using RSF (Family Health Register).	1. Developing Immunization branding as a promise of quality services including logo and IEC materials development. 2. Use of interpersonal and mass media approaches. 3. Orientation package for Suco and aldiea chiefs (local self-governments) in routine immunization	1. Developing an investment case for routine immunization including new vaccine introduction for advocacy with donors and political leadership.

Annex 4

Message of Dr Samlee Plianbangchang, Regional Director, WHO South East Asia Region, at the High-level Ministerial Meeting 2012: Year of Intensification for Routine Immunization, 2 August 2011, New Delhi

Excellency, Mr Ghulam Nabi Azad, Minister of Health and Family Welfare, Government of India; Excellencies, Dr E. Hoekstra – UNICEF; Mr Steve Steward – CDC, USA; Mr Ashok Alexander – Bill and Melinda Gates Foundation; Dr M.S. Sawhney – Rotary International; national programme managers; members of the Regional Technical Advisory Group; representatives of other partner organizations; colleagues and guests; ladies and gentlemen,

I warmly welcome you all to this High-Level Ministerial Meeting to deliberate upon the theme: "2012: Year of Intensification of Routine Immunization in South-East Asia Region". This meeting will also be followed by the Regional Meeting of "EPI Managers". I also welcome you all to this regional meeting of EPI Managers. I thank all participants for sparing their valuable time to attend the meetings. I particularly thank Excellency, Mr Ghulam Nabi Azad, Honorable Minister of Health and Family Welfare, Government of India, for agreeing to inaugurate the meetings.

Excellencies, ladies and gentlemen,

The coverage of routine immunization in SEAR remains relatively low, compared with other WHO Regions. Furthermore, as far as coverage of routine immunization in South-East Asia is concerned, there are still disparities between countries; and these disparities exist among States, provinces and districts within the same countries. We have to work harder in order to achieve "universal" and "uniform" coverage of routine immunization in children in the Region. High and sustained coverage of routine immunization is needed to help "accelerate" the achievements of targets set for elimination or eradication of certain vaccine-preventable diseases, such as polio and measles. Also, we need high and sustained

coverage of routine immunization to ensure long-term "maintenance" of gains from specific disease elimination and eradication of VPDs. The current estimate of coverage of routine immunization in SEAR is currently at 73%. It is relatively very low. We may expect our "intensified efforts" during 2012 to contribute to an acceleration of this rate. Routine immunization in this context means primarily the six basic antigens. However, if any governments would like to add more antigens other than these six in their routine immunization, WHO will be very happy to support the governments' decision in this regard. Several countries in the Region have already added hepatitis B vaccination in their routine immunization.

Excellencies,

Even though widely recognized as the most cost-effective public health interventions against infectious diseases, many vaccines, including those for the six basic antigens, are not available to children; especially the children in the developing world who need them most. Over 10 million vulnerable children in SEAR, accounting for 25% of the world's children, do not receive a complete course of vaccination against diphtheria, tetanus, and pertussis (DTP3) during their first year of life. Each year, worldwide, an estimated 1.5 to 2 million children die due to VPDs. Out of this number, 25%-30% deaths occur in SEAR. These are really premature deaths among our future generations. Immunization not only prevents infectious diseases but also contributes to the quality of life of children. Access to safe and effective vaccines is a basic right of all children. We, together, should help ensure this right; at least for routine immunization. If we are truly to engage in the efforts to increase and sustain routine immunization coverage for all children, unwavering commitments are needed from all partners and stakeholders. We are here to collectively affirm our commitment to translate our "intent" into "actions", the actions to intensify routine immunization in countries of SEAR during 2012 - the actions that can lead to effective protection of our children from common childhood diseases.

Ladies and gentlemen,

As I said, following this high-level ministerial meeting, there will be a regional meeting of "EPI managers" to review and discuss various issues relating to national immunization programmes. The deliberations on those

issues will lead to further improvement in the development and management of national immunization programmes.

With these words, Excellencies, ladies and gentlemen, I wish these two meetings all success.

Thank you.

WHO assists Member States of the South-East Asia Region to periodically review and discuss various issues relating to national immunization programmes. Deliberations on these issues lead to tangible improvements in the management of national immunization programmes.

This publication is the report of the Meeting of EPI Managers of the South-East Asia Region, held in New Delhi, India, on 3-4 August 2011. It includes a review of progress made in planning for increasing and sustaining the high coverage of routine immunization, lessons learnt from the polio campaign for improving other programmes, and strengthening laboratory surveillance. Vaccine safety and quality, reducing health inequities and a roadmap to intensify routine immunization in 2012 was also discussed.

The report includes recommendations for the consideration of Member States in their efforts to achieve the 2012 Year of Intensification of Routine immunization targets in SE Asia and the Global Immunization Vision and Strategy (GIVS) goals.

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