

## Seventh Pacific Immunization Programme Strengthening Workshop (PIPS) and Workshop on Lessons Learnt from Pandemic Influenza A(H1N1) Vaccine Deployment and Vaccination



Nadi, Fiji  
22-27 August 2011



SEVENTH PACIFIC IMMUNIZATION PROGRAMME STRENGTHENING WORKSHOP  
AND WORKSHOP ON LESSONS LEARNT FROM PANDEMIC INFLUENZA A(H1N1) VACCINE DEPLOYMENT AND VACCINATION

(WP)/ICP/IVD/1.1/001-A

English only

Report series number : RS/2011/GE/51(FJI)

**REPORT**

**SEVENTH PACIFIC IMMUNIZATION PROGRAMME STRENGTHENING  
WORKSHOP (PIPS) AND WORKSHOP ON LESSONS LEARNT FROM PANDEMIC  
INFLUENZA A(H1N1) VACCINE DEPLOYMENT AND VACCINATION**

Convened by:

WORLD HEALTH ORGANIZATION

REGIONAL OFFICE FOR THE WESTERN PACIFIC

Nadi, Fiji  
22–27 August 2011

Not for sale

Printed and distributed by:

World Health Organization  
Regional Office for the Western Pacific  
Manila, Philippines

15 August 2012

## NOTE

The views expressed in this report are those of the participants in the Seventh Pacific Immunization Programme Strengthening (PIPS) Workshop and Workshop on Lessons Learnt from Pandemic Influenza A(H1N1) Vaccine Development and Vaccination and do not necessarily reflect the policies of the World Health Organization.

This report has been prepared by the World Health Organization Regional Office for the Western Pacific for the participants in the Seventh Pacific Immunization Programme Strengthening (PIPS) Workshop and Workshop on Lessons Learnt from Pandemic Influenza A(H1N1) Vaccine Development and Vaccination, which was held in Nadi, Fiji, from 22 to 27 August 2011.

## SUMMARY

The seventh Pacific Immunization Programme Strengthening (PIPS) and Lessons Learnt from the Pandemic Influenza A(H1N1) 2009 Vaccine Deployment and Vaccination Workshop were convened by WHO and the United Nations Children's Fund (UNICEF) at the Tanoa International Hotel, Nadi, Fiji, from 22 to 27 August 2011. The organizers of the workshop were the Australian Agency for International Development (AusAID), the United States Centers for Disease Control and Prevention (US CDC), the Japan International Cooperation Agency (JICA), Rotary International, the New Zealand Agency for International Development (NZAID) and the Secretariat of the Pacific Community (SPC). There were 26 participants from the 18 Pacific island countries and areas with the participation of temporary advisers and a consultant of the workshop. The programme agenda is attached as Annex 1.

The objectives of the workshop were:

- (1) to review technical updates, share information on national immunization programme status, identify major obstacles and agreed action points with regard to routine immunization systems, achieving and sustaining targeted disease goals, achieving and sustaining high quality programme monitoring and vaccine-preventable disease (VPD) surveillance;
- (2) to strengthen linkages for successful implementation strategies based on the 20th Technical Advisory Group on Immunization and Vaccine-Preventable Diseases in the Western Pacific Region (TAG) preliminary conclusions and recommendations;
- (3) to provide input and possibly endorse a joint WHO-UNICEF Strategic Plan for Immunization in the Pacific; and
- (4) to identify the challenges, successes and lessons learnt from pandemic influenza A(H1N1) 2009 vaccine deployment and vaccination, to update the national deployment and vaccination plan for H1N1 pandemic vaccine and draw up action plans.

## LIST OF ACRONYMS

AEFI	Adverse Events Following Immunization
AFP	Acute Flaccid Paralysis
AFR	Acute Fever and Rash
ANC	Antenatal Care
AusAID	Australian Agency for International Development
BCG	Bacillus Calmette–Guérin Vaccine
BHFI	Baby-Friendly Hospital Initiative
CRS	Congenital Rubella Syndrome
DTP	Diphtheria-Tetanus-Pertussis
DTP3	Third Dose Diphtheria-Tetanus-Pertussis Vaccine
DoV	Decade of Vaccines
EMRO	Eastern Mediterranean Regional Office
EPI	Expanded Programme on Immunization
ERP	Expert Review Panel
EVM	Effective Vaccine Management
GAVI	GAVI Alliance
GIVS	Global Immunization and Vaccine Strategy
GPEI	Global Eradication Polio Initiative
HBAS	Hospital-based Active Surveillance
HBsAG	Hepatitis B Surface Antigen
HBV	Hepatitis B Vaccine
HepB3	Third Dose of Hepatitis B Vaccine
Hib	<i>Haemophilus influenzae</i> type B
HIS	Health Information System
HIV	Human Immunodeficiency Virus
HPV	Human Papillomavirus
HSSP	Health Sector Support Programme
HCW	Health Care Worker
IMB	Independent Monitoring Board
IEC	Information, Education and Communications
IgM	Immunoglobulin M
IHR	International Health Regulations
IPV	Inactivated Polio Vaccine
JE	Japanese Encephalitis
JICA	Japan International Cooperation Agency
JPIPS	Japanese Support for Pacific Immunization Programme Strengthening
JRF	Joint Reporting Form
LoG	Letter of Guarantee
MCH	Maternal and Child Health
MCV1	First Dose of Measles-containing Vaccine
MCV2	Second Dose of Measles-containing Vaccine
MDG	Millennium Development Goal

MDVP	Multidose Vial Policy
MLM	Mid Level Management
MMR	Measles/Mumps/Rubella vaccine
MNCH	Maternal, Newborn and Child Health
MNCAH	Maternal, Neonatal, Child and Adolescent Health
MNTE	Maternal and Neonatal Tetanus Elimination
MR	Measles-Rubella
NCD	Noncommunicable Disease
NMS	National Medical Store
NPAFP	Non-Polio Acute Flaccid Paralysis
NRA	National Regulatory Authority
NZAID	The New Zealand Agency for International Development
OPV	Oral Poliovirus Vaccine
ORT	Oral Rehydration Therapy
PAHO	Pan American Health Organization
PICs	Pacific island countries and areas
PCV	Pneumococcal Conjugate Vaccine
PIPS	Pacific Immunization Programme Strengthening
PIRIS	Pacific Island Regional Immunization Strategy
PPHSN	Pacific Public Health Surveillance Network
RCC	Regional Certification Committee
RCM	Regional Committee Meeting
RCV	Rubella-Containing Vaccine
RED	Reaching Every District
RVC	Regional Verification Commission
SAGE	Strategic Advisory Group of Experts (on Immunization)
SBA	Skilled Birth Attendants
SFDA	State Food and Drug Administration
SIA	Supplementary Immunization Activity
SPC	Secretariat of the Pacific Community
SRCC	Subregional Committee for the Certification of Poliomyelitis Eradication in Pacific Island Countries and Areas
SRVC	Subregional Verification Committee
TAG	Technical Advisory Group
Td	Tetanus-Diphtheria Toxoid
ToR	Terms of Reference
TT	Tetanus Toxoid
UNICEF	United Nations Children's Fund
US CDC	United States Centers for Disease Control and Prevention
VII	Vaccine Independence Initiative
VPD	Vaccine-Preventable Disease
VVM	Vaccine Vial Monitor
WPV	Wild Polio Virus

## CONTENTS

	<u>Page</u>
1. INTRODUCTION.....	1
1.1 Objectives.....	1
1.2 Opening remarks .....	1
2. PROCEEDINGS .....	5
2.1 Workshop objectives (PIPS and H1N1).....	5
2.2 Implementation of the 2010 PIPS workshop recommendations .....	6
2.3 Global and regional overview of EPI.....	6
2.4 Progress towards measles elimination in the Pacific island countries .....	10
2.5 Hepatitis B Control.....	14
2.6 New vaccines introduction .....	15
2.7 PIPS partners coordination meeting.....	18
2.8 Strengthening routine immunization .....	18
2.9 Strengthening monitoring and surveillance.....	20
2.10 Cold chain strengthening.....	22
2.11 Process and verification of hepatitis B control.....	25
2.12 Measles/hepatitis B/routine immunization .....	25
2.13 Marketplace .....	25
2.14 Communication and advocacy .....	26
2.15 Vaccines security and management .....	27
2.16 Maintaining a polio-free environment.....	29
2.17 Regional EPI Strategic Plan .....	33
2.18 Regional overview of pandemic vaccine deployment.....	33
2.19 Regulations and lessons for national regulatory agency strengthening .....	33
2.20 Plenary on injection safety, waste management, AEFI.....	33
2.21 Plenary on supply chain management and lessons for routine immunization system strengthening.....	35
3. CONCLUSIONS .....	36
3.1 General .....	36
4. ACTION POINTS.....	43

Key words:

Immunization programs/vaccination/Influenza, Human/ Hepatitis B - prevention and control/ Poliomyelitis – prevention and control/ Pacific Islands



ANNEXES:

ANNEX 1	-	PROVISIONAL AGENDA.....	47
ANNEX 2	-	TIMETABLE .....	49
ANNEX 3	-	MINUTES OF THE MEETING: PIPS PARTNERS COORDINATION MEETING .....	50
ANNEX 4	-	EVALUATION RESULTS SUMMARY .....	57
ANNEX 5	-	ACTION POINTS FROM COUNTRIES TO PIPS PARTNERS .....	63
ANNEX 6	-	LIST OF PARTICIPANTS, CONSULTANT, TEMPORARY ADVISERS, REPRESENTATIVES/OBSERVERS AND SECRETARIAT .....	64

## 1. INTRODUCTION

The seventh Pacific Immunization Programme Strengthening (PIPS) and Lessons Learnt from the Pandemic Influenza A(H1N1) Vaccine Deployment and Vaccination Workshop were convened by WHO and the United Nations Children's Fund (UNICEF) at the Tanoa International Hotel, Nadi, Fiji, from 22 to 27 August 2011. The organizers of the workshop were the Australian Agency for International Development (AusAID), the United States Centers for Disease Control and Prevention (US CDC), the Japan International Cooperation Agency (JICA), Rotary International, the New Zealand Agency for International Development (NZAID) and the Secretariat of the Pacific Community (SPC). There were 26 participants from the 18 Pacific island countries and areas with the participation of temporary advisers and a consultant of the workshop. The programme agenda is attached as Annex 1.

### 1.1 Objectives

- (1) to review technical updates, share information on national immunization programme status, identify major obstacles and agreed action points with regard to routine immunization systems, achieving and sustaining targeted disease goals, achieving and sustaining high quality programme monitoring and vaccine-preventable disease (VPD) surveillance;
- (2) to strengthen linkages for successful implementation strategies based on the 20th Technical Advisory Group (TAG) on Immunization and Vaccine-Preventable Diseases in the Western Pacific Region preliminary conclusions and recommendations;
- (3) to provide input and possibly endorse a joint WHO-UNICEF Strategic Plan for Immunization in the Pacific; and
- (4) to identify the challenges, successes and lessons learnt from pandemic influenza A(H1N1) vaccine deployment and vaccination, to update the national deployment and vaccination plan for H1N1 pandemic vaccine and draw up action plans.

### 1.2 Opening remarks

The opening ceremony was chaired by Dr Sergey Diorditsa, Team Leader of the Expanded Programme on Immunization (EPI), WHO Regional Office for the Western Pacific, Manila, Philippines. The day started with a devotion led by Ms Litiana Volavola, National EPI Coordinator, Fiji Pharmaceutical Services and Biomedical Centre, Fiji.

Dr Salanieta Saketa, Permanent Secretary for Health, Ministry of Health, Fiji, and on behalf of the Government of the Republic of Fiji and in particular the Minister for Health and the Ministry of Health, brought greetings and extended a warm welcome to all of the delegates and facilitators of the workshop. She acknowledged and thanked the JICA and the Government of Japan, WHO, UNICEF, AusAID and the Government of Australia and other partners for the continued funding and technical support towards the protection of the lives of the children of the Pacific and in support for the attainment of Millennium Development Goals 4 and 5 (MDG) and also for convening the workshop.

Dr Saketa reflected on the progress made by Fiji since her participation in the workshop on the deployment of the H1N1 pandemic vaccine for the Pacific in October 2009 and in the fifth Regional Meeting on EPI Strengthening in November 2009. She highlighted the achievements so far as Fiji reaped the benefits of the introduction of hepatitis B vaccination into its national immunization programme and the high vaccination coverage since the early 1990s.

A hepatitis B serosurvey conducted in 2009 revealed less than a 1% hepatitis B seroprevalence rate among children five years old and above. This she considered a milestone achievement considering that the Western Pacific Region has set its target milestone for the reduction of the prevalence of chronic hepatitis B virus infection to less than 2% in at least five-year-old children by 2012. She hoped that the verification process towards achieving the goal of hepatitis B control will commence by the end of 2011.

In addition, she said that in May 2011 the Fiji cabinet approved the introduction of three new vaccines (i.e. pneumococcal, rotavirus and human papilloma virus [HPV]) into its routine immunization schedule. She stressed that maintaining high immunization coverage against all nine immunizable diseases has its challenges and that Fiji had to contain a rubella outbreak in July 2011.

She said she is convinced that vaccination is a cost-effective public health measure and through the declaration of the “Decade of Vaccines” by the Bill & Melinda Gates Foundation, everyone must capitalize on this opportunity and ensure that children are the recipients of this life-saving public health intervention. Lastly, she said that the lessons learnt from the H1N1 pandemic vaccination programme would add to its strengthening. She wished all participants an enjoyable week of sharing experiences, knowledge and skills and a productive workshop.

Dr Dong-Il Ahn, WHO Representative/Director of the Pacific Technical Support, Suva, Fiji, delivered the opening remarks on behalf of Dr Shin Young-soo, WHO Regional Director for the Western Pacific. He has acknowledged the presence of the Permanent Secretary of Health in Fiji, the UNICEF Representative for the Pacific Office, Dr Isiye Ndombi, and the participants. He introduced himself as a newcomer to the Pacific. He said that EPI is one of the best WHO programmes and noted that it is a successful programme in the Pacific island countries and areas.

He highlighted the four major achievements on EPI by the Pacific island countries and areas.

- (1) The indigenous transmission of measles likely has been interrupted since 1998 and the Pacific island countries and areas have most likely reached the measles elimination goal.
- (2) Most of the countries, with the exception of three or four with low immunization coverage, likely have reached the interim goal of hepatitis B elimination.
- (3) All of the Pacific island countries and areas have introduced the *Haemophilus influenzae* type B (Hib) vaccination programme amid financial constraint.
- (4) Lastly, all of the Pacific island countries and areas continue to remain poliomyelitis-free since the Region was certified polio-free in 2000. With this achievement, he warmly congratulated all of the Member States and partners who made valuable contributions: UNICEF, AusAID, NZAID, JICA, the Government of Japan, the US CDC, Rotary International and the Secretariat of the Pacific Community.

He said that even with these significant gains, challenges still remain, particularly in the three to four countries that have low routine immunization coverage. He advised countries to strengthen their health systems to improve EPI service delivery through good microplanning and quality surveillance. He said that the Pacific is unique and thus must be handled differently, particularly in policy formulation and operations.

The workshop, which includes the lessons learnt from H1N1 pandemic vaccine deployment and vaccination as a result of a global crisis during the period 2009–2010, will provide an opportunity for the Pacific island countries and areas to demonstrate how they have responded to the outbreak. Over time, new microorganisms have evolved (i.e. human immunodeficiency virus [HIV], Ebola, severe acute respiratory syndrome [SARS], avian influenza, H1N1, etc.) and continually threaten the global community. The lessons learnt between 2009 and 2010 will therefore assist Member States to better prepare themselves for future possible outbreaks.

Lastly, Dr Ahn expressed his appreciation for the continuous efforts made by all PIPS partners in providing support to the Pacific island countries and areas. He ended his remarks by thanking Dr Saketa and the Government of Fiji for hosting the workshop and wished all a successful, productive and enjoyable meeting and a pleasant stay in Nadi.

Dr Isiyé Ndombi, UNICEF Representative of the Pacific Office, Suva, Fiji, in his opening remarks, acknowledged the Permanent Secretary of Health, Fiji; the WHO Representative/Director of the Technical Support, Suva, Fiji; representatives for AusAID, the New Zealand Ministry of Foreign Affairs and Trade, JICA, the US CDC, Rotary International, SPC, governments; colleagues from WHO and UNICEF and all participants.

By way of introduction, he informed the participants that he has been in the Pacific for nine years, including his posting with the UNICEF Country Office in Papua New Guinea. He said he felt privileged to attend the meeting where key partners and representatives of governments learnt from one another and where technical expertise and emerging knowledge can be shared.

Dr Ndombi noted that despite the substantial reduction of VPDs and where some have been eradicated or are close to eradication, efforts must be continued for the following reasons. Firstly, even with 85% coverage, the pool of 15% unvaccinated children in every successive year builds into a large population of susceptibility so that an outbreak easily can occur. Secondly, every child has the right to be given the protection vaccines can offer and, therefore, efforts must be made to vaccinate all children because it is morally and ethically right.

UNICEF is working with partners at the global level to spearhead efforts on vaccine market shaping mainly through the procurement of the vast majority of vaccines funded by the GAVI Alliance (GAVI) and the Vaccine Independence Initiative (VII). With unwavering support from donors and partners, countries have made substantial progress in the past decade, where four of five children now have access to immunization. The focus now is reaching the “fifth child” who lacks access to immunization, is the most vulnerable to disease, the most marginalized and is likely to be living beyond the current reach of the health system and health workers.

Dr Ndombi reflected on the progress made in the Pacific with regard to vaccine distribution and, through effective partnerships, VII, which has been in place since 1995 and has ensured that countries have improved the security of their vaccine supply at affordable prices. Further, he said not to underestimate the achievements made so far by the Pacific island countries and areas for having been polio-free since 2000; endemic measles virus transmission likely has been interrupted; chronic hepatitis B infection rates among children have been reduced substantially; and there has been an improving trend on annual immunization coverage.

Despite these achievements, significant challenges exist in several countries for sustainable immunization services and therefore special attention is required to address these issues. He noted that the major challenges facing improvement in the coverage and impact of immunization is the fragile health system requiring supplementary immunization activities (SIAs) in some countries, the shortage of nurses and inadequate funding for outreach services and gas supplies.

Failure to strengthen the health system to deliver high routine immunization coverage would mean that at least four countries may want to undertake SIAs during the period 2012–2013. Other challenges such as food, energy and financial crises have forced countries to cut their budgets for essential health and social services. The emergence of noncommunicable diseases (NCDs) in the Pacific is a major problem and was to be discussed during a high-level meeting of leaders in New York in September 2011. These are all opportunities on which to focus for better health outcomes for all people.

In looking forward, with stronger partnership in the Pacific, immunization can be lifted to the next level by improving coverage of immunization services, especially in those countries which did not reach their targets, and by expanding new and underutilized vaccines to save more lives. Dr Ndombi believed that maintaining and further strengthening the PIPS partnership will achieve the following key results:

- (1) maintaining the countries' vaccine self-funding at affordable rates;
- (2) improving programme management, leading to increased coverage and reduced vaccine waste;
- (3) maintaining polio-free status;
- (4) maintaining measles elimination;
- (5) improving hepatitis B control;
- (6) strengthening disease surveillance and the laboratory network for confirmatory diagnosis; and
- (7) facilitating new vaccine introduction.

Dr Ndombi concluded by paying special gratitude for the hard work and commitment of all the governments in the Pacific island countries and areas to the immunization programme. He also expressed UNICEF's gratitude to donor partners—AusAID, the New Zealand Ministry of Foreign Affairs and Trade's Aid Programme, the Japanese Government, the Japanese Committee for Vaccines for the World's Children, SunRice Australia, Rotary Japan and the United Nations Funds for Measles—for their support to the Pacific island countries and areas and, most importantly, the country leaders.

In addition, he was appreciative of the technical partners—WHO, the JICA and the US CDC—for the hard work and commitment in providing technical support and guidance. Finally, he wished a successful seventh PIPS workshop and hoped that the lessons learnt will be taken back home to improve the quality of lives of children in the Pacific.

## 2. PROCEEDINGS

### 2.1 Workshop objectives (PIPS and H1N1)

Dr Sergey Diorditsa, EPI Team Leader, WHO Regional Office for the Western Pacific, presented an overview and objectives of the seventh Pacific Immunization Programme Strengthening Workshop and Workshop on Lessons Learnt from Pandemic Influenza (H1N1) Vaccine Deployment and Vaccination. In his presentation, he outlined the success stories of the immunization programme in the Pacific Region and the opportunities and the objectives of the workshop. The following are what he considered success stories in the Pacific Region.

- (1) All 21 Pacific island countries and areas have remained polio-free since certification in 2000 but remain at risk for importation of wild poliovirus (WPV) and subsequent spread.

Dr Diorditsa stressed the importance of keeping a polio-free status. He informed participants that parallel to this workshop, a subregional committee meeting on polio certification will be held, of which the conclusions and recommendations will be presented to the participants.

- (2) Endemic measles virus transmission likely has been interrupted in virtually all of the Pacific island countries and areas and these may be ready for verification.

- (3) Chronic hepatitis B infection rates among children have been reduced substantially and many countries and areas are ready to document this success through serosurveys.

- (4) Annual immunization coverage is usually high though varies by country and over time.

He mentioned the importance of immunization strengthening to ensure that children who have not been reached must be found by the service.

- (5) Deployment of H1N1 pandemic vaccine and vaccination was conducted successfully.

Dr Diorditsa noted the importance of the event to the world, particularly in the preparedness and the control of pandemics in the future. Furthermore, lessons learnt and experience of the Pacific region in terms of logistic preparation and coordination of operations were very specific and unique to the Pacific, which is important for future preparation plans. He also noted that other success stories to be discussed in the workshop are related to the vaccine procurement in the Pacific region, which is 100% self-funding to 2015.

Furthermore, he said that the workshop will provide the following opportunities:

- (1) to further strengthen partnerships and programme policies and strategies based on the best practices shared by the various countries;
- (2) to address issues related to immunization system strengthening, achieving and/or sustaining global, regional and national immunization goals for polio, measles, hepatitis B and maternal and neonatal tetanus elimination (MNTE); and
- (3) to improve VPD surveillance.

Dr Diorditsa concluded his presentation by outlining the daily agenda (timetable) of the workshop to the participants (Annex 2).

## 2.2 Implementation of the 2010 PIPS workshop recommendations

Dr Eliab Seroney Some, Chief of Health and Sanitation Programme of the UNICEF Pacific Office, Suva, Fiji, presented an overview summary on how the countries have performed on the 2010 PIPS workshop recommendations. A questionnaire was sent to countries and only 11 of 20 countries responded. The slide presentation provided a summary of the total number of recommendations implemented. Overall, there were 15 recommendations covering different areas.

The degree of implementation by countries varied according to the type of action or specific areas of recommendations. Seven of 15 recommendations were below 60%, which means that less than half of the countries have acted on their recommendations. However, the 11 countries that responded have acted well on their specific recommendations. The following were the specific findings or updates of the recommendations of the 2010 PIPS workshop.

- (1) Vaccines forecast and ordering is good but there is room for improvement. Human resources for cold chain management still need improvement.
- (2) National reviews are excellent. The strategy to reach every district and island and monitoring coverage is weak and needs to be strengthened.
- (3) Surveillance for VPD needs improvement, especially routine surveillance feedback.
- (4) Efforts to maintain polio-free status and measles elimination should continue to receive attention.
- (5) There is good progress in the introduction of new vaccines. All countries have introduced Hib vaccine. Countries should introduce pneumococcal, rotavirus and HPV, where possible. Injection safety and waste management needs attention. Training needs for new vaccines need to be coordinated through the PIPS Secretariat.
- (6) There is good progress in linkage and integration of EPI with other interventions. Countries may regularly undertake immunization weeks or child health days and seek additional support.
- (7) Deployment of H1N1 pandemic vaccine was conducted in all of the 11 countries that responded to the evaluation questionnaire. Documentation of lessons learnt is good but could be improved.

Dr Some noted that inclusion of performance indicators with the recommendations has improved evaluation and feedback on the degree of implementation. The response rate to the questionnaire was low (11/20 countries), largely because of its last minute distribution. A clear indication of countries to which the recommendations are applicable will further improve follow-up and implementation of recommendations.

## 2.3 Global and regional overview of EPI

Dr Sergey Diorditsa, EPI Team Leader, WHO Regional Office for the Western Pacific, Manila, Philippines, provided an update on the global and regional overview of EPI. The main objective of working for immunization is to reduce the mortality against VPDs.

### 2.3.1 Global overview of the under-5 mortality rate

Data from 2008 revealed a global overview of 8.8 million under-5 children died of different causes, of which 20% (1.7 million) were caused by VPDs.

### 2.3.2 Global goals relevant to immunization

The four global goals relevant to immunization are:

- (1) Millennium Development Goal 4 (MDG 4), whose target is to reduce the under-5 mortality rate by two thirds between 1990 and 2015, which is achievable with appropriate vaccines and technology. One of the important indicators of this goal is the proportion of one year olds being immunized against measles (MCV1 coverage  $\geq 90\%$ ).
- (2) The Global Immunization and Vaccine Strategy (GIVS) was jointly drafted by WHO/UNICEF in May 2005 with the aim of reducing measles mortality by 90% between 2000 and 2010, which has been achieved, and to reduce childhood morbidity and mortality due to VPDs by at least two thirds between 2000 and 2005.
- (3) The Global Eradication Polio Initiative (GPEI) made good progress towards the 2012 goal of interrupting poliovirus transmission, with India as one of the four endemic countries not having reported WPV since February 2011. The problems of unvaccinated children still exist in Pakistan, Afghanistan, India, Nigeria, Congo and Indonesia. And except for Indonesia, these countries continue to experience endemic poliovirus transmission and outbreaks.
- (4) Global maternal and neonatal tetanus elimination (MNTE).

### 2.3.3 Introduction of new vaccines

Good progress has been made in the introduction of new vaccines. Hib vaccine has been introduced in 168 countries. The process has been continuing with some countries with regard to the introduction of other vaccines such as pneumococcal, rotavirus and others.

### 2.3.4 Integrated approach to disease control

WHO and UNICEF will continue working together to formulate a comprehensive control and synergy plan as an integrated approach to disease control (i.e. the Global Action Plan for Prevention and Control of Pneumonia launched in November 2009, the World Health Assembly resolution on Pneumonia Prevention and Treatment passed in May 2010, the Comprehensive WHO/UNICEF Diarrhoea Control Strategy launched in November 2009, the Comprehensive Cervical Cancer Control Strategy, which was updated to include immunization, reproductive health, cancer screening and control programmes and adolescent health services).

### 2.3.5 Overview of the Western Pacific Region

- (1) EPI regional goals by 2012 Member States must:
  - (a) achieve measles elimination;
  - (b) control chronic hepatitis B infection rates to  $< 2\%$  in five year old children as an interim milestone towards a final goal of  $< 1\%$ ;
  - (c) maintain polio-free status through high-quality acute flaccid paralysis (AFP) surveillance and high immunization coverage; and
  - (d) use measles elimination to prevent congenital rubella syndrome (WPR/RC/54.3).



- (2) EPI programme objectives in the Western Pacific Region are:
  - (a) maximize equitable access of vaccine of assured quality to control VPDs, including H1N1 pandemic vaccine;
  - (b) achieve targeted disease eradication, elimination and control (polio, measles/rubella, hepatitis B, MNTE);
  - (c) promote the rational introduction of new vaccines;
  - (d) strengthen monitoring, surveillance systems, laboratory networks and data use; and
  - (e) strengthen partnerships, advocacy and communication.

Good progress has been made with regard to immunization coverage in the Western Pacific Region. Based on third dose diphtheria-tetanus-pertussis vaccine (DTP3) coverage (2010 data), 18 countries in the Region achieved more than 90% coverage, which equates to a regional coverage of 96%. The problem is now with the unreached children and, even in urban areas, the problem exists due to migration, wherein families are not covered by health services.

#### 2.3.6 National regulatory authority (NRA) in Western Pacific Region

Vaccine safety is an integral part of strengthening the immunization system and WHO recommends that countries must have at least two functional NRAs. There are countries in the Region that manufactured vaccines and on 1 March 2011, WHO announced that the NRA of China—the State Food and Drug Administration (SFDA), along with affiliated institutions—now meets WHO indicators for a functional vaccine regulatory system. This means that China may start producing vaccines that can be used by the United Nations procurement system. WHO will provide assistance to countries without a functional regulatory system.

#### 2.3.7 Achievements and challenges

- (1) Routine EPI
  - (a) Remains the core of EPI diseases control efforts.
  - (b) Many countries achieved high coverage.
  - (c) Routine immunization coverage in several priority countries are still below the GIVS targets.
- (2) Challenges
  - (a) To reach unreached children even in countries with a high national immunization coverage.
  - (b) To ensure the safety of vaccination and trust of communities in the immunization programme.
  - (c) To improve the quality and safety of vaccines in all countries of the Western Pacific Region and to have at least two NRA functions: vaccine licensing and adverse events following immunization (AEFI) surveillance; work out collaboration among functional NRAs to help countries.

(3) Eradication and elimination goal

(a) Polio

(i) Achievement: The Region is polio-free.

(ii) Challenges: Risk assessment showed increased risk of a polio outbreak following WPV importation in some countries and the need for resources to ensure the polio eradication activities maintain high quality.

(b) Measles

(i) Achievement: The measles incidence continues to decline. Only 16 550 cases were reported between January and June 2011.

(ii) Challenges: How to ensure the continuity of high political commitment and resources for measles elimination, especially in priority countries of the Region.

(c) Hepatitis B

(i) Achievements: The Region and 27 countries likely will achieve the 2012 milestone.

(ii) Challenges: How to increase birth dose coverage in several priority countries; funding of verification of serosurveys.

(d) MNTE

(i) Achievements: Continuing progress.

(ii) Challenges: Elimination efforts require intensification in countries yet to reach the goal.

(4) Introduction of new and underutilized vaccines

Significant progress has been made in the introduction of new vaccines in the Region (i.e. Hib, pneumococcal, rotavirus, HPV and Japanese encephalitis). However, challenges remain because of the limited disease burden data, cost implications and new operational requirements.

(5) Surveillance

The WHO Regional Office for the Western Pacific has established an extensive surveillance system and network specifically for the traditional diseases in line with the global eradication and elimination goals such as polio, measles and rubella. The Region is developing a network for other VPDs (i.e. rotavirus, pneumococcal). The system is becoming complex and there is the challenge of coordination and improving the network through increased capacity and continuous exchange of information and ideas from all of the experts and professionals so that a high level of quality surveillance is established.

(6) Achievements and challenges: Strengthen partnership advocacy and communication

(a) Partners: There are 17 traditional partners dealing with EPI in the Western Pacific Region. Efforts are being made to identify non-traditional partners.

- (b) Challenges: To engage new partners during the global financial crisis.
  - (c) Regional vaccination week in the Western Pacific Region, 24 April 2011.
    - (i) commitment from 31 countries and areas; and
    - (ii) actual participation of 29 countries at different scales.
  - (d) Challenges: Limited funding, competing priorities.
- (7) Salient points for future considerations
- (a) The EPI programme in the Region scientifically contributed to the health goal of reducing morbidity and mortality due to VPDs.
  - (b) EPI goals contribute to MDG 4 and MDG 5 targets.
  - (c) The challenges are to mobilize new resources, sustain the achievements, strengthen the EPI programme in the context of the health system and to reach regional goals.
- (8) What is the future?

The Decade of Vaccines (DoV) 2011–2020 is a shared vision and global partnership for realizing the potential of vaccines and immunization. On 29 January 2010, the Bill & Melinda Gates Foundation pledged US\$ 10 billion to support research, production and delivery of life-saving vaccines to children in lower-income countries. WHO and UNICEF, in close collaboration with the Bill & Melinda Gates Foundation, countries, and partners, are defining the ambitions and scope of this DoV.

- (a) The DoV is a comprehensive venture to advance immunization:
  - (i) the DoV envisions a world in which children, families and communities enjoy lives free of the fear of VPDs;
  - (ii) the goal of the DoV is to extend the full benefits of immunization to all people, regardless of where they live;
  - (iii) this goal reflects the perspective that access to safe and effective vaccines is a human right that is not enjoyed by all people, particularly in low- and middle-income countries; and
  - (iv) the goal will require the full engagement of the diverse stakeholders needed to facilitate vaccine discovery, development and delivery.

#### 2.4 Progress towards measles elimination in the Pacific island countries

Dr Wang Xiaojun, Medical Officer in the WHO Regional Office for the Western Pacific started her presentation about an epidemic documented in Fiji in 1875 that killed nearly one third of the population. Before 1998, measles outbreaks occurred in the Pacific where, annually, three to five countries experienced an outbreak. During the period 1997–1998, coordinated SIA was conducted in the Pacific, resulting in the interruption of periodic measles outbreaks. The previous outbreak was recorded in the Pacific in Fiji in 2006.

Based on available surveillance data, Pacific island countries and areas have maintained measles-free status and are likely to achieve the 2012 goal of measles elimination. However, to sustain the achievement, periodic SIAs still will be needed in several countries with inadequate routine measles coverage. The estimated number of children suspected of measles have passed an outbreak threshold (size of a birth cohort) in Samoa, requiring action as early as possible to close immunity gaps; Solomon Islands and Vanuatu may pass the threshold by mid-2012 and the first quarter in 2013, respectively, based on available coverage data. Therefore, SIAs are recommended ideally before those timelines.

The improvement of routine coverage in Kiribati in recent years slowed the accumulation of susceptible children after 2009, while close monitoring and coverage validation will be important. At the regional level, the 2010 Regional Committee Meeting (RCM) reaffirmed the 2012 measles elimination goal and also called for accelerating the control of rubella and the prevention of congenital rubella syndrome.

Globally, in July 2011, WHO published a revised position paper on rubella vaccine, recommending that countries that have not yet introduced rubella-containing vaccine (RCV) should consider including RCV in their immunization programmes. Countries should achieve and maintain  $\geq 80\%$  of coverage with at least one dose of RCV through routine EPI or regular SIAs or both to avoid the potential increased risk of congenital rubella syndrome (CRS).

In line with the revised position paper, Solomon Islands and Vanuatu are recommended to consider using measles-rubella (MR) vaccine in the next SIAs. In summary, all countries are reminded to achieve and sustain high routine vaccination coverage to sustain measles-free status in the Pacific island countries and areas and to closely monitor accumulation of susceptible children, with the support of WHO and other partners. Samoa, Solomon Islands and Vanuatu may want to plan to conduct SIAs or other annotative activities to close existing or anticipated immunity gaps against measles.

#### 2.4.1 Report from the 20th TAG and relevance to the Pacific island countries

Dr Robert Hall from the School of Public Health and Preventive Medicine, Monash University, Melbourne, Australia, and Temporary Adviser of this workshop, provided a brief summary of the recommendations of the 20th Technical Advisory Group meeting on measles and rubella in which he participated recently in Manila, Philippines. In his presentations, he made it clear that the 19th TAG recommendations were still valid, therefore reaffirming those recommendations:

- (1) higher political commitment and resources for immunization and VPD surveillance;
- (2) verification should be conducted;
- (3) expert review committees for classification;
- (4) strengthen epidemiologic and virologic surveillance;
- (5) clinical case definition required for any confirmation;
- (6) report regularly to the WHO Regional Office for the Western Pacific;
- (7) the WHO Regional Director may want to form the Regional Verification Commission (RVC) as soon as possible;
- (8) the RVC may want to consult with Member States regarding process and criteria;

- (9) the RVC will verify both progress towards elimination and elimination itself by country;
- (10) various types of evidence to be considered for verification; and
- (11) draw on lessons learnt from the different regions—Pan American Health Organization (PAHO) the European Region (EURO) and the Eastern Mediterranean Region (EMRO)—and also from the subregional committee for the certification for the poliomyelitis eradication in the Pacific islands countries and areas.

The definition of measles elimination was clarified during the 20th TAG meeting, using the definition that was put forward in the weekly epidemiological record of last year as being the absence of endemic measles virus transmission for at least one year. So the somewhat arbitrary definition of incidence of less than one per million, while usually indicative of measles elimination, is not a definitive classification.

- (1) Improve surveillance sensitivity and case investigation quality.
  - (a) all core variable data;
  - (b) adequate confirmatory specimen collection;
  - (c) contact tracing;
  - (d) proper classification as laboratory-confirmed, epidemiologically-linked, clinically confirmed; and
  - (e) specimens for virologic testing (throat swabs).
- (2) Countries may want to use surveillance data at the subnational level to identify areas with residual virus transmission and target these by outbreak response immunization (ORI) or mopping up activities.
- (3) Reduce nosocomial transmission by vaccinating health care workers (HCWs), timely vaccination of infants and children, including those presenting to health facilities and timely reporting, investigation and isolation of suspected cases.
- (4) Reduce accumulation of susceptible children by immunizing as early as the national schedule allows and adjusting the second dose of measles-containing vaccine (MCV2) schedule to 15–24 months old combined with rigorous school entry checks of immunization status and follow-up.
- (5) Vaccinate high-risk adults such as students, migrant workers, military recruits, HCWs and employees of the travel and tourism industries.
- (6) National immunization policy/programme (NIPs) should cooperate with other sectors such as education, the local community and media, especially to address increased concern of vaccine safety.

In conclusion, Dr Hall said that measles is such an eradicable disease and we are in a good position to eliminate it in the Region; substantial progress has been made in eliminating measles in the Pacific. Having high immunization coverage with two doses of measles given on time is the key in eliminating the disease.

#### 2.4.2 Country plan of Samoa towards measles elimination

Ms Fuapepe Iese Manuleleua, National EPI Coordinator, National Health Services, Samoa, made a presentation on the country's plan towards measles elimination for 2012. Samoa conducted SIA on measles in 2003, 2008 and 2009 (post-tsunami) and although it has had good coverage, the routine coverage for measles is low.

In 2009 data, MCV1 and MCV2 coverage were only 62% and 46%, respectively. Given that it has accumulated a pool of susceptible children over the years, the country is embarking on an SIA for measles in June 2012. The target age group for this campaign is from 12 months old to six years old and the plan of action is to visit all schools, including the kindergartens and all villages in health areas. There will be three teams per health district area consisting of at least one registered nurse, two enrolled nurses and two community representatives.

As much as possible, the same representatives from the community will assist since they had been involved in the H1N1 pandemic vaccination campaign. Their previous training, experience and familiarity with Samoa and its population definitely will help nurses and vaccinators in identifying the target age groups.

The clinical nurse consultants and the nurse managers will continue to play a pivotal role given that they are the strong pillars of the immunization programme and campaign activities in Samoa. Before the campaign date, training will be conducted in various strategic locations (Upolu and Savaii). Each health centre area will have a vehicle and two vehicles will be hired to assist during the event. One vehicle is allocated for Upolu and Savaii for supportive and supervisory visits.

Radio programmes will be used to disseminate information and other channels of communication. They were negotiating with Digicel Company to assist during the campaign. All children vaccinated will be marked by black ink on their left small fingernails and registered using the registry forms and tally sheet. The external support that they need would be the following:

- (1) technical support for conducting a microplan;
- (2) funding for procurement of vaccines and accessories;
- (3) training;
- (4) implementation and support for monitoring and supervision; and
- (5) technical support for the rapid coverage survey.

Other areas for action:

- (1) data management;
- (2) involvement of the community;
- (3) improvement in human resources;
- (4) fill vacant post for nurses; and
- (5) assist in outreach services.

## 2.5 Hepatitis B Control

### 2.5.1 Status of 2012 Hepatitis B Control Milestone in the Pacific island countries and areas

Dr Karen Hennessey, WHO Technical Officer (hepatitis B focal point), said that in 2005, Member States of the Western Pacific Region adopted a regional milestone to reduce chronic hepatitis B infection to less than 2% among five-year-old children by 2012 and a regional goal of less than 1%. From a regionwide perspective, the 2012 milestone likely has been met based on reported hepatitis B vaccination coverage levels in 2007.

On a country level, 27 countries and areas are estimated to reach the <2% milestone. Nine countries, including four Pacific island countries and area (Kiribati, Samoa, Solomon Islands and Vanuatu), have not reached the 65% hepatitis B birth dose and 85% third dose of hepatitis B vaccine (hepB3) coverage targets recommended for achieving the <2% milestone. Samoa recently has reached immunization targets based on 2010 joint reporting form (JRF) data.

Since a high proportion of births are delivered in health facilities in the Pacific island countries and areas, conducting hospital assessments to ensure good practices for timely birth dose vaccinations are an important activity. Other key activities for making progress before the 2012 milestone include conducting seroprevalence surveys in countries that have had at least five years of reaching immunization targets and beginning the WHO verification process for countries that have both high coverage and have existing seroprevalence data indicating the regional milestone has been met. These activities are critical for measuring impact and documenting public health successes.

### 2.5.2 Report from the 20th TAG recommendations

Dr Robert Hall, Regional TAG member, provided a feedback on the 20th TAG meeting with regard to the hepatitis B control in the Region, particularly the Pacific. He said that he is pleased to report that the Region is on track with regard to reaching the less than 2% milestone of hepatitis B control by 2012. There are at least 27 countries in the Region that are likely to achieve the mark on time.

Although some countries in the Region would not be able to reach the target goal, the Region as a whole would be able to achieve the target. The Expert Review Panel (ERP) was contemplating to propose a <1% goal target date for the TAG meeting next year for deliberation, which it will then recommend to the regional committee for adoption.

In the year preceding the 2012 hepatitis B milestone, the TAG urged priority countries and the Region to commit resources and attention to improving timely birth dose and three-dose vaccination coverage. This means maximizing birth dose coverage by assessing and ensuring birth dose implementation in health facilities; collaborating with maternal and child health (MCH) programmes to maximize birth dose coverage among births delivered by skilled birth attendants (SBAs); and strengthen reporting and recording of birth dose vaccine, especially <24 hours. Furthermore, the TAG endorses the ERP recommendations from the February 2011 meeting for:

- (1) The following countries and areas should conduct hepatitis B serosurveys for verification of Regional control goals in the next 12 months: Cook Islands, the Federated States of Micronesia, French Polynesia, Guam, Nauru, New Caledonia, Niue, Tokelau, Tuvalu and Wallis and Futuna.
- (2) The following countries should begin verification: American Samoa, Australia, China, Fiji, New Zealand and Tonga. And new data suggests adding Mongolia.

(3) Funding constraints have been a deterrent to progress. The WHO Regional Office for the Western Pacific should pursue the possibility of restarting GAVI funding for serosurveys and support an increase of birth dose coverage in GAVI-eligible countries.

### 2.5.3 Country report: Preparation for verification process in Tonga

Ms Sela Paasi, Chief Nursing Officer, Ministry of Health, Tonga, presented the status of its preparation for the verification process of hepatitis B control in Tonga. The hepatitis B vaccination was introduced into the national immunization programme schedule in Tonga in November 1998, with the first dose to be given at least within 24 hours of birth, the second dose at six weeks and the third dose at 14 weeks old.

With the introduction of pentavalent vaccines (DTP/hepatitis B/Hib) in August 2010, the birth dose schedule of monovalent hepatitis B vaccine has been retained with subsequent doses of pentavalent vaccines (DPT/hepatitis B/Hib) at six weeks, 10 weeks and 14 weeks old. The reported data during the period 1998–2010 showed that the hepatitis B vaccination coverage for the first and second doses were consistently high between 98% and 100%, with a significant improvement of the third dose coverage to 98%–100% between 2004 and 2010. A seroprevalence study in 1998 revealed that hepatitis B surface antigen (HBsAg) among preschool children was 3.8%.

A coverage survey conducted during the period 2004–2008 recorded the birth dose coverage of 99% and a third dose coverage of 97.6%. The seroprevalence survey among children aged six to 59 months old was 0.8% (CI 0.2–2.5%). The aim of the study was to measure the impact of improved immunization practises and assess the progress towards hepatitis B control in Tonga. The HBsAg prevalence rate among blood donors and pregnant women measured yearly between 2005 and 2010 was 9.1% (2005), 7.7% (2006), 8.9% (2007), 3.4% (2008), 8.8% (2009) and 6.7% (2010). The screening of antenatal mothers for HBsAG was conducted only in 2009, subsequent to the study made in 2008.

The study during the period 2004–2008 helped to improve Tonga immunization practices. For example:

- (1) reinforce birth dose at the first 24 hours of birth;
- (2) look for defaulters, babies who were delivered at home; and
- (3) assess and monitor the progress towards hepatitis B elimination in Tonga.

Tonga has shown a consistently high coverage of hepatitis B vaccination for at least five years and with a recent serosurvey conducted (between 2004 and 2008) revealed a prevalence of <2% in children, which is the target rate set for reaching the milestone of hepatitis B control by 2012. Tonga is therefore ready for the verification process.

## 2.6 New vaccines introduction

### 2.6.1 Issues and Concerns

Dr Md. Shafiqul Hossain, Technical Officer, WHO Regional Office for the Western Pacific, Manila, Philippines, highlighted the major issues and concerns in the introduction of new vaccines to the national immunization programme. He started his presentation by recounting the great progress of the immunization programme during the 36 years of its existence and cited the various initiatives (i.e. Universal Child Immunization, GPEI, GAVI 1 and GAVI 2 and DoV) that propelled the success of the programme.



In recent years, new or underutilized vaccines have been introduced into the national immunization programme and, with the advancement of technology and the emergence of diseases and illnesses, more new vaccines were being developed. In the Western Pacific Region, 31 to 36 countries have introduced Hib vaccines (data as of January 2011). Of 31 countries, Vanuatu is the last to introduce the vaccine into the national immunization schedule.

There are five major industrialized countries and areas in the Region that have not introduced the Hib vaccination into their national programmes, although the vaccines are used in the private market i.e. China, the Republic of Korea, Hong Kong (China), Japan and Singapore. The following vaccines have been introduced into a number of countries in the Region: Hib, 31 countries; pneumococcal conjugate vaccine (PCV), 14 countries; HPV, 14 countries; rotavirus, eight countries; JE, seven countries.

There are three countries in the Region that plan to introduce pneumococcal vaccines into their national immunization programme: the Lao People's Democratic Republic, Cambodia and Papua New Guinea. For HPV, Vanuatu, Kiribati and Mongolia are planning to introduce the vaccine while Singapore is planning to commence with the Hib vaccine.

Introduction of new or underutilized vaccines will mean new concerns that are important to consider.

- (1) Apart from traditional vaccines, the introduction of new vaccines will add to the complexity of storing them at the correct temperature and method. There are vaccines that are heat-sensitive and those that are easily damaged by freezing.
- (2) Vaccines such as pneumococcal and rotavirus will have different dose presentations and profiles (i.e. with and without a vaccine vial monitor [VVM], age limitations) and will have programmatic and operational issues to consider. WHO recommends completing the course or full doses of vaccinations required using the same product.
- (3) There will be implications regarding safety issues with the multidose vial policy (MDVP) interpretation and practice, especially those liquid vaccines prepared without preservatives, which will be mistakenly kept by health workers for subsequent use. WHO is therefore working on trials to establish visual cues to assist health workers in identifying which vaccines are to be kept for subsequent sessions and discarded at the end of a session.
- (4) Introduction of new vaccines means an increase in volume and storage capacity. Hence, an assessment of cold chain facilities and appropriate action must be conducted before vaccine introduction.
- (5) Countries must have a communication strategy in place before introduction of a vaccine. This will address any fear or anxiety that health workers and the public may have towards a new vaccine.
- (6) Microplanning and training is required to assist management and health workers with regard to the resources required, familiarity of the vaccines' profile and activities to be undertaken.
- (7) Operational cost and human resources must be taken into consideration.
- (8) Consider vaccine safety, injection safety and waste management.
- (9) Involvement of stakeholders and partners will help alleviate limited resources and fill the financial gaps.

(10) Engagement of an advisory body to provide technical advice on the introduction of a vaccine would prevent any bottlenecks in the implementation (e.g., National Immunization Technical Advisory Group, Immunization Coordination Committee).

(11) Must consider the sustainability of the programme in the long term.

(12) Countries must refer to the WHO and UNICEF joint statement on “good donation practices” to guide countries and donors for donated vaccines that will be used in the national immunization programme.

#### 2.6.2 Country Report: New vaccines introduction in Fiji

Ms Kylie Jenkins, Technical Facilitator, Infant and Child Health, Fiji Health Sector Support Programme (HSSP), an AusAID-funded initiative with the Ministry of Health, Suva, Fiji, provided an update of the status for the introduction of new vaccines (i.e. pneumococcal, rotavirus and hepatitis B vaccine) to the national immunization programme in Fiji. There is a strong political commitment and the cabinet has approved the introduction of these three vaccines. Likewise, the activity has been incorporated into the corporate and strategic plan of the Ministry of Health.

Disease burden studies on pneumococcal, rotavirus and hepatitis B vaccine (HBV) confirmed the problem and that vaccination against these diseases will have a positive impact on children and women’s health in the country. Considering the high cost of the vaccines, it might not be possible for the Government to fully finance the project. Hence, the Ministry of Health is looking into other financing options in which donors might be able to consider full funding or phased financing. A tender process was conducted to secure a cheaper price and specifications of the vaccines ensuring they are suitable to Fiji’s situation.

Some of these vaccine tender specifics are a three to five year procurement commitment, multivial packaging, single or multidose vial pricing, WHO prequalified vaccines, >24 months expiry from the date of arrival in Fiji, no pre-filled syringes and with VVM. The next step in the process is to negotiate with the tenders, identify funding and preparation activities for new vaccine introduction in 2012 (i.e. cold chain assessment, information, education and communication [IEC], training, consumables, revising MCH card). There is a strong commitment at the senior levels of the Ministry of Health for the introduction of these three vaccines in Fiji. It needs the support from WHO, UNICEF and PIPS partners to make this happen.

#### 2.6.3 Planning process of new vaccine introduction implementation

Ms Tikua Tekitanga, Principal Nursing Officer—EPI Coordinator, Ministry of Health and Medical Services, Tarawa, Kiribati, provided a brief account of a plan to introduce pneumococcal vaccine in 2012. She noted the population distribution by age groups and locations in Kiribati. The Government planned to introduce the vaccines to reduce the under-5 mortality (MDG4) and to protect people from a greater array of diseases. Likewise, it is the aspiration of the Government for better health outcomes for the children in Kiribati.

The planned activities and timeframe had been prepared. The preparation started with the submission of the application form to GAVI and GAVI progress report in 2010. Cold chain assessment and installation of fridges and radio (HF) communications to the outer islands are continuing. Three solar fridges from UNICEF were installed and three other solar fridges were to be installed within two to three weeks.

Revision of policy, handbook and recording and registry forms is planned for May 2012 and the revised documents will be produced in November 2012. Community awareness through radio announcements, newspaper and drama will be conducted at least three months before the planned introduction date. Training of health workers will be conducted in the outer islands and main island about six weeks before vaccination.

As part of the preparation, the Ministry of Health will look into how to improve the system on immunization safety and surveillance. AEFI guidelines have been established but needs review in order to work efficiently. The planned biannual supervision and monitoring may be conducted once because of limited funding. Likewise, the annual evaluation will be integrated with other health programmes.

#### 2.7 PIPS partners coordination meeting (minutes of the meeting attached as Annex 3)

#### 2.8 Strengthening routine immunization

Dr Jayaprakash Valiakollerri, Technical Officer, WHO Suva, Fiji, presented key strategies and the importance of planning, implementation, monitoring and evaluation activities in strengthening routine immunization. The main key strategies are to reach every community; create increasing demand; expand the immunization schedule to include new or underutilized vaccines; improving the vaccine supply, quality and safety; strengthening programme management; and building the capacity to prepare for pandemics, epidemics and natural disasters.

The reaching every district (RED) model can be adopted by the Pacific island countries and areas to achieve high routine immunization coverage through improvement of microplanning and resource management, strengthening community linkages, regular outreach, supportive supervision and monitoring and use of data for action. Good planning, implementation and monitoring are the keys to continually improve programme activities.

Routine immunization coverage has been good in many Pacific island countries and areas. The low-performing countries include Samoa, Solomon Islands and Vanuatu. Kiribati has made some progress. There is a need to conduct microplanning with a bottom-line approach. Although, some countries indicated that microplanning is being conducted, the issue of shortage of staff and training affects the implementation of activities. There is a need for coverage survey in Vanuatu. The RED strategy can be adopted by countries according to their situation

Countries that did not have midlevel managers training last year are advised to conduct the training. A coverage survey is planned for 2013, except for Vanuatu, where there is an urgent need for the cluster survey to be conducted in 2012 before its SIA. Countries may want to seek assistance in a microplanning exercise.

##### 2.8.1 Maintaining high routine immunization coverage

Ms Teio Kea, EPI-Epidemiology and Data Analyst, Cold Chain Maintenance, Ministry of Health, Rarotonga, Cook Islands, provided data about the population and a map of Cook Islands. The country has a total population of 13 300 with total number of 281 births (2010), 1639 under-5 children (2010) and 3410 children five to 14 years old. She said that the population is decreasing due to migration and, with a smaller number of children, it is easier to achieve high immunization coverage.

The new vaccine schedule, which includes the pentavalent vaccine, was implemented in June 2009 following New Zealand's schedule. The vaccine coverage in 2010 is very high, with hepatitis B birth dose within 24 hours; BCG; and pentavalent one, two and three were all 100%. Measles/mumps/rubella vaccine (MMR/MMR2) and DTP/OPV4 were 98% and tetanus-diphtheria toxoid/tetanus toxoid (Td/TT2) was 100%.

It is compulsory for mothers to deliver in the hospital and delivery at home or by skilled birth attendants (SBAs) are strongly discouraged. In 2009, the administration of vaccinations was centralized because of a safety incident that occurred on an outer island. Transportation and distance is not a problem in Cook Islands. The communication system is good because the outer islands are linked to the capital by phones with internet access. Also, a free radio programme is available to provide information to the communities.

Only about <2% of parents refuse vaccinations and it is the responsibility of the health worker to convince parents to understand the importance of vaccination. The measles outbreak in New Zealand and rubella in Fiji were publicized in the media and was an effective tool to persuade parents about the need for immunization. Immunization certificates are given to parents once children have received their full doses. Without this, parents have to pay a certain amount when going overseas or when the children are due for enrolment.

Constant follow-ups are made if immunization data or immunization charts are not submitted on time. A computer's software (Med Tech 32, Audit) has been installed to provide immunization data analysis identifying drop-outs and timing of vaccinations. Integrating other health programmes and activities with immunization has been practised as a holistic approach to health.

The following are the key achievements: immunization coverage has been consistently high with 98%–100%; immunization policy was revised in April 2010; H1N1 pandemic vaccine deployment commenced and was completed in May 2010; HPV was introduced in May 2011 with a target age group of girls nine years old to 13 years old, a second dose was completed in July 2011, with first dose coverage of 89% and the second dose coverage at 86%; and the JRF report was submitted on time.

## 2.8.2 Country plan to improve routine immunization

Mr Leonard Tabilip, National EPI Coordinator, Department of Public Health, Ministry of Health, Port Vila, Vanuatu, gave a presentation on the country's plan to improve routine immunization. Country data vaccination coverage (2010) for all vaccines is higher compared with the figures in the WHO/UNICEF JRF.

The key achievements of EPI were EPI was the lead and the main operational body for the 2010 H1N1 pandemic national vaccine campaign; combined efforts with key partners for the successful introduction of pentavalent vaccine at the end of January 2011; efforts made by key partners in the implementation of the recommendations of the 2009 joint strategic review by UNICEF and WHO, which led to the revision of the EPI policy; drafting of a comprehensive Multi-Year Plan 2011–2015; cold chain improvement; staff training, recruitment of additional staff (data officer, cold chain technician); and efforts to integrate services in the renewed landscape of the primary health care and healthy islands concept.

The shortage of health staff remains a problem and there are limitations in conducting regular outreach clinics, especially in remote areas because of geographical difficulties. Likewise, monitoring and supervisory visits are weak at all levels. The shortage of the gas supply from the Government remains critical. The following initiatives will be undertaken to strengthen EPI: integration of EPI with other health services (e.g. Child Health Week, Immunization Week); launching of an MCH booklet for all children under age one year and an immunization certificate for children who completed their vaccinations; reviving of the primary health care concept and integration of reaching every zones (modification of RED); and collaboration with community health workers (Save the Children Australia project).

The priority activities during the period 2011–2012 were installation of solar refrigerators at the health facilities; attachment of five EPI provincial supervisors at the national level; an annual review of EPI followed by supportive supervision; strengthening outreach clinics in six provinces; training on cold chain and vaccine management at provincial levels; printing of an EPI review policy guideline and child booklet; and a coverage survey and integrated measles SIA.

## 2.9 Strengthening monitoring and surveillance

### 2.9.1 WHO/UNICEF Joint Reporting Form (JRF)

Dr Eliab Seroney Some, UNICEF Pacific, provided a brief explanation with regard to the issue raised by the participants on the two different immunization coverage figures—between country data and the figures published from the WHO/UNICEF JRF. He explained the following:

- (1) The immunization coverage data in all countries are collected monthly by the government (EPI-Ministry of Health) from all service delivery points, including outreach services using immunization registers.
- (2) Two estimates are made at the country level and reported in the JRF. One is administrative coverage (as reported by EPI from immunization registers) based on the number of children covered by the doses of each antigen divided by the target number of children. The second is official estimates (as agreed and cleared by the Ministry of Health) gives national authorities the opportunity to provide an estimate of true coverage. These official estimates may be from the administrative coverage, from surveys or from other sources. See instruction 5010–5200 in the attached JRF.
- (3) WHO/UNICEF estimates on immunization coverage (and not administrative or official estimates) are published at the two websites:
  - (a) UNICEF: <http://www.childinfo.org/immunization.html>; and
  - (b) WHO: [http://www.who.int/immunization\\_monitoring/data/en/](http://www.who.int/immunization_monitoring/data/en/)
- (4) Other global databases derive their data from these two websites.

Countries may seek assistance from WHO/UNICEF to have further training and orientation with regard to the filling out JRFs.

### 2.9.2 Improving EPI data management

Quality vaccination coverage data is essential to effectively monitor programme progress and guide appropriate actions. If the collection of data is not done properly, it will mask the actual situation and thereby affect its analysis. At times, the reported coverage is overestimated or underestimated because of irregularities in the denominator (target population). There is a significant difference between the census data and the EPI registration data and one must be aware when using the data and their interpretation.

Another factor is the timeliness and completeness of reporting. Monthly reporting forms are either piled up at the provincial or national level waiting to be consolidated and analysed. Without analysis, timely feedback cannot be accomplished and appropriate and timely interventions cannot be acted upon. Recognizing the importance of data and the use of coverage, more effort is needed to improve its timeliness, completeness and accuracy.

### 2.9.3 Web-based immunization registry

Ms Norleen Oliver, System Administrator, Department of Health and Social Affairs, the Federated States of Micronesia, shared information about the country's IIS-Webiz software data registry. Before its installation, the four different states in the country had their own data entry functioning independently from each other. Hence, the status of a child's data is lost if he or she moves from one state to another or his or her record is duplicated. This makes the system disconnected, redundant and unreliable.

With assistance from the US CDC, the new Health Information System (HIS) was installed in the Federated States of Micronesia and the other five United States of America-affiliated countries. The new centralized data registry functions to record demographics of patients, vaccination details, reminder and recall capability, automated calculation of immunization coverage rates, counter-response measure and administration and inventory module.

The installation has even extended to labour and delivery rooms to capture vaccinations given at birth. In addition, it fosters collaboration between vertical programmes in the country and with other Pacific jurisdictions, it checks the validity of the immunizations given to patients and is used as a tool in the microplanning for on-time vaccinations.

### 2.9.4 Improving VPDs surveillance: Hospital-based active surveillance (HBAS)

Dr Jayaprakash Valiakollari, Technical Officer, WHO Suva, Fiji, recalled the history of HBAS, which started in 1997 under the Pacific Public Health Surveillance Network (PPHSN). The action taken was to support the initiative to certify the eradication of polio and the control or elimination of measles and neonatal tetanus in the Pacific. To date, the HBAS network is established in 20 Pacific island countries and areas, with 58 reporting sites and more than 200 key clinicians participating.

All participating Pacific island countries and areas are required to submit monthly reports to WHO Suva. WHO sends an e-mail reminder to all countries during the first week of every month to submit the forms; countries also receive a monthly summary feedback. Timeliness and completeness of reporting remain an issue.

A major concern is that all 72 acute fever and rash (AFR) cases notified in 2010 was still pending for case classification although laboratory results from many of them were available for a long time. The problem was the result of a lack of essential case information (e.g. rash onset).

The following are key elements to improve surveillance: timely reporting; adequately investigating every case notified; collecting specimens required and properly arranging shipment; and sending case investigation forms in a timely manner to the WHO Regional Office for the Western Pacific to allow for support. The importance of surveillance data cannot be underestimated since it is one of the most critical components for verification of measles elimination.

#### 2.9.5 Surveillance during a pertussis outbreak in Guam

Ms Annette Aguon, CDC Coordinator Supervisor, Immunization Programme, Department of Public Health and Social Services, Guam, related the activities and control measures in containing the pertussis outbreak in Guam. As of 18 August 2011, a total of 133 cases were reported, of which 40% were confirmed, 12% were suspects, 23% were probable and 23% were discarded. Of 133 cases, about 53% of children affected were under one year old.

Once a case was identified, a general public awareness was conducted through press releases to advise about the disease, its signs and symptoms, when and where to seek medical care, isolation and quarantine at home and the importance of immunization.

Also, medical providers were involved in the clinical advisories, confirmatory diagnosis and a presentation with the physicians and nurses at the Guam Memorial Hospital. Immunization outreach clinics were organized and conducted immediately. Technical support was provided by the US CDC through teleconferencing and e-mails. All schools were involved to provide more information to identify cases and contact tracing.

The challenges were the following: late reporting; a delay in receiving medical notes and laboratory reports from providers (hospital and clinics); no laboratory tests ordered for some patients; locating some patients for interviews and investigation; no full-time staff for the VPD coordinator and territorial epidemiologist; and the issue of a “pseudo outbreak” since no culture had been done yet (following US CDC criteria).

#### 2.10 Cold chain strengthening

##### 2.10.1 Cold chain improvement in the Pacific island countries

Dr Ingrid Hillman, Child Survival Specialist, Health and Sanitation Programme, UNICEF Pacific Office, Suva, Fiji, presented on the cold chain improvement in the Pacific island countries, whose objective is at least 80% functionality (where possible 100%) of cold chain in health facilities. Challenges in the Pacific island countries with regard to cold chain are the following: the geographic situation of the Pacific; technical capacity such as not enough cold chain technicians; poor maintenance such as non-functioning and outdated refrigerators; and operational costs, such as a limited budget to procure gas supplies.

With the advent of new technology, solar chill refrigerators, which require no gas, are available. These fridges have been introduced in some Pacific island countries and areas as part of UNICEF’s cold chain improvement plan for the Pacific with the involvement of key partners (JICA, JPIPS 1 and 2, Rotary Japan and WHO).

The key areas for improvement are: capacity of the health staff; a cold chain technician in maintenance; repairmen, stock and vaccine management; availability of cold chain supplies (cold box, vaccine carrier, appropriate refrigerators; use of temperature-monitoring devices (freeze tag and fridge tag); and availability of spare parts.

### 2.10.2 Cold chain maintenance

Mr Tatsuhiko Tsukakoshi, Cold Chain Maintenance Expert under JICA, Suva, Fiji, gave a presentation on the Project for System Improvement of Expanded Program on Immunization in the Pacific Region (JPIPS Phase 2). The project duration is three years (during the period February 2011–January 2014). The purpose of the project is that the implementation system for vaccine management and cold chain maintenance are developed and operated on their initiative in the target countries under the PIPS mechanism.

A project coordinator and short-term consultants in EPI management and cold chain maintenance provided training to improve the capacity of the Pacific island countries and areas on vaccine and cold chain management. The target countries under this project are the Federated States of Micronesia, Fiji, Kiribati, Samoa, Solomon Islands, and Vanuatu. Other countries such as Cook Islands, the Marshall Islands, Palau, Nauru, Niue, Tonga and Tuvalu could benefit from this project as well.

Pacific island countries and areas, whenever possible, may want to continually seek to improve cold chain maintenance and vaccine management with the following recommendations:

- (1) Countries may want to plan and finance refresher training on cold chain maintenance and repair for health workers and technicians.
- (2) The JPIPS Phase 2 Project, with assistance from other PIPS partners, should continue to provide a package of training on vaccine management and cold chain maintenance at regional and in-country levels.
- (3) Countries to build capacity of cold chain technician(s) may want to provide preventive maintenance training on schedule and repair services as needed.
- (4) Create a maintenance system, including inventory management of spare parts and tools for repair.
- (5) Cold chain inventory and plan to be updated regularly in every country and PIPs partners collaborate with the cold chain managers to work out a replacement schedule for each country, specifying the quantity and types of equipment.
- (6) Formulate a guideline and conduct technical assessment for the erratic or broken equipment. This is provided that the equipment is not working but repairable, there is a determination of the extent of the repair needed (e.g. onsite repair, major overhaul, spare parts) and the equipment is not working and should be replaced.
- (7) Work out procedures for disposing of nonfunctional equipment (how to collect broken equipment and dispose of it in an environmentally acceptable method).

### 2.10.3 Strengthening of cold chain

Mr Raymond Mauriasi, National EPI Coordinator, EPI, Ministry of Health and Medical Services, Solomon Islands, showed the distribution of cold chain facilities by provinces and clinics. A cold chain inventory was conducted and, of 322 clinics, only 239 (74%) have fridges. Of these, only 153 (65%) are functioning while 83 (35%) are not working.



There are four types of fridges, according to the source of power used in Solomon Islands: electricity, gas, kerosene and solar. Most of these kerosene-run fridges are no longer functioning because they are old. The challenges noted are a high number of old fridges (kerosene and RCW42EG, including a national medical store [NMS] cold room); a lack of maintenance and repairs; no regular updated refrigerator inventory; lack of human resources (one national, others have multiple responsibilities); and the geographical distribution of islands. The following are the strategies to strengthen the cold chain:

Logistics and supplies:

- (1) solar chills for hard-to-reach clinics;
- (2) gas fridges for easy-to-reach clinics;
- (3) cold boxes to all area health centres, two each;
- (4) vaccines carrier to all clinics; and
- (5) spare gas bottles to all clinics.

National Medical Store:

- (1) replacement of cold room;
- (2) contingency plan: Four ice line (MK306) or have an alternative storage arrangement with a private company;
- (3) provision of office and training site for cold chain; and
- (4) recruitment of a cold chain support officer.

Management/Planning/Budgeting:

- (1) improve collaboration with NMS;
- (2) provincial director committed to budget for gas supplies in the 2012 operation plan;
- (3) increase allocation to provinces—60% of HSSP budget; and
- (4) quarterly cold chain inventory update.

The following are the recommendations:

- (1) support cold chain technician training;
- (2) support replacement of old fridges, e.g. solar chills and cold room;
- (3) establish a training room for cold chain; and
- (4) strengthen internal country-level issues, e.g. human resources, planning and budgeting.

### 2.11 Process and verification of hepatitis B control

Dr Tilman Ruff, consultant from the University of Melbourne's NOSSM Institute for Global Health, said that in most of the Western Pacific Region, including the Pacific island countries and areas, hepatitis B infection was highly prevalent and a major public health problem and that these countries were among the first to introduce hepatitis B infant immunization commencing at birth and to create national immunization programmes. The Western Pacific Region has been the first to establish specific hepatitis B control targets—an interim milestone of <2% HBsAg prevalence among people at least five years old with a target date of 2012 on the way towards a goal of <1% HBsAg prevalence in the population at least five years old.

The Western Pacific Regional Office has established a hepatitis B expert resource panel (ERP) to assist countries to strengthen their hepatitis B control programmes and verify achievement of the interim milestone and goal. This requires serological evidence. Verification can confirm substantial progress made across the Region in hepatitis B control. On the basis of data available on the immunization programme performance and hepatitis B prevalence, the ERP consultation in February 2011 recommended that:

- (1) American Samoa, Fiji and Tonga submit a request and package for verification;
- (2) further clarification be sought from the Commonwealth of the Northern Mariana Islands, the Marshall Islands and Palau; and
- (3) at least 10 countries with high immunization coverage for at least five years conduct serosurveys in order to be able to proceed with verification: Cook Islands, the Federated States of Micronesia, French Polynesia, Guam, New Caledonia, Nauru, Niue, Tokelau, Tuvalu and Wallis and Futuna.

It was noted that serosurveys undertaken for programme assessment rather than verification potentially could use less strict methodology, e.g. opportunistic sampling or selecting areas with low coverage.

It was recommended that countries considering serosurveys explore combining multiple purposes. Where surveys are done solely to assess hepatitis B control, rapid diagnostic tests using a finger prick drop of blood and read visually on the spot in the field could simplify surveys and reduce costs. Expert advice was recommended for survey design and could help ensure required information was gained with the smallest possible number of children. Advice and support on survey design is available through the WHO Regional Office for the Western Pacific and the US CDC. The ERP is available through the WHO Regional Office for the Western Pacific hepatitis B focal point, Dr Karen Hennessey, to review and advice on a country's verification plans.

### 2.12 Measles/hepatitis B/routine immunization

Three groups discussed the above based on country coverage status and priority actions needed during the period 2011–2012.

### 2.13 Marketplace

Countries displayed promotional materials and other information on immunization such as posters, banners, handbooks, immunization certificates, registry and innovative activities.

## 2.14 Communication and advocacy

### 2.14.1 Vaccination Week as an advocacy tool

Mr Gabriel Anaya, Programme Management Officer, WHO Regional Office for the Western Pacific, Manila, Philippines, related that in 2002, the idea of a Vaccination Week was proposed by the health ministers of the Region of the Americas, prompted by the measles outbreak in Venezuela and Colombia. In 2005, the European Immunization Week used the power of advocacy and targeted communication to boost awareness and increase the success of the immunization programme. In 2010, the WHO Regional Office for the Eastern Mediterranean Vaccination Week intended to protect more people against VPD by raising awareness, increasing demand and utilization, mobilizing resources and partners and ensuring continuing political and decision-makers' commitment.

The first Vaccination Week in the Region proved to be a successful tool to highlight the importance of vaccination and raise community awareness about vaccination services available at the national and district levels in countries and areas. It is an opportunity to open the door to resource mobilization activities at the regional and country levels. In addition, it can boost morale by celebrating and acknowledging the hard work of immunization staff.

As endorsed by the TAG, implementation of Vaccination Week should continue in the Region with full participation of all countries and areas in this important event. All countries and areas in the Region are requested to submit a summary report of their Vaccination Week held in 2011. In addition, all countries and areas are requested to submit a country survey for Vaccination Week in 2012.

### 2.14.2 Linking maternal, newborn and child health (MNCH) to EPI interventions

Pacific countries have shown good progress in achieving MDG4, especially in the reduction of the under-5 mortality but not in reducing the deaths of newborn infants. Immunization services give many opportunities to further reduce the infant mortality rate by linking the immunization services with other MNCH programmes.

The opportunities in the Pacific are Baby-Friendly Hospital Initiative (BFHI); quality antenatal care (ANC); community-based maternal, newborn and child care; joint preview of the EPI and MNCH programmes; integrated health services; and pneumonia and diarrhoea control. By linking the above EPI services, it will give positive impact to hepatitis B birth dose in the hospital, tracking the defaulters through community-based programmes and using community health volunteers. Many high-impact interventions such as distribution of vitamin A, deworming tablets, zinc tablets, new oral rehydration therapy (ORT), hand-washing and other MCH services can be delivered during integrated outreach services, Child Health Day, Immunization Week or SIAs.

Countries should link their EPI services where possible with other high-impact interventions as BFHI, community-based MNCH programmes and integrated health services in outreach services, Child Health Day or Immunization Week and SIAs.

### 2.14.3 Country presentation

Ms Litiana Volavola, National EPI Coordinator, Fiji Pharmaceutical Services and Biomedical Centre, Ministry of Health, Fiji, discussed EPI communication and advocacy, which is one of the major key immunization components apart from service delivery, vaccine supply and logistics, surveillance and monitoring and programme management.

Communication strategies contribute to the immunization goal, they create demand and utilization of the service, educate people and deal with rumours and mobilize the communities and leaders on immunization. In June 2011, Fiji conducted an Immunization Week with a goal to ensure 95% of children are fully immunized by the first year of life. The key message that was conveyed was “I’m responsible, I support immunization”.

The target audience were parents (men, women) and caregivers. The event was aimed at enhancing understanding about the importance of immunization, appreciating the value (immunized) against the cost of not being immunized, the importance of attending regular clinics and encouraging wider participation and ownership among stakeholders. There was a significant increase during the week in the number of mothers and fathers who brought their children to the clinic, even those between one and five years old.

Most parents brought their children to the clinics thinking that new vaccines were given. This was considered an opportunity for the health staff to know the status of the children and immunized them accordingly. The experience reaffirms the importance of educating parents and the regular attendance to MCH by children until they are at least five years old. Vaccination Week also produced lessons learnt in service delivery and the communications aspect of the initiative. Changing behaviour and practices takes time that requires dedication and resources. The role of mass media in communications is powerful, but the engagement of stakeholders is fundamental to mobilization.

## 2.15 Vaccines security and management

### 2.15.1 Vaccine Independence Initiative (VII)

Dr Eliab Seroney Some, Chief of the Health and Sanitation Programme, UNICEF Pacific, Suva, Fiji, presented the internal review of the performance of the VII in the Pacific islands, which is managed by UNICEF. The VII has been in operation since 1995 with seed money provided by AusAID, NZAID and the Government of Japan. VII in the Pacific covers 13 countries. From 2008, most countries introduced pentavalent vaccines and this led to an additional contribution to VII from AusAID, doubling the revolving fund from US\$ 1 million to US\$ 2 million (for GAVI and non-GAVI), including an increase in the buffer stocks. In 2010, the VII was renewed by the UNICEF Board until 2015. The review covers from 2006 to 2010, with the following key findings:

- (1) over its 15 years of operation, only one country has been suspended once for non-payment;
- (2) the number of countries not able to make payment within the year of invoicing increased from one in 2006 to five in 2007 and in 2009 and a dramatic reduction in 2010;
- (3) Vanuatu has significantly reduced the number of payments from two to six during the period 2006–2009 to one payment in 2010;
- (4) VII agreements and letter of guarantee (LoG) as in 2008 need urgency whenever there are changes; and
- (5) there has been a dramatic improvement in timely payments, from only three paying within 60 days (between 2006 and 2009) and 10 taking over 90 days in 2009 to 11 paying within 60 days in 2010.

In conclusion:

- (1) the Pacific island countries and areas were able to pay 100% for vaccination;

- (2) some countries had faced hardship in paying for vaccines (during the period 2006–2009), but not from 2010;
- (3) there was a risk of outstanding payments from one Pacific island countries and areas, leading to its temporary suspension from VII, i.e., orders not placed have been reduced drastically;
- (4) UNICEF will not honour further requests issued by a ministry of health if outstanding invoices exist from previous requests; and
- (5) There is still a need to improve timely invoicing.

Some issues and their status:

- (1) Update vaccine procurement work process: Done.
- (2) 2010: Late arrival of pentavalent in May instead of March/April because of production issues.
- (3) Explore ways of shortening the more than four months it takes to receive invoices for vaccines and offshore charges. A full-time logistician/administrative assistant is to be hired.
- (4) Maintain the splitting of invoices to countries. The first invoice should show the cost of vaccines and prorated offshore charges and inbound and storage charges in Nadi. The second invoice should show outbound charges and any exchange rate differences.
- (5) Revisit how to handle buffer stocks: Still outstanding.
- (6) The duration of LoG should be the same as for the VII agreement. Presently LoG are renewed annually. No vaccine orders would be accepted without a signed annual LoG: Continuing discussions with Headquarters and the supply division.

#### 2.15.2 Vaccine inventory tools

Dr Souleymane Kone, WHO Headquarters, Geneva, introduced the vaccine inventory tools that are being developed to improve vaccine supplies and cold chain equipment management. The immunization vaccine delivery system involves various steps from the manufacturer to the point of vaccination (mother and child). Such a system only will work if there is good planning, such as on vaccine supply forecasting and storage capacity.

In addition, good monitoring must be in place to make an assessment that the vaccination points have adequate quantities of vaccines to immunize the target population. Vaccine or cold chain inventory is a complex and tedious process but is made simple with the availability of these tools. The tools not only will provide a comprehensive account of the status of equipment or facilities but also will give an in-depth analysis, which will guide programme managers to make decisions, including for long-term planning.

A template has been developed and entry of data is required, according to the profile. Once data has been entered completely, the tool will provide a comprehensive analysis. For instance, the cold chain inventory tool will provide a complete list of equipment to be replaced (locations, quantity, cost of replacement, maintenance and operational costs, a list of equipment models, specifications and photos and many more). This tool provides opportunities and unlimited possibilities for expansion of its usage to other areas or programmes.

## 2.16 Maintaining a polio-free environment

### 2.16.1 Polio eradication progress

Dr Sigrun Roesel, WHO Regional Office for the Western Pacific, said the Global Polio Eradication Initiative (GPEI) was making further progress towards the end-2012 goal of interrupting poliovirus transmission; with India as one of the four endemic countries not having reported wild poliovirus since February 2011. However, there are also areas of concern as the three other endemic countries (Afghanistan, Nigeria and Pakistan) and the countries with re-established transmission (Angola, Chad, the Republic of the Congo) are facing major challenges.

Following the 2010 World Health Assembly recommendation, an Independent Monitoring Board (IMB) was established to monitor and guide the work of 2010–2012 Strategic Plan of the GPEI. While the IMB highlights major achievements since the launch of the new GPEI Strategic Plan 2010–2012, including successfully stopping outbreaks following wild poliovirus importations such as in Europe in 2010 (Kazakhstan, Tajikistan, Turkmenistan and Russian Federation), it concluded that the overall end-2012 goal of eradication is at risk.

The IMB was particularly concerned at the situation in Chad and Pakistan, calling the outbreak in Chad a “public health emergency”, while noting that Pakistan “risked being the country that prevents global polio eradication”. Urgent efforts may be needed in both countries.

On Nigeria and Afghanistan, the IMB noted progress achieved over the past 12 months but underscored that population immunity gaps remain which threatens to derail progress. On countries with re-established transmission, the IMB emphasized that no real distinction should be made between these countries and the countries with endemic infection. On financing of the GPEI, the IMB called the US\$ 665 million funding gap through 2012 the “single greatest threat to the GPEI's success”.

The Western Pacific Region on 29 October 2010 commemorated having been certified polio-free for 10 years. The Regional Certification Commission (RCC) considered this an achievement probably comparable to reaching elimination itself and expressed its gratitude to everybody in the Pacific who helped to make this happen.

Still, the RCC urged that there is no room for complacency, as reminded by the polio outbreak in the European Region in 2010—a region that had been certified polio-free in 2002. The RCC considered this as a stark reminder of vulnerability so long as poliovirus transmission continues in other parts of the world, regardless of how long a country has remained polio-free.

A risk assessment conducted in 2010 for all countries in the Western Pacific Region on the potential spread of imported wild polio virus classified three countries (Cambodia, the Lao People's Democratic Republic and Papua New Guinea) at high risk and three countries (China, the Philippines and Viet Nam) at medium risk. While a range of activities for risk mitigation is being implemented, the quality of surveillance and immunization activities is not yet universally at the level required to have good protection against polio reintroduction. Performance gaps remain, leaving high-risk populations vulnerable.

In the Pacific, routine immunization coverage against polio remained generally high in 2010 and 11 Pacific island countries and areas reported coverage of a third dose oral poliovirus vaccine (OPV/IPV3) over 90% in the JRF. Five countries (Fiji, the Federated States of Micronesia, Samoa, Tuvalu and Wallis and Futuna) reported coverage between 80% and 90% and two Pacific island countries (Palau and Solomon Islands) reported coverage below 80%.

Reporting of acute flaccid paralysis (AFP) cases has been fluctuating over the years and only limited countries report AFP cases regularly (e.g. Fiji, Solomon Islands and New Caledonia). From 2011 to date, the non-polio AFP rate (annualized) is well below the target of 1 per 100 000 children under 15 years old. The percentage of adequate stool sample collection remains low, which often causes delays in final case classification by the Subregional Certification Committee (SRCC). There is also considerable delay in notification of cases to WHO and the shipment of samples to the reference laboratory in Australia is not yet timely enough.

#### 2.16.2 TAG recommendations on polio

- (1) concurs with the conclusion of the RCC that the Western Pacific Region has stayed polio-free in 2010;
- (2) also considers having been certified polio-free for 10 years a remarkable achievement;
- (3) regards continuing risk assessment on potential of imported WPV to spread and cause polio outbreaks as critical and concurs with risk mitigation activities carried out;
- (4) notes with great concern that surveillance performance levels in some countries remain at very low levels or are declining;
- (5) notes also that still not every country concerned has an updated and fully endorsed WPV importation preparedness plan in place;
- (6) congratulates the Chinese Center for Disease Control and Prevention and WHO Regional Offices involved (Regional Office for the Western Pacific, Regional Office for South-East Asia, Regional Office for Europe and Regional Office for the Eastern Mediterranean) for organizing a coordination workshop among polio-free countries and regions in China in July 2011;
- (7) supports the Regional Certification Committee (RCC) request that all countries may want to do their own risk assessment exercise, particularly at the subnational level, as appropriate;
- (8) asked to receive results of these risk assessments submitted to the next RCC meeting;
- (9) urges all countries to ensure that an updated and adequately endorsed WPV importation preparedness plan is in place, as appropriate;
- (10) encourages follow-up on the coordination meeting held in China in July 2011 about how recommendations and action points can be implemented in a rapid, practical and collaborative manner and continue an intercountry dialogue;
- (11) Otherwise, recommendations made at TAG/19 remain still valid.

In the Pacific island countries and areas, the following are noted:

- (1) declining AFP surveillance in 2011;
- (2) some countries' Polio3 coverage <90%; and
- (3) no national WPV importation plans in the biggest countries.

### 2.16.3 AFP Surveillance in the Pacific island countries

Dr Jayaprakash Valiakolleri, WHO Suva, Fiji, provided a brief presentation on the status of AFP surveillance in the Pacific island countries and areas. The Pacific Region has been certified polio-free since 2000, but efforts to maintain high immunization coverage and quality surveillance must continue. The monthly reporting data from January to July 2011 revealed that a majority of the Pacific island countries and areas are reporting but the timeliness and completeness of the report is still a problem for some.

Countries such as Fiji, French Polynesia, the Marshall Islands, New Caledonia, Solomon Islands, Tonga and Wallis and Futuna have been reporting well on their AFP cases. From 2011 to date, the reported AFP cases are well below the target of one per 100 000 children under 15 years old. The percentage of adequate stool sample collection remains low and there is a considerable delay in sending the specimen to the laboratory for confirmation. Likewise, there is a considerable delay in notification of cases to WHO for case investigation.

### 2.16.4 Report from the Chairperson of SRCC

Dr Lisi Tikoduadua, Chairperson of the SRCC, provided a feedback on the 12th meeting of the SRCC from 22 to 23 August 2011 in Nadi, Fiji. The objectives of the meeting were:

- (1) to review the current situation of maintaining polio-free status in the Pacific, including the 2011 workplan;
- (2) to discuss the latest developments and requirements in the GPEI;
- (3) to review and classify pending AFP cases;
- (4) to present conclusions and recommendations to participants at the seventh PIPS workshop on how to keep the Pacific polio-free; and
- (5) to prepare the draft outline for the annual progress review report on maintaining polio-free status in the Pacific island countries and areas for submission to the RCC at its 17th meeting.

She reviewed the implementation of the SRCC Action Plan 2010 bearing the following components:

- (1) strengthening routine immunization;
- (2) improving awareness and surveillance performance;
- (3) preparedness response to importation of WPV;
- (4) poliovirus laboratory containment; and
- (5) SRCC activities.

The following were observations and challenges noted in the Pacific island countries and areas:

- (1) Routine immunization coverage against polio remained generally high in 2010:
  - (a) 11 Pacific island countries reported coverage of third dose polio vaccine (OPV/IPV3) over 90%;



- (b) five Pacific island countries (Fiji, the Federated States of Micronesia, Samoa, Tuvalu and Wallis and Futuna) reported coverage between 80% and 90%;
  - (c) two Pacific island countries (Palau and Solomon Islands) reported coverage below 80%; and
  - (d) no data were available for American Samoa and Guam.
- (2) Of the larger countries Fiji, Solomon Islands and New Caledonia identify AFP cases at expected rates but adequate stool sample collections remains difficult.
  - (3) HBAS completeness and timeliness-fluctuating (21%–91%).
  - (4) Five of the larger countries (the Federated States of Micronesia, French Polynesia, Guam, Samoa and Vanuatu) were below the expected level of more than 1 per 100 000 non-polio acute flaccid paralysis (NPAFP) rate during last decade.
  - (5) None of the key countries recommended to formulate their own national preparedness plans on the response to importation of WPV (Fiji, Solomon Islands and Vanuatu) was able to date to do so.
  - (6) High turnover of key staff (i.e. no proper orientation on surveillance, lack of skills in recognizing AFP cases).
  - (7) Lack of enthusiasm for AFP surveillance due to polio long having been gone (last case over 20 years ago) in the Pacific island countries and areas and competing priorities.
  - (8) Pre- and in-service training materials are not instituted to ensure AFP surveillance awareness.
  - (9) Geography of far-flung outer islands leads to late reporting and investigation, some AFP cases lost to follow up, late submission of reports.
  - (10) Long distance to laboratory in Australia and infrequent flights causes shipment delays, late virological results and difficult to ensure reverse cold chain.
  - (11) AFP case classification may take longer because of a lack of information and difficulties in communicating with health staff because of poor communications access, regular movement by health care providers between islands and multiple responsibilities.

The following are recommended to overcome the challenges:

- (1) SIA opportunities to add OPV if Polio3 <90%;
- (2) collaboration on surveillance training activities and technology with communicable disease surveillance and response;
- (3) combined monthly AFP/AFR reporting mechanism since 2004 should be optimized;
- (4) validate low AFP rates through retrospective record reviews (opportunity to understand and address challenges in a focused manner);
- (5) improved reporting through enhanced e-mail communication and launching of mobile phone system in Fiji in mid-September 2010;

- (6) build in capacity to ministries of health on influenza and measles outbreak preparedness response also available for WPV detection;
- (7) opportunistic visits by SRCC, Country Liaison Office and WHO Secretariat to countries with poor performance to review AFP cases; and
- (8) SRCC seeking support from health ministers on active involvement in HBAS.

#### 2.17 Regional EPI Strategic Plan

Dr Valiakoller, WHO Suva, Fiji, provided a brief outline on the Regional EPI Strategic Plan for group work discussion. The plan put forward the vision of a healthy Pacific people and with a mission of having a universal and equitable access to quality immunization services. The draft document was sent earlier to countries before the workshop for review. The plan has five strategic areas: routine immunization services strengthening; disease eradication, elimination and control; health system links; new vaccines and technologies; and Pacific immunization partnerships.

The participants were divided into four groups and each group was assigned a strategy to discuss, including the fifth strategy. For each of the strategies, the group was to review, discuss, revise or add the various activities as outlined and conclude with the expected results. A prepared worksheet was given to guide the participants in their group work. A plenary session was then conducted with the group work outputs attached as Annex 4.

#### 2.18 Regional overview of pandemic vaccine deployment (Note: report will be provided by the H1N1 pandemic team)

#### 2.19 Regulations and lessons for national regulatory agency (NRA) strengthening

Ensuring vaccine quality and safety is an essential component of an EPI programme. An independent, competent and effective regulatory system in a country can support assured quality vaccines. Countries may want to strengthen the functions of an NRA according to WHO guidelines with regard to their vaccine source.

An NRA can play a leading role in ensuring vaccine quality and contributing to immunization safety, particularly through its role in licensing and adverse events following immunization (AEFI) surveillance. For countries introducing new and underutilized vaccines, especially under emergency status, NRAs should at a minimum have the capacity for licensing and post-marketing surveillance, including high-quality AEFI surveillance.

The Pacific island countries and areas are strongly recommended to confirm the functional capacity of their own NRA functions under the guidelines proposed by WHO and building a subregional NRA cooperation scheme for using limited resources efficiently and receiving support from fully functional NRAs from other countries.

#### 2.20 Plenary on injection safety, waste management, AEFI

There were two presentations made in this session. Vanuatu presented on country experiences during H1N1 pandemic and the WHO Regional Office for the Western Pacific presented on lessons learnt from H1N1 pandemic in the entire Region.

## Vanuatu

Vanuatu received 25 000 doses of the 2009 pandemic influenza vaccine and 100% of the targeted population was vaccinated. Health care workers (HCWs), pregnant women, people with underlying medical conditions (people of all ages with chronic diseases, in particular asthma and diabetes) and people 17 to 19 years old were offered the vaccine. Vaccination of the target population began on 1 March 2010 and was completed by the end of the month. Follow-up and monitoring of the population vaccinated for detection of AEFI continued until the end of April 2010.

Only auto-disable syringes were used and safety boxes were distributed for the collection of used syringes. The Government used the system in place for collecting and incinerating used injection equipment. Used injection equipment was burned at the peripheral levels. Staff received refresher updates about not recapping the needle after the administration of vaccine and safe disposal of used injection equipment.

The AEFI cases reported to the Ministry of Health were all related to pain at the injection site in people vaccinated with pandemic influenza vaccine, of which none required medical attention.

Mr Leonard Tabilip, National EPI Coordinator, Vanuatu, summarized the lessons learnt for his country as follows:

- (1) excellent commitment provided from all levels in support of the H1N1 pandemic vaccination campaign was critical;
- (2) working with the media was essential to mobilize the community and target groups;
- (3) providing training to HCWs and motivating them resulted in excellent performance and incentive; and
- (4) WHO played a critical role in providing information, technical leadership, guidelines and assistance in obtaining vaccine and ancillary supplies.

## WHO Regional Office for the Western Pacific

Dr Md. Shafiqul Hossain reported that, for 2010, five Pacific island countries and areas indicated that they did not have a functioning AEFI system in place. Further, three Pacific island countries did not respond to this question when they submitted their answers using the WHO/UNICEF JRF. Table 1 below summarizes the status on immunization safety indicators collected using the JRF from the Pacific island countries.

Table 1: Reported data on indicators regarding vaccine and injection safety in the Pacific island countries for 2010 using JRF.

<b>Programme Area</b>	<b>Yes</b>	<b>No</b>	<b>Not reported</b>	<b>(%) Yes</b>
<b>AEFI surveillance in place</b>	12	5	4	(57)
<b>AEFI Causality Committee in place</b>	10	8	3	(48)
<b>Policy on injection safety developed</b>	14	3	4	(66)
<b>Use of AD syringes</b>	14	3	4	(66)
<b>Policy on waste management in place</b>	14	2	5	(66)

Based on the data for the Pacific island countries and areas, there is a need to improve activities and policies to ensure that those countries and areas follow the best practices for assuring immunization safety. Dr Hossain indicated that for the future, the WHO Regional Office for the Western Pacific will work towards building up the capacity of the countries and the areas in the Region to improve their abilities in immunization safety.

#### 2.21 Plenary on supply chain management and lessons for routine immunization system strengthening

Presentation on supply chain management and lessons learnt for routine immunization was presented by Samoa. The Ministry of Health determined the following objectives for its H1N1 pandemic vaccination campaign:

- (1) protect at least 10% of the population who are at high risk of contracting H1N1 pandemic in case a second wave breaks out;
- (2) be better prepared for a second wave of an H1N1 pandemic outbreak in order to prevent health care services from being interrupted; and
- (3) reduce morbidity and mortality in case a second wave of an outbreak hits Samoa.

The total population of Samoa is 2 184 992. WHO donated 28 000 doses of the pandemic influenza vaccine to Samoa, including ancillary supplies of syringes and safety boxes, that allowed the Government to offer more vaccine to the public. Table 2 shows the results of their pandemic influenza vaccination campaign.

Table 2: Number of people targeted for vaccination by target group using the H1N1 pandemic influenza vaccine (2010), Samoa.

<b>Target group</b>	<b>Estimated Population</b>	<b>Number of Persons vaccinated</b>	<b>(%) of target Population vaccinated<sup>a</sup></b>
<b>HCW</b>	1001	980	98%
<b>Pregnant women</b>	3770	3146	85%
<b>Persons w/chronic diseases 6 mo.-5 years</b>	7400	3778	78%
<b>Critical service workers</b>	3700	2899	91%
<b>Other people</b>	10 000	12 300	123%
<b>Total</b>	<b>28 000</b>	<b>26 103</b>	<b>93%</b>

The challenges confronted in deploying the vaccine were communications breakdowns with the other islands during the second shipment of the vaccine and ancillary items and human resources.

The lessons learnt from the deployment of the vaccine were:

- (1) the inventory management system needed to be updated at all levels;
- (2) distribution sites may want to alert the consignees of their shipment details so that they are ready to receive their supplies. To this end, the Government may want to ensure that supply chain managers understand the importance of pre-shipment alerts;
- (3) regular updates of the cold chain equipment are highly necessary for effective vaccine management; and
- (4) managers should improve the coordination team.

The estimated budget for the campaign was US\$ 54 122 and US\$ 43 197 was spent on the campaign. A total of 26 103 people were vaccinated, costing US\$ 1.64 per vaccinated person.

### 3. CONCLUSIONS

The main conclusions of the workshop were as follows:

#### 3.1 General

##### 3.1.1 Measles elimination and rubella control in the Pacific island countries and areas

(1) Three countries—Samoa, Solomon Islands and Vanuatu—may want to make intensified efforts during the period 2012–2013 to close existing immunity gaps against measles, either through nationwide SIAs or innovative strategies that target currently unvaccinated under-5 children to synergize with already planned activities for improving routine immunization services.

- (a) universal high coverage ( $\geq 95\%$ ) should be achieved in any planned SIAs;
- (b) Samoa may want to take action as soon as possible;
- (c) measles and rubella vaccine may be considered during SIAs in Solomon Islands and Vanuatu if they adopt a rubella control policy and commit to providing rubella-containing vaccine through future SIAs in line with the recently published WHO position paper on rubella vaccine (revised version, July 2011); and
- (d) countries are strongly encouraged to integrate measles SIAs with the administration of supplemental OPV doses, vitamin A, deworming drugs and other essential child health interventions whenever possible.

(2) PIPS partners may want to work together to identify financial resources required to ensure the planned activities will be implemented in a timely fashion.

(3) Pacific island countries and areas with suboptimal coverage for a second dose of measles-containing vaccine (MCV2) may want to identify key contributing factors, make a specific activity plan based on the findings and take adequate actions accordingly to improve MCV2 coverage.

(a) Performance indicators and partners

- (i) fully 95% coverage achieved in each planned SIAs, validated by a wide range of rapid coverage assessment;
- (ii) improvement in coverage of MCV2 in countries or areas concerned;
- (iii) number of countries conducting all planned activities; and
- (iv) partners would be WHO, UNICEF and PIPS partners.

### 3.1.2 Hepatitis B control, including process and verification

(1) Reach coverage targets of 65% timely hepatitis B birth dose and 85% hepB3.

(2) Conduct hepatitis B serosurvey if a country has met coverage targets for at least five years.

(3) Begin the verification process if a country has reached coverage targets and has prevalence data indicating <2% hepatitis B infection rates among children.

(a) Performance indicators, relevant countries and partners

- (i) number of countries that have reached the immunization coverage targets (target 20 countries);
- (ii) number of countries that have conducted hepatitis B serosurveys among those countries that have met coverage targets and lack seroprevalence data (target 10–12 countries);
- (iii) number of countries that have begun the verification process among countries that have immunization coverage and seroprevalence data (target at least four countries);
- (iv) specific countries: (1) Kiribati, Solomon Islands, Vanuatu, Samoa (maintain 2010 progress); (2) Cook Islands, the Commonwealth of the Northern Mariana Islands, the Federated States of Micronesia, French Polynesia, Guam, the Marshall Islands, Nauru, New Caledonia, Niue, Tokelau, Tuvalu and Wallis and Futuna; (3) American Samoa, Fiji, Palau and Tonga; and
- (v) Partners: WHO South Pacific Country Office, the WHO Regional Office for the Western Pacific and UNICEF. WHO would provide support.

### 3.1.3 New vaccine introduction

(1) When preparing to introduce new vaccines, countries may want to assess programmatic needs for the introduction and formulate an action plan to address gaps in all areas, including supply chain management, storage and transport capacities at all levels, safe injection and waste disposal practices and communications strategies.

(2) Countries that have introduced new vaccines may want to conduct implementation evaluations using available tools and gaps and lessons learnt may be documented and used for future new vaccine introduction.

(3) The impact of vaccine introduction may be monitored and results shared with policymakers to maintain support for vaccine use.

(a) Performance indicators, relevant countries and partners

(i) number of countries with programmatic assessment reports;

(ii) number of countries with documented gaps and lessons learnt;

(iii) number of countries with documented impact of new vaccines;

(iv) number of countries sharing documented impact with policy-makers;

(v) specific countries: Cook Islands (HPV-2011); French Polynesia (2012-HPV); Fiji (HPV, Rotavirus, PCV-2012); Guam reintroduce rotavirus (2011); Kiribati (HPV-2011, PCV-2013); New Caledonia (HPV-2011, change to PCV13-2011); Solomon Islands (PCV-2013); Vanuatu (HPV-2011); and

(vi) Partners: WHO, UNICEF.

#### 3.1.4 Strengthening routine immunization

(1) Mid-level managers (MLM) may need training for the countries that have not had their training last year.

(2) Coverage survey to be planned for 2013 except for Vanuatu, where there is an urgent need for the cluster survey to be conducted in 2012.

(3) Countries to have assistance with a microplanning exercise.

(a) Performance indicators, relevant countries and partners

(i) number of countries that have had MLM training;

(ii) number of countries that are implementing the RED strategy;

(iii) number of countries assisted in the microplanning exercise;

(iv) specific countries: Cook Islands, the Marshall Islands, Niue, Palau; Samoa, Solomon Islands, Tokelau, Tuvalu and Vanuatu; and

(v) partners: WHO Regional Office for the Western Pacific, WHO South Pacific Country Office, UNICEF and JICA.

#### 3.1.5 Strengthening monitoring and surveillance and maintaining a polio-free Pacific

(1) National HBAS coordinators may want to closely monitor if every case of AFP, AFR or neonatal tetanus is investigated adequately after its notification and, if required, ensure that specimens are collected properly, shipped and tested. Appropriate actions may be taken as soon as possible once any gap is identified.

- (2) Immediate communication with the South Pacific Country Office by e-mail or telephone after case notification is highly recommended to allow timely assistance be provided from WHO when required.
- (3) All Pacific island countries and areas may want to have immunoglobulin M (IgM) testing results of AFR cases available by referring those samples to WHO-accredited measles laboratories (Mataika House in Fiji or the Victorian Infectious Diseases Reference Laboratory in Australia).
- (4) Results of measles or rubella IgM testing may be reported monthly to an EPI officer of the South Pacific Country Office and the WHO Regional Office for the Western Pacific laboratory coordinator.
- (5) In countries or areas with difficulty in shipping samples to those accredited laboratories, alternative samplings such as the dried blood spot method may be used.
- (6) WHO should review and update the July 2005 HBAS manual.
- (7) All action points made at the sixth PIPS workshop for maintaining the polio-free status remain valid.
- (8) In addition, all national EPI coordinators may want to ensure that national International Health Regulations (IHR) focal points have fully included WPV reporting requirements in the respective national plans.
- (9) Further information can be obtained from the generic plan of action “Response to importation of wild poliovirus in the Pacific island countries and areas”—updated and endorsed by the SRCC in September 2010.
- (10) A national EPI team may want to persistently follow up with subnational level staff involved routinely to ensure coverage data is reported, consolidated, reviewed and communicated frequently (quarterly, at a minimum, or, ideally, monthly). Actions will be needed to improve accuracy, completeness and timeliness of coverage reporting.
  - (a) Performance indicators, relevant countries and partners
    - (i) at least 90% HBAS reporting completeness (12 reports a year) and at least 60% timely reporting;
    - (ii) at least two discarded measles rate per 100 000 population at the subregional level and at the country level in countries with  $\geq 100\ 000$  population);
    - (iii) adequate case investigation rate and adequate specimen collection rate are both  $\geq 80\%$  (for AFP and AFR, respectively);
    - (iv) proportion of samples tested for IgM among AFP cases (target: 80%);
    - (v) completeness and timeliness of monthly routine coverage data reporting;
    - (vi) at least 90% coverage with the third dose of polio vaccine;



- (vii) nonpolio AFP rate at least 1 per 100 000 <15 years (measured over time as applicable based on population size);
- (viii) retrospective record review conducted if nonpolio AFP rate is below certification standards;
- (ix) national wild poliovirus importation preparedness plan in place in Fiji, Solomon Islands and Vanuatu;
- (x) specific countries: (1) All countries; (2) All countries; (3) American Samoa, the Federated States of Micronesia, Fiji, French Polynesia, Guam, Kiribati, the Marshall Islands, New Caledonia, Samoa, Solomon Islands, Tonga and Vanuatu (4) the Federated States of Micronesia, French Polynesia, Guam, Kiribati, Samoa, Vanuatu, and (5) Fiji, Solomon Islands, Vanuatu; and
- (xi) partners: WHO, UNICEF.

#### 3.1.6 Cold chain strengthening

- (1) Conduct an effective vaccine management (EVM) assessment of the PIPS regional vaccine hub storage facility in Suva, Fiji.
- (2) All big countries in Pacific may want to plan for an EVM assessment and formulate an improvement plan within the next three years.
- (3) Implement stock recording and inventory management at all storage points, starting at the national stores in all countries.
- (4) All countries may want to establish vaccine utilization and wastage monitoring in their national immunization programmes.
- (5) All countries may want to update their cold chain inventories using the standardized tool and conduct a gap analysis for the expansion and replacement of equipment.
  - (a) Performance indicators, relevant countries and partners
    - (i) number of countries with EVMs report, including improvement plan;
    - (ii) number of countries with an annual vaccine utilization and wastage monitoring report;
    - (iii) number of countries with updated cold chain inventory;
    - (iv) specific countries: Fiji 2012; Solomon Islands 2012; Vanuatu 2013; and
    - (v) partners: WHO, UNICEF, JICA.

#### 3.1.7 Vaccine security and management (VII and inventory tools)

- (1) All countries participating in the VII to improve accuracy of annual forecasting to minimize supplemental orders and reliance on the regional buffer stock.
- (2) All countries participating in the VII to ensure payment of invoice within 60 days.

- (a) Performance indicators, relevant countries and partners
  - (i) number of countries with forecast variance <20% for 2012 orders;
  - (ii) number of countries with supplementary orders 2012 (target zero);
  - (iii) number of countries paying for vaccines with one payment;
  - (iv) number of countries paying within 60 days of invoicing;
  - (v) specific countries: (1) Fiji; (2) Solomon Islands; (3) Kiribati; (4) Samoa; (5) Tonga; (6) Vanuatu; (7) Niue; (8) Nauru; (9) Tokelau; (10) The Federated States of Micronesia; (11) Cook Islands; (12) the Marshall Islands; and (13) Tuvalu; and
  - (vi) partners: UNICEF, WHO.

### 3.1.8 Communication and advocacy and linking or integrating EPI with other maternal, newborn child and adolescent health (MNCAH) interventions

- (1) Countries may want to link their EPI services where possible with other high health impact interventions, such as BFHI, community-based MNCH programmes and integrated health services in outreach programmes, Child Health Day or Immunization Week and SIAs.
- (2) All countries and areas may submit a summary report from Vaccination Week 2011.
- (3) All countries and areas may submit the country survey form for Vaccination Week 2012.

- (a) Performance indicators, relevant countries and partners
  - (i) number of countries that conduct SIAs with integrated health services;
  - (ii) number of countries that conduct Immunization Week and/or Child Health Day with integrated health services;
  - (iii) number of countries that conduct outreach services with integrated health services;
  - (iv) specific countries: For No. 2, all except Tonga; No. 3, All; and
  - (v) partners: WHO, UNICEF, AusAID/NZAID, Rotary International, AusAID.

### 3.1.9 Regional EPI strategic plan

- (1) Countries may indicate what is relevant to their country for each strategic area for 2012, 2013, 2014 and 2015.
- (2) Revise the Pacific Island Regional Immunization Strategy (PIRIS) incorporating points that came up for discussion.
- (3) Submit to countries for endorsement.

- (4) Implementation framework may be completed by countries.
  - (a) Performance indicators, relevant countries and partners
    - (i) number of countries reporting having received second draft PIRIS by January 2012;
    - (ii) number of countries indicating relevant strategic areas and results by December 2011;
    - (iii) number of countries endorsing PIRIS;
    - (iv) specific countries: All; and
    - (v) partners: WHO South Pacific Country Office, UNICEF.

#### 3.1.10 Strengthening national regulatory authority, including legal issues

- (1) WHO to survey status of function of NRAs in the Pacific island countries and areas.
- (2) WHO to formulate a regional alliance to support the Pacific island countries and areas for developing functional NRAs.
  - (a) Performance indicators, relevant countries and partners
    - (i) number of countries having functional NRAs with regard to their vaccine source;
    - (ii) number of countries confirming emergency pathway for registration of new vaccine;
    - (iii) specific countries: All except American Samoa, the Commonwealth of the Northern Mariana Islands, French Polynesia, Fiji, Guam and New Caledonia for No. 1; and
    - (iv) partners: WHO, fully functional NRAs in the Region.

#### 3.1.11 Strengthening immunization safety, including AEFI (e.g. manual and training needs to be considered)

- (1) All countries are encouraged to emphasize the importance of immunization safety practices for maintaining high quality immunization services.
- (2) All Member States may want to draw up and strengthen the AEFI surveillance system, including creating and updating the manuals for AEFI surveillance for training HCWs.
- (3) All countries may want to make an effort to formulate a regional cooperation mechanism for strengthening the capacity of the AEFI surveillance system.
  - (a) Performance indicators, relevant countries and partners
    - (i) number of countries are drawing up a functional AEFI surveillance system;

- (ii) number of countries have manuals for an AEFI surveillance system;
- (iii) number of countries received or conducted training;
- (iv) specific countries: All; and
- (v) partners: WHO, UNICEF.

### 3.1.12 Pandemic vaccine deployment and vaccination

(1) By June 2012, the Pacific island countries and areas may want to advise the WHO Regional Office for the Western Pacific on the status of the pandemic deployment and vaccination plan, including when it can be submitted to government authorities for approval.

- (a) Performance indicators, relevant countries and partners
  - (i) number of countries informing the WHO Regional Office for the Western Pacific of the submission date to governments;
  - (ii) specific countries: All; and
  - (iii) partners: WHO.

## 4. ACTION POINTS

### PART 2

#### **PACIFIC ISLAND COUNTRIES AND AREAS EXTERNAL SUPPORT REQUIRED FOR 2011–2012**

*(WHO will review the below requests and communicate later on areas of support)*

<b>Country</b>	<b>External Support required in 2011-2012</b>	<b>Partners</b>
1. American Samoa	Technical assistance for AFP/AFR refresher training	CDC, WHO
	Technical assistance in Surveillance and case investigation training for all providers(nurses & lab)	CDC, WHO
	Transportation for health centres will help with case investigation, client tracking & etc.	?CDC
2. Kiribati	New cold chain storage; responsible officer - Pharm/EPI; budget US\$6000	UNICEF (AusAID/NZAID)
	Cold chain technician, ; responsible officer - DPHS/EPI - budget US\$7,000	UNICEF (AusAID/NZAID)
	Cold chain equipment, ; responsible officer - Pharmacy BMT/EPI, budget US\$20,000	UNICEF (AusAID/NZAID)
	Radio HF - ; responsible officer - DPHS/EPI, budget US\$20000	?
	Incinerator - ; responsible officer - DPHS/EPI1 budget US\$2000	?
	Funding-New vaccine Pneumococcal ; responsible officer - DPHS/EPI budget US\$100000	GAVI
	MR2 campaign	UNICEF (AusAID/NZAID), WHO
	Pneumococcal vaccine ; responsible officer - Pharm etc. budget US\$ (tbd)	UNICEF (AusAID/NZAID) / GAVI,

Country	External Support required in 2011-2012	Partners
		WHO
	Cold chain (training – vaccine management and cold chain)	JICA
3. Guam	Training on Statistics and Data Analysis	CDC. WHO
4. Niue	Auditing	UNICEF (AusAID/NZAID)
	Continue the VII assistance	UNICEF (AusAID/NZAID)
	Continue support from all donor agencies and WHO, UNICEF, JICA, NZAID, AusAID	All PIPS partners
5. Solomon Islands	Cold chain (procurement and training)	UNICEF/J-PIPS (JICA) /HSSP, WHO
	<b><u>Vaccines :</u></b>	
	• Training material on vaccine management and security	UNICEF (AusAID/NZAID), WHO
	• Vaccine forecasting and procurement	UNICEF (AusAID/NZAID)/GAVI,
	• Pneumococcal Introduction Preparation	UNICEF (AusAID/NZAID), WHO
	• Training on vaccine management & cold chain	JICA, UNICEF (AusAID/NZAID), WHO
	National and provincial EPI reviews - National Consultant	UNICEF (AusAID/NZAID), WHO
	Logistics: cold boxes, vaccine carriers, canoes, vehicle	UNICEF (AusAID/NZAID)/HSSP, WHO
	Technical guidance of VPD Surveillance at country and provincial levels	WHO
	UN volunteer	UNICEF (AusAID/NZAID)
	National Measles campaign-2012	UNICEF (AusAID/NZAID), WHO
	Reaching Every Zone strategy training, including micro-planning	UNICEF (AusAID/NZAID), WHO
	Recruitment of Data Officer and Communication Officer	UNICEF (AusAID/NZAID)
6. Vanuatu	Cold Chain	UNICEF (AusAID/NZAID), WHO, JICA
	Training	UNICEF (AusAID/NZAID), JICA, WHO
	M&E	UNICEF (AusAID/NZAID), WHO
	Technical guidance	UNICEF (AusAID/NZAID), WHO
	Support for Cold Chain Technician and Data Officer	UNICEF (AusAID/NZAID), WHO
	Vaccines	UNICEF (JCV)
	Integration PHC	UNICEF (AusAID/NZAID)
	EPI surveillance	AusAID, WHO

Country	External Support required in 2011-2012	Partners
7. Cook Islands	Cold Chain	UNICEF (AusAID/NZAID), WHO
	Vaccine procurement/VII	UNICEF (AusAID/NZAID), WHO
	Training/capacity building	UNICEF (AusAID/NZAID), WHO
8. Tonga	MLM training	UNICEF (AusAID/NZAID), WHO
9. Tuvalu	Technical support for MLM training	UNICEF (AusAID/NZAID), WHO
	Technical support for Hepatitis B sero-prevalence survey	WHO
	Technical support for technician to be training in keeping up with maintenance of fridges	JICA, UNICEF (AusAID/NZAID)
	Technical support to revise the immunization policy and handbook	UNICEF (AusAID/NZAID), WHO
	Technical support in installation of incinerators, i.e, shelters and other materials	UNICEF (AusAID/NZAID), WHO
10. Palau	Review reasons for drastic reduction in immunization coverage	CDC, UNICEF (AusAID/NZAID)
	JRF training	CDC, UNICEF, WHO
	Policy Handbook	CDC, UNICEF, WHO
11. Tokelau	To be invited to the JICA cold chain management trainings	JICA, UNICEF (AusAID/NZAID), WHO
12. Federated States of Micronesia (FSM)	Assessment of cold chain capacity	UNICEF (AusAID/NZAID), WHO
	MLM training (two people if possible)	UNICEF, WHO, JICA
	Cold chain equipment	UNICEF (AusAID/NZAID)
	Training to upgrade nurses and health assistants skills and knowledge on vaccines safety, cold chain maintenance and micro-planning	UNICEF (AusAID/NZAID), JICA, WHO
13. Republic of Marshall Islands	Training of cold chain technicians	UNICEF (AusAID/NZAID), JICA, WHO
	Cold chain equipment: vaccine carriers and boxes	UNICEF (AusAID/NZAID)
	Training on Statistics and Data Analysis	UNICEF (AusAID/NZAID), WHO
	Procurement of solar chills	UNICEF
	MLM training	UNICEF (AusAID/NZAID), WHO, JICA
14. French Polynesia	Financial resources to be found for the implementation of the HPV vaccination	UNICEF (AusAID/NZAID), WHO
15. Tonga	Technical support to revise: (a) Immunization handbook; (b) immunization policy; (c) cold chain; (d) develop waste management policy	UNICEF (AusAID/NZAID), WHO
	Financial support to print revised: (a) Immunization handbook; (b) immunization policy; (c) cold chain; (d) develop waste management policy	UNICEF (AusAID/NZAID),
	Technical and financial support to upgrade nurses' skills and knowledge on vaccine safety, cold chain management, micro-planning, EPI surveillance and M&S	UNICEF (AusAID/NZAID), WHO

Country	External Support required in 2011-2012	Partners
	Financial support to hire local consultant to enter H1N1 data to the Hospital Information System	UNICEF (AusAID/NZAID), WHO
16. Samoa (Western Samoa)	Cold chain & vaccine management; Time: October 2011	UNICEF (AusAID/NZAID), JICA, WHO
	Support (technical and vaccine supply) for SIA with polio and vitamin A; Time October 2012	UNICEF (AusAID/NZAID), WHO
	Cold room, March 2012	UNICEF
	Technical support for training: micro-planning, AEFI, waste management, HBAS, and EPI information system	UNICEF (AusAID/NZAID), WHO
	Recruitment of Data Manager and UNV Volunteer	UNICEF
	Supply, equipment and technical support for EPI information system	UNICEF (AusAID/NZAID), WHO
	Transport for monitoring and coordination	UNICEF
	Technical support for national EPI policy, including cold chain policy, waste management policy and safe injection policy	UNICEF (AusAID/NZAID), WHO
	Introduction of new vaccine (2013): HPV, PCV13	UNICEF (AusAID/NZAID), WHO
17. Fiji Islands	Technical and financial support for calculation of cold chain storage of new vaccines at all levels	UNICEF (AusAID/NZAID)
	Support new vaccine introduction in the areas of policy formulation and planning	UNICEF (AusAID/NZAID), WHO
	Technical and financial assistance for workshop construction in Suva for cold chain maintenance and repair	UNICEF (AusAID/NZAID), JICA
	Construction of cold room in Nadi hospital	UNICEF (AusAID/NZAID)
	Interim financial support for Project Office to look after new cold store room (Nadi Hospital) for two years. Government to take over from 2014.	UNICEF (AusAID/NZAID)
	Technical and financial assistance for development of guidelines for waste management, including dealing with multi-dose vaccine vials	UNICEF (AusAID/NZAID), WHO
	On going financial and technical support for HBAS	FHSSP
	Technical support for VPD surveillance at Mataika House	FHSSP, WHO
	EVM assessment	WHO, UNICEF, JICA
Sub Regional	AEFI surveillance training	WHO



**SEVENTH PACIFIC IMMUNIZATION  
PROGRAMME STRENGTHENING  
2011(PIPS) WORKSHOP AND  
WORKSHOP ON LESSONS LEARNT FROM  
PANDEMIC INFLUENZA A(H1N1) VACCINE  
DEPLOYMENT AND VACCINATION**

**WPR/2011/  
19 August**

**Nadi, Fiji  
22-27 August 2011**

**ENGLISH ONLY**

**PROVISIONAL AGENDA**

1. Opening session
2. Workshop objectives - PIPS & H1N1
3. Status of 2010 PIPS Workshop recommendations
4. Global and regional overview of Expanded Programme on Immunization (EPI)
5. Report from 20th TAG and relevance to Pacific island countries and areas (PICs)
6. Progress towards measles elimination in PICs
7. Status of 2012 hepatitis B control milestone
8. New vaccine introduction (issues/concerns)
9. PIPS partners coordination meeting
10. Strengthening routine immunization



11. Strengthening monitoring and surveillance
12. Strengthening cold chain systems
13. Process and Verification of hepatitis B control
14. Measles/hepatitis B/ routine immunization
15. Market place
16. Communication and advocacy
17. Vaccine security and management
18. Maintaining poliomyelitis free
19. Decade of Vaccines
20. Pacific Islands Regional Immunization Strategy (PIRIS)
21. Global and regional overview of pandemic vaccine deployment
22. Legal and regulation and lessons for National Regulatory Authority (NRA)
23. Plenary on injection safety, waste management and AEFI
24. Plenary on supply chain management and lessons learnt for routine immunization system strengthening
25. 7<sup>th</sup> PIPS workshop action points and monitoring
26. Plenary on management of vaccine deployment
27. Plenary on vaccination strategies and implementation
28. Plenary on human resources management
29. Plenary on advocacy social mobilization and communication
30. Overview of lessons learnt from pandemic vaccine deployment and applicability to routine immunization system
31. Guidelines on updating pandemic vaccine deployment and vaccination plans
32. Individual country work on updating pandemic vaccine deployment and vaccination plans
33. Conclusions
34. Closing Remarks



**PIPS PARTNERS COORDINATION MEETING  
22 AUGUST 2011  
TANOA INTERNATIONAL HOTEL, NADI, FIJI**

1. Introduction

1.1 Present in the meeting were 26 participants representing WHO, UNICEF, AusAID, NZAID, JICA, CDC, Rotary International, Secretariat of the Pacific Community, Fiji Health Sector Support Programme/Ministry of Health, Fiji and the Temporary Advisers and Consultant to the workshop;

1.2 The meeting was chaired by Dr Isiye Ndombi, Representative, UNICEF Pacific Office, Suva, Fiji.

2. Proceedings

2.1 The chair welcomed the partners and shared his idea on the definition of “partnership”. He said that “partnership” is a dignified relationship amongst individuals who has a common goal to produce results. Hence, the essence of relating with one another in this forum to achieve the best results for children through immunisation in the Pacific simply signifies the dignity of that relationship.

2.2 The chair outlined the agenda of the meeting (with copies distributed to participants) bearing three segments or areas for discussion. All participants agreed on the agenda. The chair said that the meeting is hoped to agree on the role of partnership; agree on key actions to strengthen partnerships; agree for partners to support specific country activities or deliverables; and how the partners would like to move forward with the Pacific Island Strategy Plan.

2.3 The discussion started with the agenda item (1) Review and discuss PIPS partnership:

(a) Background Information

Dr Eliab Some (UNICEF) provided a slide presentation on the background of PIPS (background paper attached), providing a summary of a series of important events leading to the birth of PIPS. With the historical data, PIPS concept has emerged during the UNICEF/WHO Workshop on EPI in the PICs on March 2004 in Auckland, New Zealand. The concept of PIPS was to promote a shared vision between technical and donor agencies (partners) with common objectives, strategies and actions to support immunization programme in the Pacific. The shared vision aimed to establish a Pacific Vaccine Consortium (PacVAC) of partners involved in immunization in the Pacific that would implement the Project called PIPS (Pacific Immunization Programme Strengthening).

(b) Role of partnership

The group defined the role of PIPS partnership where it is expected to be evolving over time. It would mainly function as a coordinating body/mechanism amongst partners to avoid duplication of work in immunization. Such coordinating activities includes but not limited to the following:

(1) strategic planning that would also enable to identify gaps, especially for partner’s support;

- (2) coordination of inputs/resources in planning: human, financial and technical;
- (3) identify areas in immunization that need acceleration;
- (4) project management, monitoring of data and how to communicate this information to partners—“the voice of partners”; and
- (5) pool of funds to support innovations and how to facilitate responding to urgent/emergency needs/activities.

Regarding activity 5, AusAID informed the group of the available funds for projects outside the normal programming. This fund can be used for activities like urgent meetings for partners if the need arises.

- (c) The role of TAG was clarified. Dr Yoshikuni Sato (WHO Regional Office for the Western Pacific) informed that TAG is an independent advisory body for the WHO Regional Office. Its main function is to review the progress of the global and regional goals/targets on immunization, identify gaps and recommend.

The role of TAG and in linking to PIPS was considered important hence, a Regional TAG member is invited in PIPS workshop providing an opportunity to feedback TAG's meeting updates and recommendations. Likewise, it brings forth PIPS issues/concerns to the TAG meeting. In addition, Dr Josefa Koroivueta (Director of Public Health, Ministry of Health, Fiji), said that TAG functions as

(1) a technical oversight to the immunization programme given the immunization eradication/elimination initiatives being undertaken in the Pacific; (2) can be used to advocate for support to strengthen programme at the country level; and (3) TAG can communicate and influence higher level authorities to upscale immunization programme activities.

- (d) Next step to strengthen partnership

- An issue was raised by Dr Some on the importance of documentation as it is difficult to follow through if there are changes in staff;
- A WHO/UNICEF workplan may serve a good source of information;
- The following issues/concerns were raised:
  - ▶ The importance of having terms of reference to define roles and responsibilities of PIPS.
  - ▶ The importance of having a workplan and calendar of activities.
  - ▶ Who function as a secretariat of PIPS? Who is leading at the moment?
  - ▶ Who is accountable? Need to have clear guidelines on accountabilities and governance mechanism must be agreed upon.
  - ▶ There are two types of meeting, one is technical (with experts) and another is more of a general meeting to discuss strategies. Who attends this meeting? The donor coordination meeting in Suva is done monthly with a fewer number of people. Can it be done quarterly?

- ▶ If the workplan is substantial, then the meeting can be done quarterly and US CDC would be able to attend.
- ▶ For technical meetings, Dr Koroivueta (Ministry of Health, Fiji) suggested to include representative from the national laboratories.
- The group decided and agreed to have the terms of reference and calendar of activities drafted by February 2012 partner's coordination meeting.

#### 2.4 Review of deliverables through PIPS partnership (2011–2012)

##### (a) Joint actions to improve EPI services in high priority countries (Samoa, Vanuatu, Solomon Islands).

- Dr Ingrid Hilman (UNICEF) informed the group that countries do not have sufficient funds to support outreach activities, purchase gas supplies and capacity building for EPI management. With support from AusAID and NZAID, three UN volunteers will be deployed to Solomon Islands, Samoa and Vanuatu to improve the national management capacity in EPI. A proposed joint action document for low performing countries listing specific activities was discussed (document attached for reference). A separate meeting among the countries (Solomon Islands, Samoa, Vanuatu) will be held during the workshop to discuss the proposed activities.
- Dr Jayaprakash Valiakollerri (WHO Suva) suggested that a joint activity can be done by WHO and UNICEF such as country visits or if WHO visit a country, UNICEF will do a follow-up visit to assess the progress. Also, to have regular interactions with the priority countries so that gaps are identified and addressed in a joint manner. These countries (Solomon, Samoa, Vanuatu) need to conduct SIAs next year and it is important that these activities will be coordinated by partners, donors and participating agencies.
- Dr Ndombi said that the presentation made with regards to the specific activities that countries need support was clear. However, he raised a question as for how long will Samoa be doing SIAs as it seems to be the easiest country in the Pacific where you can reach every home. He was of course supportive of conducting SIA but wanted to know where the bottle necks are which might be dealt with at the policy level. He asked the partners to brainstorm more on this issue to address the problem appropriately.
- Rotary 2650 (Japan) committed UD\$ 60 000 to support Samoa.
- Dr Ndombi appreciated the support from Rotary 2650 and said that it will go a long way in protecting children in Samoa. He suggested classifying the challenges of these countries into different categories and finding ways to deal with them. Samoa might have other issues apart from conducting SIAs. He encouraged partners to discuss these issues and look at different ways in dealing with them especially on sustainability.
- Dr Tilman Ruff (consultant) asked the question as to why Kiribati which always by every country not performing well, is not included in the list of low performing countries.
- Dr Ingrid Hilman (UNICEF) replied that although Kiribati has plenty of challenges, they have enough committed nurses who ensure that immunisation is given regularly.

She noted that despite of the 30% non-functioning solar fridge, immunisation activities were not disrupted. Nurses brought with them vaccine carriers to immunise children. The positive attitude of the nurses made the difference.

- Dr Valiakoller (WHO) also said that Kiribati has enough human resources, the districts have a nursing officer and the system is functioning.
  - Mr Gabriel Anaya (WHO Regional Office for the Western Pacific) also noted that one important contributing factor is the financial support and Kiribati is GAVI eligible country which makes a huge difference.
  - Dr Md. Shafiqul Hossain (WHO Regional Office for the Western Pacific) shared information that in 2009, when WHO provided support to the H1N1 deployment and vaccination, they had evaluated the cold chain status and found that 11 countries have limited cold chain capacity. It can only accommodate vaccines required for 10% of the total population. So, it might be advisable to review the cold chain status as some donors like JICA is providing assistance to improve the vaccine and cold chain management of PICs.
  - JICA informed the group that they are willing to help on cold chain maintenance and management through their on-going project in PICs.
- (b) Conducting Supplementary immunization activities in concerned countries
- Dr Wang Xiaojun (WHO Regional Office for the Western Pacific) shared her PIPS partners played active role in supporting measles supplementary immunization activities in 2006 and 2009 in several Pacific island and countries. Basing on the available coverage data, three countries (Samoa, Solomon Islands and Vanuatu) should plan necessary actions (SIAs or innovative approaches) to close existing or anticipated immunity gaps against measles. Although the population is small, the countries need extensive technical and financial support to ensure a successful SIA. She estimated a total funding need of US\$ 600 000 for the three countries. She suggests PIPS partners work closely to support planning, preparation, implementation and monitoring of SIAs. WHO will provide technical and programmatic support.
  - Dr Hilman (UNICEF) said that the government's commitment and approval is the first step. Based on past experience, WHO, UNICEF and JICA were fully involved in supporting the campaign. The challenge now is the preparation of the proposal at the earliest possible time.
  - Dr Sigrun Roesel (WHO Regional Office for the Western Pacific) brought up the issue of what is required to stay polio free. She recommended that routine coverage must be universally high as  $\geq 90\%$ . If that is not the case for a couple of years then susceptible accumulates and to consider adding OPV during SIA particularly to children under five.
  - Dr Hossain (WHO Regional Office for the Western Pacific) commented that SIAs is being conducted for quite some time and now there is a need to link SIA and routine immunization and as mentioned by a couple of colleagues, wondered how long SIAs need to be continued. So, maybe there is something to think on how to improve routine immunization system through SIAs.
  - The chairperson acknowledged the point raised and thus, advised the body to look into the matter on how Samoa can improve its routine services.

- Dr Hilman said that Vanuatu is planning to conduct mass measles campaign in the first quarter of 2013 and advised to that an EPI coverage survey be conducted in 2012 before measles SIA.
  - Dr Diorditsa suggested for UNICEF and WHO to prepare coverage improvement plan. In particular in this area where SIAs are conducted, a lot of bottle necks would be identified and interventions taken and these interventions can be looked operationally to prepare a coverage improvement plan and these plans could have some financial implications and which could be discussed by government and partners during meetings so that routine immunization could be strengthened.
- (c) Conducting Hepatitis B serosurveys, or plan for verification
- Dr Karen Hennessey (WHO Regional Office for the Western Pacific) said that in terms of improving coverage, three countries can be addressed in a similar joint plan that had been mentioned earlier (by Dr Valiakolleri). So, maybe something to consider three or four countries. The verification is pretty well covered in terms of human and financial resources, secretariat and in kind expertise from the ten expert resource panel members. So the serosurvey for the 10 to 13 countries and the optimum timeline would be the rest of this year and 2012. We are doing what we can to prepare countries and time to gear up in terms of providing the training, assessing the needs and outlining the budget requirements and have support from CDC and government from Japan. From experience so far, we can probably estimate US\$ 40 000 per survey, or less for smaller countries or more to reaching outer islands due to transport. So, US\$ 40 000 x 10 countries. Ten countries showed interest. The other question is on resource mobilisation. We can start planning this out after this meeting. We have some money from CDC, but we can also approach other donors if there are gaps, so hopefully we will have a clear idea on how much money we need at the end of the workshop.
  - Dr Tilman Ruff shared his idea of the possibility of doing the rapid antigen test of hepatitis B in the field which potentially could simplify the logistics enormously but has significant disadvantages because we cannot re-test the serum and one of the coordination function that this group can serve and if you are doing serosurvey and if there is any other useful purpose to be serve with those serum other than hepatitis B control, like measles or whatever, then that is an important synergies to flag because it has significant practical cost implications.
  - Dr Karen Hennessey replied that ERP will review the protocol of the surveys to ensure that countries are following the standard criteria. She further informed the group that all countries are interested, and to prioritise those countries which have high immunization coverage for five years. Other criteria might be on logistic issues and if some countries have already done surveys and people were already trained.

## 2.5 Introduction of Pacific Island Strategy Plan

- Dr Eliab Some discussed the overview, strategic areas and areas of collaboration by partners. He said that in between 2005–2007 there was an agreed plan to coordinate the partner's effort. He referred to the document that has been circulated, with a one page overview of the draft strategy (copy attached). The proposed strategy will help guide both the countries and development partners. Out of this, a work plan can be derived which more or less synchronised and harmonised and everyone understands the activities. The strategy plan arose from the 6<sup>th</sup> PIPS meeting, and the first draft was developed with UNICEF's regional office support. The consultant looked at the

document, the global and regional strategies, technical consultations and prepared the first draft and circulated to countries and partners. The second draft will be reviewed during this PIPS workshop. As outlined, the regional strategy looks at the global context and what are those specific goals that have been outlined in which immunization directly relates to: MDG, GIVS, regional goals and target. It ensured that the strategy is fully aligned to all the global and regional targets and strategies and secondly, ensures that the Pacific context is well represented. Also, it has taken into consideration the regional cooperation and integration, the history of EPI, the strengths and weaknesses so that there is no re-inventing of wheels or repeat the same mistakes, or areas that need improvement. The strategy begins by stating the vision and mission, strategic alignment and strategic areas, there are five of them which very much mirror on what is already in the PIPS. The strategy will be presented during the PIPS meeting and discuss in groups, particularly the strategic areas, key results and outputs and the implementation framework on the country actions for further support from PIPS and partners. Dr Some, acknowledge the already steps taken by AusAID and NZAID in agreeing to a common plot which mirrors the strategy (2011–2012). He said that he is already experiencing the ease of having a common programme and believes that with a common strategy it would clearly shows what needs to be done in each strategic area and likewise, coordination would also be much easier.

- After the explanation, the chair asked the partners for any comments. There was no comment made by the participants.

### 3. Conclusion

- The chair thanked everyone for their patience and the privileged for allowing him to chair the meeting. He again highlighted the following four objectives that he mentioned at the start of the meeting:
  - (i) the first was to agree or start agreeing on the roles of PIPS partnerships;
  - (ii) agree on the key actions to strengthen the partnerships; and
  - (iii) agree on the selected list of activities around which the partners can work for country level results, such as which countries will be conducting SIAs, serosurveys, and where we need to do some specific work to improve routine immunization.
- He felt that the meeting have met most of the objectives but he believed that the actual meeting of the objectives would be in February 2012, when an item that has been agreed to be done by that time would be closed. He then asked his colleagues if there was anything they wanted to say before he closed the meeting.
- Dr Dong-il Ahn (WHO Representative, Suva, Fiji) thanked Dr Ndombi for chairing the meeting, and is looking forward to continue the dialogue and in the preparation of the PIPS ToR in six months time.
- Dr Diorditsa (WHO Regional Office for the Western Pacific) also thanked everyone for having the opportunity. He said that the regional office is ready to support the coordination mechanism of partners in PICs. He recalled that in his presentation during the workshop, one of the upcoming indicators is a strengthened partnership. So, he hoped that the partnership in the PICs would be a strong model to motivate the region.



- In conclusion, Dr Ndombi reiterated for the six months time to prepare the terms of reference (ToR) and roles of PIPS partnerships but thinks that the agreement on improving routine immunization should be closer for Samoa, Solomon Islands and Vanuatu. The intervention for these countries is a short horizon, it is urgent and thus, partners must move quickly and set a clear timeline. Lastly, he said that he is counting on all partners to deliver results in countries and for the sake of the children in the Pacific. He thanked everyone for the constructive contributions.
- The meeting was officially closed.

#### 4. Summary

##### 4.1 PIPS Partnership

###### Action Points:

- to draft the ToR of PIPS partnership defining the roles and responsibilities by February 2012; and
- to prepare PIPS partnership work plan with a calendar of activities.

##### 4.2 Deliverables through PIPS partnership in 2011-2012

###### Action Points:

- in providing support (financial and technical) to improve EPI in low performing countries, partners (WHO, UNICEF, etc) must conduct joint activity or activities that are complimentary with one another;
- PIPS partners must refer to the proposed list of activities (document attached) for low performing countries and identify areas/gaps where they can provide support;
- three (3) countries are scheduled to conduct SIA: Samoa, as soon as possible; Solomon Islands, to complete before June 2012 and Vanuatu, to complete before March 2013. PIPS partners must work together to identify financial and technical requirements to ensure effective and timely implementation of the planned activities; and
- serosurveys for hepatitis B will be conducted in 10 to 13 PICs and must be completed by 2012. PIPS partners to identify financial and technical resources needed for effective implementation of the planned activities.

##### 4.3 Pacific Island Strategy Plan

###### Action Point:

- PIPS partners must refer to this document (which includes the implementation framework and country specific activities) to identify the activities or areas that they are going to provide support.

**EVALUATION RESULTS SUMMARY  
SEVENTH PACIFIC IMMUNIZATION PROGRAMME STRENGTHENING (PIPS)  
WORKSHOP  
22-27 AUGUST 2011, NADI, FIJI**

There were a total of 29 respondents with varying degree of completing the questionnaire. Seventeen of the respondents were Country Representatives, four PIPS partners and eight did not classify themselves.

Q1: Category of topic sessions assessed as less useful or more useful/interesting to participants:  
Below are the findings:

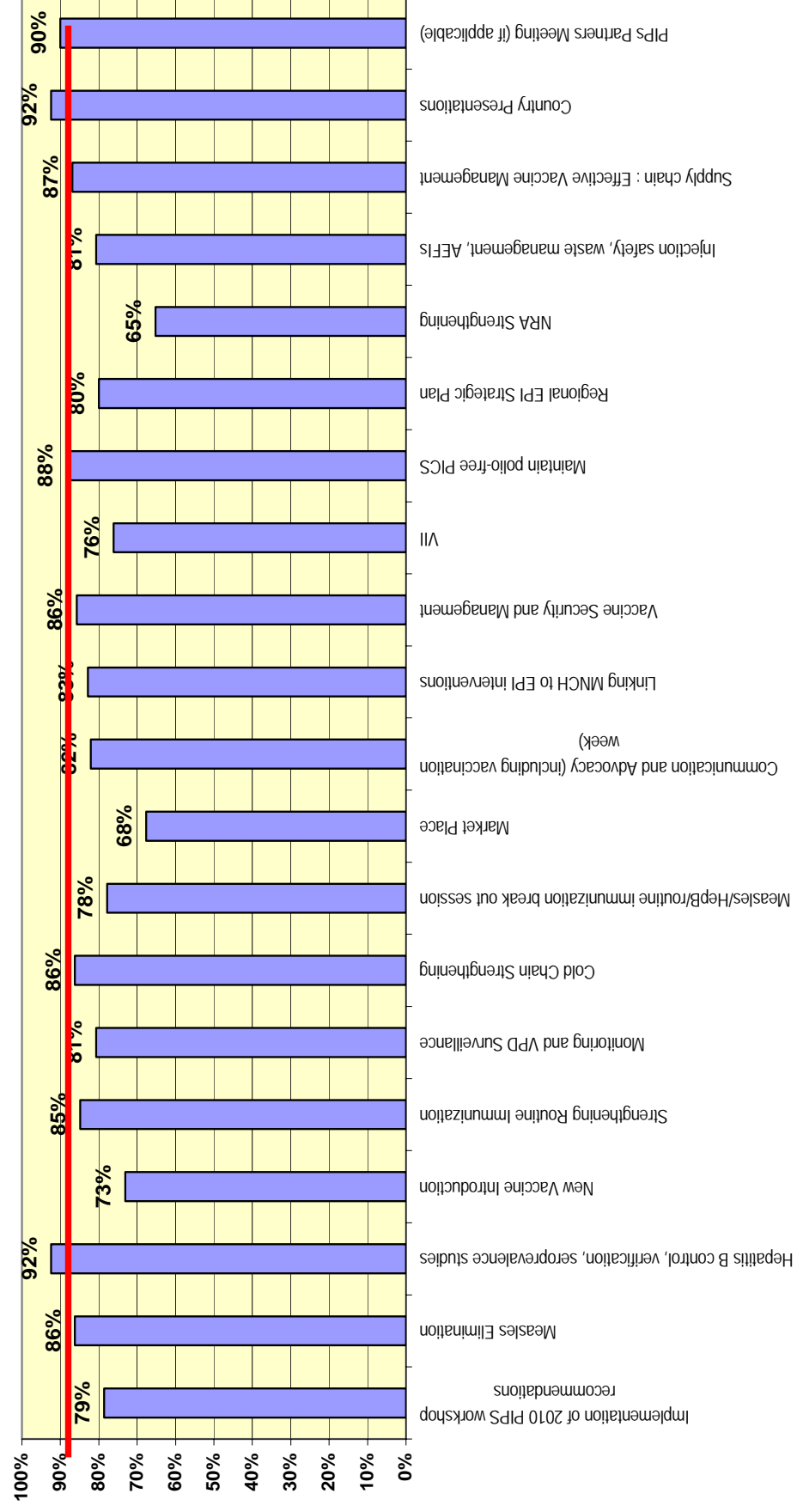
1.1 With 20 topic sessions listed, three topics top the list with Country presentations and hepatitis B control, verification, sero-prevalence studies to be the most useful or interesting (92%) and the PIPS Partners meeting (90%);

1.2 The lowest rated topics were the NRA strengthening and market place with 65% and 68% respectively; and

1.3 The rest of the topic sessions were rated at the ranged of 73% to 87%. Please refer to graph on below:

**7th Pacific Immunization Programme Strengthening (PIPS) Workshop  
22 August - 27 August 2011**

**Scale of whether session was considered useful**



Q2: The most useful things the participants heard/learned at PIPS were consolidated as follows:  
(refer to individual comments on excel spreadsheet):

- 2.1 Hepatitis B serosurvey & verification process
- 2.2 Strengthening EPI; Regional EPI Strategy; Workplan
- 2.3 Polio Eradication & surveillance
- 2.4 Improving EPI data management; MIS/HIS
- 2.5 Communication/social mobilization; Vaccination week
- 2.6 Country presentations and progress on immunization
- 2.7 Interaction with and between countries
- 2.8 Deployment and Vaccinations Plan; the lack of our vaccination plan for H1N1
- 2.9 Linking MNCH to EPI
- 2.10 New vaccines introduction
- 2.11 Vaccine management and security
- 2.12 AEFI
- 2.13 NRA
- 2.14 Cold chain tools
- 2.15 UNICEF assistance and support
- 2.16 Participation of TAG members and recommendations
- 2.17 PIPS partners meeting and collaboration
- 2.18 The opportunity to learn new things
- 2.19 Everything from Day 1 to 6

Q3: Consolidated list of missing topics participants would like to include at next PIPS workshop:

- 3.1 Integration of Immunization with other closely related program (e.g. MCH, FP, sexual reproductive)
- 3.2 JRF & Data Management
- 3.3 Information about introduction Rotavirus, the cost after introduction, share experience about results after introduction
- 3.4 Good Management
- 3.5 More Country presentations

3.6 Barriers/challenges of routine immunization

3.7 Expert - Disease "specific" topic experts—CDC/WHO

3.8 Why not every countries include in priority groups e.g. like Fiji, Solomon, Vanuatu and Samoa?

Key findings:

(1) Q1 & 2 have common message from the participants suggesting to have more Country presentations and opportunity to interact limiting the global and regional presentations;

(2) Market place not fully understood by the participants. Must have explanation to new comers on what to do; and

(3) Tonga needs a copy of the Regional EPI Strategic Plan.

Q4: What did you think of the programme agenda of the week? (28 respondents)

<b>Too few items</b>	<b>Just right</b>	<b>Too many items</b>
7%	29%	64%

Q5: How comfortable do you feel raising your country issues during the PIPS? (25 respondents)

<b>Comfortable</b>	<b>Neither uncomfortable nor comfortable</b>	<b>Uncomfortable</b>
68%	22%	0%

Q6: If your answer was “uncomfortable”, how can we make it more comfortable?

6.1 Give enough time to participate to express ideas and information.

6.2 This is an opportunity to share with the experts and hear what other countries do in their own settings.

6.3 To have a Qs Box/ Suggestion Box.

Q7: Are these annual PIPS Workshops useful to you and your programme? (29 respondents)

Yes = 27

No = 1

NA = 1

Q8: If the answer above was “YES”, how often should PIPS Workshop be conducted?

<b>More than once a year</b>	<b>Every year</b>	<b>Every 2 years</b>
4%	89%	7%

Q9: What would be the three key improvements you would suggest so that the PIPS can be more useful for your programme and activities? The following are the consolidated responses:

- 9.1 Send templates in advance to allow participants to work on the subjects they're not comfortable with (i.e., at least a month prior to meeting)
- 9.2 Reduce number of days of meeting and time (i.e., 5 days is enough; start at 8am-4:30pm by having shorter lunch break and end early for side meetings; long day programme/presentation is boring; make the meeting “sexy”, put more flavour; more group work & discussions, reduce number of presentations)
- 9.3 Maintain the relationship through frequent messages/e-mail
- 9.4 More focused agenda relevant to country’s needs (i.e., practical sessions, focus more on low coverage antigens; short, precise and clear presentation; more technical advice/ presentation on core EPI issues and how country's can implement to be par to what is expected especially meeting the (2) pillars of GIVS; findings and analysis of information gathered and collected from participants be presented and discussed)
- 9.5 Information and Data management
- 9.6 EPI Coordinator/Manager (Samoa) to participate with her supervisor in every PIPS meeting
- 9.7 Samoa to attend next TAG meeting 2012
- 9.8 Invite 2 people from our small countries (share cost maybe)
- 9.9 Limit Regional presentation and have more country presentations (allow time for countries sharing of experiences; immunization update in West Pacific; ask PICs to submit materials that would be discussed, e.g., pandemic plan, etc.; Pictures/slide show/ presentation on storage/ handling on each country, immunization campaigns)
- 9.10 Do not combine PIPS with other workshop
- 9.11 Emerging Issues, Update/Changes; more on clinical issues
- 9.12 To talk more of the down side, instead of bringing up the good side only; maybe we will all learn from our mistakes and move forward
- 9.13 Too many checklists that repeats
- 9.14 More discussions on hepatitis B surveys
- 9.15 Include some decision makers to attend PIPS

Q10: How useful is the PIPs workshop Meeting Report to you? (26 respondents)

<b>Very useful</b>	<b>Moderately useful</b>	<b>Useful</b>	<b>Not useful</b>
46%	35%	15%	4%

Of the 26 respondents, 1(4%) said, the report is not useful while all the other 25 respondents said it is useful.

Q11: Are you interested in attending the 21<sup>st</sup> Regional Technical Advisory Group (TAG) meeting in 2012?

Yes = 73%

No = 27%

Q12: Time allotted to the session was:

- Majority of the respondents claimed adequate time were allotted to the five activities: (refer to graph below)
  - (1) Length of PIPS meeting – 55%. However, a significant number of respondents said it's too long (35%);
  - (2) Exchange of knowledge and experience with other participants – 86%;
  - (3) Discussion time after presentations – 72%;
  - (4) Small group work and feedback to the large group -61%; and
  - (5) Interaction with other participants outside of meeting room – 82%.

**Action Points from Countries to PIPS Partners**

- (1) Send invitation and requested information (e.g. checklists) for next PIPS workshop sooner to the islands, such as 3 to 6 months before meeting date;
- (2) Invite more than PIC's EPI Manager to attend PIPS workshop if other topics to discuss (e.g. H1N1 Coordinator) to ensure right representation;
- (3) Shorten workshop;
- (4) Number of days- 3 to 4 adequate;
- (5) Number and length of some presentations- too many, too long;
- (6) Eliminate repetition/duplication of information- emphasize highlights and updates;
- (7) Ensure countries have more time allocated for presentations;
- (8) Be environmentally friendly by eliminating workshop binder with hard copies of material. Recommend a thumb drive with all information for all participants, unless otherwise requested;
- (9) Re-arrange order of presentations- topics that impact all PICS presented in the first few days of the meeting then topics that only impact specific countries presented;
- (10) Countries require time to discuss issues with PIPS partners individually; and
- (11) Hotel accommodation is not adequate, rooms are infested with insects and participants requested more appropriate accommodation.



**LIST OF PARTICIPANTS, CONSULTANT, TEMPORARY ADVISERS,  
REPRESENTATIVES/OBSERVERS AND SECRETARIAT**

**1. PARTICIPANTS**

- AMERICAN SAMOA**
- Ms Eastersunday Leofili, Registry Administration Assistant, American Samoa Government, ASG Department of Health Immunization Program, Pago Pago, AS 96799.  
Fax No.: (684) 699 8467. Tel. No.: (684) 699 8464.  
Email: eastbum19@yahoo.com
- Ms Ella Iese, Clinic Supervisor, American Samoa Government ASG Department of Health Immunization Program, Pago Pago AS 96799. Fax No.: (684) 688 2014. Tel. No.: (684) 688 7822.
- COOK ISLANDS**
- Mrs Teio Kea, EPI-Epidemiology and Data Analyst, Cold Chain Maintenance, Ministry of Health, P.O. Box 109, Rarotonga.  
Fax No.: (682) 29100. Tel. No.: (682) 29110  
Email: t.kea@health.gov.ck
- FIJI**
- Dr Salanieta Saketa, Permanent Secretary for Health, Ministry of Health, Dinem House, Toorak, Suva. Fax No.: (679) 330 6163.  
Tel. No.: (679) 322 1500. Email: ssaketa@health.gov.fj
- Dr Josefa Koroivueta, Secretary of Public Health, Ministry of Health, 2nd Floor Dinem House, 88 Amy Street, Suva.  
Fax No.: (679) 331 4569. Tel No.: (679) 3221 1515.  
Email: josefa.koroivueta@health.gov.fj
- Dr Frances Bingwor, National Advisor – Family Health, Ministry of Health, 2nd Floor Dinem House, 88 Amy Street, Suva.  
Fax No.: (679) 3318227. Tel. No: (679) 3221502  
Email: fbingwor@health.gov.fj
- Ms Litiana Volavola, National EPI Coordinator, Fiji Pharmaceutical Services and Biomedical Centre, Ministry of Health, Lot 1 Jerusalem Road, Vatuwaqa, Suva. Fax No.: (679) 3388003.  
Tel. No.: (679) 3388000 Ext. 109. Email: lvolavola@yahoo.com
- Mr Arthur Snow, Cold Chain Technician, Fiji Pharmaceutical and Biomedical Services, Ministry of Health, Lot 1 Jerusalem Road, Vatuwaqa, Suva. Fax No: (679) 3388003.  
Tel. No.: (679) 3388000 Ext. 109.  
Email: Arthur\_snow11@yahoo.com

- FRENCH POLYNESIA** Dr Jean-Marc Segalin, Médecin responsable du Bureau des Programmes de Pathologies infectieuses – Direction de la Santé, Polynésie française (Medical Officer, Bureau of Infectious Diseases Programme, Health Bureau, French Polynesia), 98713 Paapeete BP 611 Polynesie Francaise. Fax No.: (689) 488 224. Tel. No.: (689) 0488 215. Email: jean-marc.segalin@sante.gov.pf
- GUAM**
- Ms Annette L. Aguon, CDC Coordinator Supervisor, Immunization Program, Department of Public Health and Social Services, 123 Chalan Kareta, Mangilao, GU 96913-6304. Fax No.: (671) 734 1475. Tel. No.: (671)735 7143. Email: annette.aguon@dphss.guam.gov
- Ms Michele Leon Guerrero, CDC Coordinator II, Department of Public Health and Social Services, 123 Chalan Kareta, Mangilao GU 96913-6304. Fax No.: (671) 734 1475. Tel. No.: (671) 735 7143. Email: michelle.leonguerrero@dphss.guam.gov
- KIRIBATI**
- Ms Tikua Tekitanga, Principal Nursing Officer – EPI Coordinator, Ministry of Health and Medical Services, Tarawa, Kiribati. Email: tikutanga@gmail.com
- MARIANA ISLANDS, NORTHERN**
- Mr Wilbert Rospel, Immunization Data Coordinator/Perinatal Hepatitis B Coordinator, Department of Public Health, CHC Building, P.O. Box 500409, Saipan MP 96950. Fax No.: (670) 236 8700. Tel. No.: (670) 236 8780. E-mail: wgrospel@gmail.com
- MARSHALL ISLANDS**
- Ms Daisy Pedro, National Immunization Coordinator, Ministry of Health, P.O. Box 1622, Majuro, Marshall Islands 96969. Fax No.: (692) 625 3432/4543. Tel No.: (692) 625 3399 ext. 2275. Email: bukunkur@yahoo.com
- Ms Melaia Lawanivalu, Immunization Coordinator – Ebeye Kitlang Memorial Hospital, Ministry of Health, P.O. Box 5219 Ebeye, Marshall Islands 96969. Tel. No.: (692) 235 7590. Email: mebeye22@yahoo.com
- Mr Bremity Lakjohn, Public Health Nurse, Ministry of Health, P.O. Box 16, Majuro, Marshall Islands 96960. Fax No.: (692) 625 3432/4543. Tel. No.: (692) 625 3399. Email: bremo73@yahoo.com
- MICRONESIA, FEDERATE STATES OF**
- Ms Louisa Helgenberger, National Immunization Programme Manager, P.O. Box 554, Kolonia, Pohnpei. Fax No.: (691) 8632. Tel. No.: (691) 3200 2619/2643 2872. Email: lhelgenberger@fsmhealth.fm
- Ms Mariana Sablan, Immunization Consultant, National Government, Immunization Programme, P.O. Box 400, Federated States of Micronesia, Chuuk State. Tel. No.: (691) 330 3945. Email: mcoats@fsmhealth.fm

Ms Norleen Oliver, Systems Administrator, Federated States of  
Micronesia Department of Health & Social Affairs,  
P O Box 856 Kolonia, Pohnpei FM 96941.  
Fax No.: (691) 320 5362. Tel. No.: (691) 320 2619/2643 2872.  
Email: noliver@fsmhealth.fm

**NEW CALEDONIA**

Dr Laurent Besson-Leaud, Paediatrician CHT Magenta – Service de  
Pediatrie, BP J5 98800 Noumea Cedex, New Caledonia.  
Fax No.: (687) 256759. Tel. No.: (687) 256666.  
Email: l.besson-leaud@cht.nc

**NIUE**

Ms Minemaligi Pulu, Maternal and Child Health Nurse/EPI  
Manager/Coordinator, Niue Health Department, P.O. Box 33, Alofi.  
Fax No.: (683) 4265. Tel. No.: (683) 4100.  
Email: Mine.Pulu@mail.gov

**PALAU**

Ms Merlyn Basilius, Acting Public Health Nursing Supervisor,  
Ministry of Health, P.O. Box 6027, Koror.  
Fax No.: (680) 488 4800. Tel. No.: (680) 488 2640/2212.  
Email: mbasilius@gmail.com

**SAMOA**

Ms Maatasesa Samuelu-Matthes, Manager, Nursing and Integrated  
Community Health, National Health Service, Private Mail Bag, Apia.  
Fax No.: (685) 3096. Tel. No.: (685) 66690; 758 8676.  
Email: maatasesas@nhs.gov.ws

Mrs Fuapepe Iese Manuleleua, National EPI Coordinator, National  
Health Services, Private Mail Bag, Apia. Fax No.: (685) 3096.  
Tel. No.: (685) 66692. Email: Fuapepel@nhs.gov.ws

**SOLOMON ISLANDS**

Mr Raymond Mauriasi, National EPI Coordinator, EPI Ministry of  
Health and Medical Services, P.O. Box 349, Honiara.  
Fax No.: (677) 20085. Tel. No.: (677) 28169.  
Email: rmauriasi@moh.gov.sb

Dr Divi Ogaoga, Child Health Unit, Reproductive and Child Health  
Unit, Ministry of Health and Medical Services, Honiara.  
Tel. No.: (677) 23600/20830/20831 ext 416.  
Email: dogaoga@moh.gov.sb

**TOKELAU**

Miss Faimanifo Peseta, National EPI Coordinator, National  
STI/HIV/AIDS Programme Coordinator, National Procurement  
Officer, Tokelau Apia Office, Savalalo. Fax No.: (685) 29143.  
Tel. No.: (685) 20822. Email: fmpeseta@lesamoa.net

**TONGA**

Ms Sela Paasi, Chief Nursing Officer, Ministry of Health,  
P.O. Box 59, Nuku'Alofa. Fax No.: (676) 24291.  
Tel. No.: (676) 23200 Ext 1419. Email: spaasi@health.gov.to

**TUVALU**

Ms Alaita Taulima, Public Health Sister, Princess Margaret Hospital,  
Funafuti Island. Tel. No.: (688) 20749.  
Email: alaitataulima@yahoo.com

**VANUATU**

Mr Leonard Tabilip, National EPI Coordinator, PMB 009  
Department of Public Health, Ministry of Health, Port Vila.  
Fax No.: (232) 25438. Tel. No.: (232) 88 22512.  
Email: ltabilip@vanuatu.gov.vu

**2. CONSULTANT**

Dr Tilman Ruff, Associate Professor, NOSSM Institute for Global Health, Level 4, University of Melbourne, Victoria 3010, Australia. Fax No.: (613) 9347 6872. Tel. No.: (61) 438 099 231  
E-mail: tar@unimelb.edu.au

**3. TEMPORARY ADVISERS**

Dr Robert Hall, School of Public Health and Preventive Medicine, Monash University, Alfred Hospital, Commercial Road, Melbourne, Victoria. Fax No.: (614) 0507 3061.  
Tel. No.: (613) 9903 0452. E-mail: Robert.Hall@monash.edu.au

Dr Lisi Tikoduadua, Consultant Paediatrician, Department of Paediatrics, Colonial War Memorial Hospital, Ministry of Health, Women and Social Welfare, Dinem House, Toorak, Suva.  
Fax No.: (679) 330-3232. Tel. No.: (679) 992-5082. E-mail: ltikoduadua@health.gov.fj

**4. REPRESENTATIVES/OBSERVERS**

**AUSTRALIAN  
AGENCY FOR  
INTERNATIONAL  
DEVELOPMENT**

Mr Nilesh Goundar, Program Manager (UN Partnerships and Gender), Development Cooperation Section, Australian High Commission, Suva, Fiji. Fax No.: (679) 338 2695. Tel. no. (679) 338 8361. Email: Nilesh.goundar@ausaid.gov.au

**FIJI NATIONAL  
UNIVERSITY**

Mrs Latileta Gumatua, primary Health Care Tutor, College of Medicine, Nursing and Health Sciences, Fiji National University, Tamavua, Suva. Fax No.: (679) 332 1013. Tel. No.: (679) 332 1499.  
Email: latileta.gumatua@fnu.ac.fj

**FIJI HEALTH  
SECTOR SUPPORT  
PROGRAM (FHSSP)**

Ms Kylie Jenkins, Technical Facilitator, Child Health, Fiji Health Sector Support Program, Level 4, Namosi House, Amy Street, Toorak, Suva. Tel. No. : (679) 322 1428.  
Email: kylie.jenkins@fhssp.org

**THE NEW ZEALAND  
AGENCY FOR  
INTERNATIONAL  
DEVELOPMENT  
(NZAID)**

Ms Makeleta Koloi, Developing Programme Coordinator Regional Health and Education, New Zealand High Commission PO Box 1378, Suva, Fiji. Fax No.: (679) 3300040.  
Tel. No.: (679) 3311422, Ext 109.  
Email: Makeleta.koloi@mfat.govt.nz

**JAPAN  
INTERNATIONAL  
COOPERATION  
AGENCY (JICA)**

Mr Kentaro Yoshida, Assistant Representative, Japan International Cooperation Agency, Fiji Office, Level 7, Suva Central Building, Renwick Road, Suva. Fax No.: (679) 3302452.  
Tel. No.: (679) 3302522. Email: Yoshida.Kentaro@jica.go.jp

Ms Saori Fujimoto, Project Coordinator, JPIPS, Japan International Cooperation Agency, Fiji Office, Level 7, Suva Central Building, Renwick Road, Suva. Fax No.: (679) 3302452.  
Tel. No.: (679) 3302522. Email: fujimoto@tekizaitekisho.org  
Mr Tatsuhiko Tsukakoshi, Cold Chain Maintenance Expert, JPIPS Japan International Cooperation Agency, Fiji Office, Level 7, Suva Central Building, Renwick Road, Suva.  
Tel. No.: (679) 330 2522. Email: tsuka-3@gf7.so-net.ne.jp

Ms Kotoji Iwamoto, Vaccine Management Expert, JPIPS Japan International Cooperation Agency, Fiji Office Level 7, Suva Central Building, Renwick Road, Suva.  
Tel. No.: (679) 330 2522. Email: kotojib24@gmail.com

Ms Nila Prasad, Programme Officer, Japan International Cooperation Agency, Fiji Office, Level 7 Suva Central Building, Renwick Road, Suva. Tel. No.: (679) 3302522. Email: NilaPrasad.FJ@jica.go.jp

**5. SECRETARIAT**

Dr Sergey Diorditsa, Team Leader, Expanded Programme on Immunization, WHO Regional Office for the Western Pacific, United Nations Avenue, Manila, Philippines. Fax No.: (632) 526 0279.  
Tel. No.: (632) 528 9745. Email: diorditsas@wpro.who.int

Dr Yoshikuni Sato, Medical Officer, WHO Regional Office for the Western Pacific, United Nations Avenue, Manila, Philippines. Fax No.: (632) 526 0279. Tel. No.: (632) 528 9742.  
Email: satoy@wpro.who.int

Dr Sigrun Roesel, Medical Officer, WHO Regional Office for the Western Pacific United Nations Avenue, Manila, Philippines. Fax No.: (632) 526 0279. Tel. No.: (632) 528 9741.  
Email: roesels@wpro.who.int

Mr Gabriel Anaya, Programme Management Officer, WHO Regional Office for the Western Pacific United Nations Avenue, Manila, Philippines. Fax No.: (632) 526 0279. Tel. No.: (632) 528 9740. Email: anayag@wpro.who.int

Dr Md. Shafiqul Hossain, Technical Officer, WHO Regional Office for the Western Pacific, United Nations Avenue, Manila, Philippines. Fax No.: (632) 526 0279. Tel. No.: (632) 528 9750.  
Email: hossains@wpro.who.int

Dr Wang Xiaojun, Medical Officer, WHO Regional Office for the Western Pacific, United Nations Avenue, Manila, Philippines. Fax No.: (632) 526 0279. Tel. No.: (632) 528 9747.  
Email: wangx@wpro.who.int

Dr Karen Hennessey, Technical Officer, WHO Regional Office for the Western Pacific, United Nations Avenue, Manila, Philippines. Fax No.: (632) 526 0279. Tel. No.: (632) 528 9734.  
Email: hennesseyk@wpro.who.int

Dr Miyuki Tsuruoka, Special Fellow, WHO Regional Office for the Western Pacific, United Nations Avenue, Manila, Philippines. Fax No.: (632) 526 0279. Tel. No.: (632) 528 9081.  
Email: tsuruokam@wpro.who.int

Dr Dong-Il Ahn, WHO Representative/Director, Pacific Technical Support, Level 4, Provident Plaza One, Downtown Boulevard, 33 Ellery Street, Suva. Fax No.: (679) 9920296.  
Tel. No.: (679) 3304600. Email: ahnd@wpro.who.int

Dr Jayaprakash Valiakollerri, Technical Officer, Pacific Technical Support, Level 4, Provident Plaza One, Downtown Boulevard, 33 Ellery Street, Suva. Fax No.: (679) 9920296.  
Tel. No.: (679) 3304600. Email: valiakollerrij@wpro.who.int

Ms Fuatai Maiava, Technical Officer, Communicable Diseases – NPO, Office of the WHO Representative, 4th Floor Ioane Viliamu Building, Beach Road, Tamaligi, Apia, Western Samoa.  
Fax No.: (685) 23765. Tel. No.: (685) 23756. Email: maiavaf@wpro.who.int

Dr Bernard Fabre-Teste, Country Liaison Officer, George Pompidou Building Port Vila.  
Fax No.: (678) 22691. Tel. No.: (678) 27683. Email: fabresteb@wpro.who.int

Dr Peter Carrasco, World Health Organization, Avenue Appia 20, CH-1211 Geneva 27, Switzerland. E-mail: rcphs@aol.com

Dr Minal K. Patel, Medical Epidemiologist, WPRO Team/Disease Eradication and Elimination Branch, Global Immunization Division, Centers for Disease Control and Prevention, 1600 Clifton Road MS A04, Atlanta, GA 30333. Fax No.: (404) 315-2497. Tel. No.: (404) 639-8907.  
E-mail: hgo9@cdc.gov

Dr Eyasu H. Teshale, Medical Officer, Division of Viral Hepatitis, Epidemiology and Surveillance Branch, 1600 Clifton RD NE Mailstop G-37, Atlanta, GA. Fax No.: (404) 7188585.  
Tel. No.: (404) 7188553. E-mail: eht4@cdc.gov

Dr Isiye Ndombi, Representative, United Nations Children's Fund, 5<sup>th</sup> Floor, Fiji Development Bank, Suva. Fax No.: (679) 3301667. Tel. No.: (679) 3300439. E-mail: indombi@unicef.org

Dr Eliab Seroney Some, Chief Health & Sanitation Programme, United Nations Children's Fund, 5<sup>th</sup> Floor, Fiji Development Bank, Suva. Fax No.: (679) 3301667. Tel. No.: (679) 3300439.  
E-mail: essome@unicef.org

Dr Ingrid Hilman, Child Survival Specialist, Health & Sanitation Programme, United Nations Children's Fund, 5<sup>th</sup> Floor, Fiji Development Bank, Suva. Fax No.: (679) 3301667.  
Tel. No.: (679) 3300439. E-mail: ihilman@unicef.org

Ms Reehana Nisha, Programme Assistant, Health & Sanitation Programme, United Nations Children's Fund, 5<sup>th</sup> Floor, Fiji Development Bank, Suva. Fax No.: (679) 3301667.  
Tel. No.: (679) 3300439. E-mail: nreehana@unicef.org

Dr Arnold Calo-oy, Rapporteur, c/o United Nations Children's Fund Pacific Office, 5<sup>th</sup> Floor, Fiji Development Bank, Suva. Fax No.: (679) 3301667. Tel. No.: (679) 3300439.  
E-mail: acalooy@unicef.org