



# SECURING REGIONAL HEALTH THROUGH APSED

Building sustainable capacity for managing  
emerging diseases and public health events

**PROGRESS REPORT 2012**

Revised Edition November 2012



World Health  
Organization

Western Pacific Region



## **WHO Library Cataloguing in Publication Data**

Securing regional health through APSED, building sustainable capacity for managing emerging diseases and public health events: progress report 2012.

1. Communicable diseases, Emerging. 2. Communicable disease control.
  3. Disease outbreaks – prevention and control. 4. Disaster planning.
  5. Public health. 6. Risk assessment.
- I. World Health Organization Regional Office for the Western Pacific.

ISBN 978 92 9061 594 1 (NLM Classification: WA110)

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Image credits:

AFP - Front cover: Chinese children wearing masks.

WHO - Top right: laboratory worker at the Research Institute for Tropical Medicine, Philippines.

AFP - Middle right: Infectious diseases outbreak exercise, Hong Kong (China).

AFP - Bottom right: H1N1 flu vaccination, China.



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# ACRONYMS

APSED	<i>Asia Pacific Strategy for Emerging Diseases</i>
ASEAN	Association of Southeast Asian Nations
DSE	Division of Health Security and Emergencies
EBS	event-based surveillance
EID	emerging infectious disease
EIS	event information site
ELISA	enzyme-linked immunosorbent assay
EOC	emergency operations centre
EQA	external quality assurance
EQAP	External Quality Assurance Programme
ESR	Emerging Disease Surveillance and Response
FAO	Food and Agriculture Organization of the United Nations
FET	field epidemiology training
FETP	Field Epidemiology Training Programme
GOARN	Global Outbreak Alert and Response Network
HFMD	hand, foot and mouth disease
IATA	International Air Transport Association
IBS	indicator-based surveillance
IHR	International Health Regulations (2005)
ILI	influenza-like illness
IMS	incident management system
IPC	infection prevention and control
LIMS	laboratory information management system
M&E	monitoring and evaluation
MoH	Ministry of Health
MFETP	Mongolian Field Epidemiology Training Programme
NFP	National IHR Focal Point
OIE	World Organisation for Animal Health
PCR	polymerase chain reaction
PHEP	public health emergency preparedness and response plan
PIC	Pacific island countries

PhilCZ	Philippine Interagency Committee on Zoonoses
PPHSN	Pacific Public Health Surveillance Network
POE	points of entry
RRT	rapid response team
SARI	severe acute respiratory infection
SARS	severe acute respiratory syndrome
SOP	standard operating procedure
SPC	Secretariat of the Pacific Community
TAG	technical advisory group
WHO	World Health Organization
WPSAR	<i>Western Pacific Surveillance and Response</i> journal

# ACKNOWLEDGEMENT

We acknowledge the collective progress of the countries and areas of the WHO Western Pacific Region in securing regional health through the implementation of the *Asia Pacific Strategy for Emerging Diseases (2010)*. We would also like to thank the many organizations, partners and others who have supported the implementation of APSED 2010. A list of our main partners can be found in Annex 3.



Participants of the Second Meeting of the Technical  
Advisory Group  
on APSED (2010), 10–12 July 2012



# EXECUTIVE SUMMARY

**T**he International Health Regulations (2005), known as IHR (2005), call upon countries and the World Health Organization (WHO) to strengthen their capacities and systems to detect, assess, report and respond to acute public health events and emergencies in order to build a global public health defence system that benefits all. IHR (2005), which entered into force on 15 June 2007, required each State Party to meet core capacity requirements by 15 June 2012, with a mechanism for deadline extensions for countries that needed additional time to meet the deadline.

In the Western Pacific Region, the *Asia Pacific Strategy for Emerging Diseases* (APSED) serves as a key regional tool to meet IHR core capacity requirements. The strategy was first developed in September 2005, and an updated version, APSED (2010), was endorsed by the Regional Committee for the Western Pacific at its sixty-first session in October 2010. While maintaining the focus on emerging diseases, APSED (2010) addresses developing capacities to detect and respond to a broader range of acute public health events as required under IHR (2005). The development and strengthening of core capacities associated with the detection, assessment and management of the broader range of public health events are also undertaken by relevant technical areas including food safety<sup>1</sup> and environmental health.

Over the past five years, steady progress has been made in developing and strengthening IHR core capacities through APSED implementation. The percentage of countries in the Region with at least the minimum surveillance capacity as defined by APSED assessment tools increased from 33% in 2007 to 87% in 2009. Event-based surveillance systems were introduced and established at both national and regional levels and more than 12 000 people were trained for rapid response across the Asia Pacific region. The quality of surveillance systems and the ability to detect influenza viruses improved: the proportion of national influenza centres in countries that could diagnose influenza accurately increased from less than 60% in 2007 to nearly 90% by 2009, based upon results from WHO's External Quality Assurance Programme (EQAP). In addition, the availability of data in near real time from countries across the Western Pacific Region during the influenza A(H1N1) pandemic in 2009 was a testament to surveillance capacities that had been built to facilitate preparedness and response to pandemic influenza. By 2010, the

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<sup>1</sup> Under the Western Pacific Regional Food Safety Strategy (2011-2015)

majority of Member States had fully or partially achieved the minimum core capacities required in laboratories as defined by APSED monitoring tools. For example, in accurate laboratory diagnosis, 93.4% of capacities have been met at least partially. The percentage of countries in the Region with at least the minimum capacities for infection prevention and control increased from 63% in 2007 to 83% in 2010, based upon results of the APSED monitoring tools. Also according to these tools, the percentage of countries in the Region with at least the minimum capacities for risk communications increased from 44% in 2007 to almost 80% in 2010.

Despite the steady progress made in the Region, challenges still remain to attain and maintain regional health security. According to their own self-assessments, not all Member States in the Western Pacific Region were able to meet the IHR core capacity development deadline of 15 June 2012, with 14 Member States requesting a two-year extension. This is largely attributed to relatively low baseline capacities in resource-limited countries, relatively high requirements set in the IHR monitoring framework and indicators, and inadequate allocation of national financial and technical resources.

Recognizing these challenges, an ambitious but realistic road map was captured in the APSED (2010) Workplan and was subsequently translated into national workplans. This report summarizes the progress of APSED (2010) implementation in the Western Pacific Region by documenting key achievements, activities and challenges for each of the eight focus areas for the period of January 2011 to June 2012. In summary, while steady progress was made during this period, maintaining commitment, securing the required resources, implementing national plans, building on achievements and following the established road map envisioned under APSED (2010) are critical to meet and maintain IHR (2005) core capacities in the Western Pacific Region.



WHO

**Rapid Response Teams play a vital role during pandemics. More than 12 000 people have been trained for rapid response in the Asia Pacific region.**

# INTRODUCTION

**E**merging infectious diseases (EIDs) are a major public health concern, affecting all populations and disrupting social and economic development. Severe acute respiratory syndrome (SARS), avian influenza A(H5N1) and the influenza A(H1N1) pandemic that emerged in 2009 demonstrated that the impact from emerging diseases is universal—no country is protected by virtue of wealth, high levels of education or standards of living and health care.

To address the challenge of emerging diseases and other acute public health events and to increase global health security, the revised International Health Regulations (2005), known as IHR (2005), entered into force on 15 June 2007. IHR (2005) calls upon countries and the World Health Organization (WHO) to strengthen their core capacities to detect, report and respond to acute public health events.<sup>2</sup> This legally binding agreement has contributed to global public health security by providing a new framework for the coordination and management of events that potentially constitute public health emergencies of international concern. IHR (2005) required each State Party, with the support of WHO, to meet the core surveillance and response capacity requirements “as soon as possible” but not later than 15 June 2012.



The Western Pacific Region, considered to be at the epicentre of emerging infectious diseases as well as other acute public health events, has been particularly keen to establish regional capacity to manage and respond to these threats. To this end, the *Asia Pacific Strategy for Emerging Diseases* (APSED) was launched in 2005 as a common strategic framework for countries and areas of the Region to strengthen core capacities considered priorities for the establishment of regional health security, and subsequently as a tool for strengthening core capacities required under IHR (2005). APSED (2005) was comprised of five focus areas: surveillance and response; laboratories; zoonoses; infection control; and risk communications. An independent evaluation of APSED

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2 [International Health Regulations \(IHR\) \(2005\), Second edition, WHO, 2008](#)

(2005) in 2010 reported key achievements of Member States, including the establishment of robust event-based surveillance systems, functional coordination mechanisms between the human and animal health sectors, and the incorporation of risk communications into outbreak response.<sup>3</sup>

An updated regional strategy, APSED (2010), was developed through a consultative and collaborative process among WHO, Member States, technical experts and partners. The updated strategy built upon experiences and lessons learnt from implementing APSED (2005), as well as the response to the 2009 influenza pandemic. APSED (2010) includes an additional three focus areas beyond the original five focus areas: public health emergency preparedness; regional preparedness, alert and response; and monitoring and evaluation, as well as the incorporation of risk assessment into surveillance and response. Additional efforts were made by relevant technical areas including food safety and environmental health in contributing to IHR core capacity development and strengthening. Following recommendations made at the First Meeting of the Asia Pacific Technical Advisory Group (TAG) on APSED (2010) in July 2011, ambitious but realistic workplan templates were added to APSED (2010).<sup>4</sup> These practical and flexible templates have been used by Member States for prioritization of activities, development of national workplans, and mobilization of technical and financial resources.

Steady progress has been made in implementing APSED (2010).



WHO

**Workers swabbing ducks in the Lao People's Democratic Republic, part of a training course in avian influenza poultry surveillance.**

3 Heywood, A. and S. Moussavi. 2010. "Independent evaluation of the APSED".

4 APSED (2010) Workplan, July 2011



AFP

**H1N1 flu vaccination, China, 2009. Lessons learnt from the response to this pandemic were incorporated into the updated APSED (2010).**

However, despite the progress in the Region, challenges to attaining and maintaining regional health security remain. According to their own self-assessments, not all Member States in the Western Pacific Region were able to meet the IHR core capacity development deadline of 15 June 2012, with 14 countries having requested a two-year extension. This is largely attributed to relatively low baseline capacities in resource-limited countries, relatively high requirements set in the IHR monitoring framework and indicators, and inadequate allocation of national financial and technical resources. The Second Meeting of the TAG on APSED (2010) in July 2012 concluded that APSED (2010) has been used as an effective tool to develop national plans, but that it is vital that APSED (2010) continue to be implemented in a manner that prioritizes effective resource allocation and respects and builds on existing systems, structures and relationships within Member States and the Region.

The first chapter of this report documents the progress of the first one-and-a-half years of APSED (2010) implementation by focus area and highlights the key achievements and activities, as well as the major challenges and lessons learnt. Chapter 2 describes the issues and challenges specific to Pacific island countries and areas and the progress made through the subregional approach. Chapter 3 presents the outlook for the future implementation of the core IHR capacities through APSED (2010).



Medical staff transporting laboratory samples.

# CHAPTER 1

## TECHNICAL PROGRESS REPORT, JANUARY 2011–JUNE 2012

### FOCUS AREA 1: SURVEILLANCE, RISK ASSESSMENT AND RESPONSE

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#### OVERVIEW

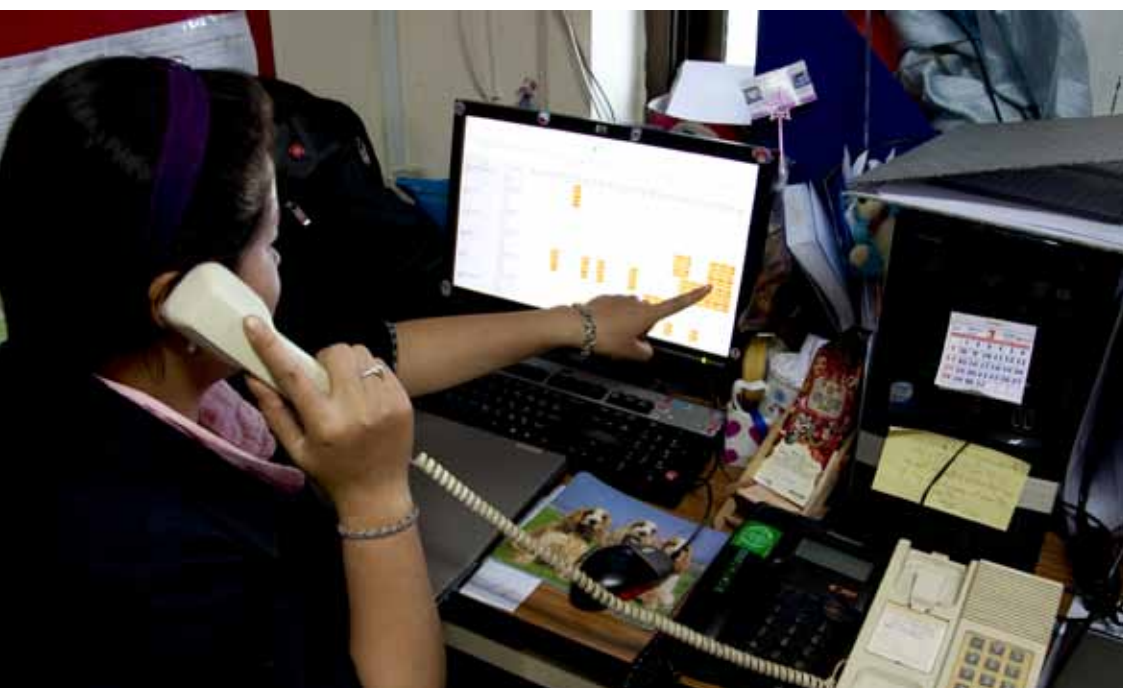
Surveillance and response continue to be priorities in APSED (2010). Sensitive and timely surveillance systems can trigger early alerts and rapid response that in turn can minimize the impact of an outbreak. Re-examination of the challenges and successes in implementing APSED (2005) led to the addition of risk assessment as a component of Focus Area 1 in APSED (2010). The incorporation of risk assessment allows for information on potential or actual public health events to be assessed prior to responding in a manner proportionate to the risk posed. Activities under this focus area are coordinated with other focus areas such as laboratories, risk communications and zoonoses to ensure comprehensive diagnostics, awareness of disease threats and adequate response. Close linkages between focus areas are essential for achieving overall success.

To enable effective notification and management of emerging disease outbreaks and other acute public health events, a national surveillance system should include event-based surveillance (EBS), indicator-based surveillance (IBS) and risk assessment. EBS is the organized and rapid capture of information about events that pose a potential risk to public health. This information may be in the form of rumours or other ad-hoc reports transmitted through formal channels (e.g., established routine reporting systems) or informal channels (e.g., media, health workers and nongovernmental organization reports). IBS is the routine reporting of cases of disease that are collected and analysed against trends and predefined thresholds that may trigger further public health action. Risk assessment is the systematic process for gathering, assessing and documenting information to determine a level of risk and provide the basis for taking action to manage and reduce the negative consequences of acute public health events. Risk assessment is one of the national-level core capacities required under IHR (2005), and is used to determine potentially significant events that may need to be notified urgently to WHO.

Key achievements at the country level are highlighted below followed by a detailed description of activities conducted. Results are presented for the 19 Member States that responded to the IHR National Capacity Monitoring Questionnaire. A detailed narrative of regional activities can be found under Focus Area 7: Regional Preparedness, Alert and Response.

## KEY ACHIEVEMENTS

- ▶ Designated teams or units for EBS have been established in the 19 countries that responded to the IHR National Capacity Monitoring Questionnaire. These countries also reported that they were using the IHR Event Information Site as an integral information resource.
- ▶ Standard operating procedures (SOPs) and guidelines for EBS have been developed in 84% of countries in Western Pacific Region that responded to the IHR National Capacity Monitoring Questionnaire. A number of countries utilized SOPs and guidelines to develop EBS systems, and these have become their routine system. For example, in Cambodia a weekly monitoring report based on EBS data has been produced on a routine basis since late 2011.
- ▶ The majority of Member States have held consultations on IBS priority diseases and case definitions. For example in the Lao People's Democratic Republic 17 priority diseases/syndromes and their case definitions for IBS at the national level were agreed upon in early 2011. In Mongolia, an IBS protocol was developed and approved in 2011.



WHO

Strengthened surveillance systems provide early warning of disease outbreaks.



- ▶ National surveillance systems have expanded in some countries. For example, in the Lao People's Democratic Republic severe acute respiratory infection (SARI) and influenza-like illness (ILI) sentinel surveillance was rolled out in five and eight new geographically representative sites, respectively. In Cambodia a public health laboratory system has been developed to support the existing ILI/SARI surveillance system.
- ▶ Surveillance data on epidemic-prone and priority diseases are analysed at least weekly at national and subnational levels in 84% of those countries in Western Pacific Region that responded to the IHR National Capacity Monitoring Questionnaire.
- ▶ The majority of Member States have established a coordination mechanism for response to major events, emergencies and disasters. Of the 19 countries that responded to the IHR National Capacity Monitoring Questionnaire, 18 countries have established rapid response teams to quickly respond to reports of disease outbreaks.
- ▶ Risk assessment has been acknowledged as being important and has been allocated to an area in the Ministry of Health (MoH) by almost all Member States. For example in Mongolia national risk assessment procedures and guidelines linked to EBS were developed.
- ▶ In June 2012 in Cambodia, formal risk assessment methodology was used for the first time to assess whether an event met the criteria for a potential public health event of international concern. Following the risk assessment, the MoH acted in accordance with the IHR 2005 guidelines.
- ▶ Modified Field Epidemiology Training Programmes (FETPs) have been developed and aligned with national surveillance, risk assessment and response activities in Cambodia, the Lao People's Democratic Republic and Mongolia. Evaluations of these modified FETPs were carried out in the Lao People's Democratic Republic and Mongolia.

## **SUMMARY OF ACTIVITIES**

In the Western Pacific Region, Member States have undertaken a wide range of activities for surveillance, risk assessment and response, in line with their national APSED (2010) workplans.

In the Lao People's Democratic Republic, a consultation of epidemiological surveillance and clinical experts on priority diseases and case definitions for IBS was held in December 2010. Following this meeting, in early 2011, the MoH formally defined 17 priority diseases and syndromes including SARI, dengue, acute watery diarrhoea, and fever and rash for their national IBS system. Training sessions on IBS including new case definitions were held for hospital staff during 2011–2012. An additional sentinel SARI site was

established in one provincial hospital in 2011. ILI/SARI refresher training courses, including the use of SOPs and routine monitoring visits, are held annually at sentinel sites. In January 2012, a simple list of risk assessment questions was developed and included in the draft IBS/EBS SOPs. During March–April 2012, training materials on IBS and EBS were developed and training programmes are currently in progress. In May 2012 an evaluation of ILI/SARI surveillance was carried out with the results still pending.

In Mongolia, surveillance standards for priority emerging diseases were updated in 2011 and a prioritization exercise is currently in progress to review the national notifiable disease list.

During 2011, Viet Nam developed and piloted a web-based IBS system for communicable diseases, including software that supports rapid, accurate and timely reporting of notifiable diseases, such as human and avian influenza and diseases of unknown etiology. This system was installed at all levels of the preventive medicine service and 26 training courses on the system software were conducted for preventive medicine staff in 760 provincial, district and commune-level health facilities. Protocol for the national EBS system was also developed during 2011, which outlined the key components of EBS, including risk assessment, information sources and rapid response capacity. The national EBS system is being piloted in 2012.

An informal evaluation of EBS was completed in Cambodia during 2011 that recommended improving the reporting and follow-up of events. Also in Cambodia, the National Focal Point (NFP) for IHR reports to WHO Regional Office for the Western Pacific on a timely manner on H5N1 cases and other outbreaks as necessary.

The Philippines updated its event-based surveillance and response manual aiming to describe the procedure of EBS and how to respond to health threats. Epidemic surveillance and response units were also established in seven pilot regions in the Philippines in 2011. To improve dissemination of information, surveillance reports are now posted on the Internet.

A wide range of risk assessment activities has been undertaken in Member States over the reporting period. At this point in time, the majority of Member States apply risk assessment in an ad hoc manner and identify opportunities to undertake risk assessments as appropriate. Risk assessments for public health events are mostly applied at the national level.

China, Japan and Singapore assess risks for acute public health events on a routine basis to identify changes in the level of risk for specific diseases, to screen events for their potential to cause an acute public health event, and to use results of risk assessments to guide response activities. Structures are in place, and SOPs and meeting frequency are established and being refined as more experience is gained.



AFP

**Inspecting a private chicken farm, in Da Nang, Viet Nam. APSED supports workshops and training events for zoonotic risk assessments.**

The Lao People's Democratic Republic, Mongolia, the Philippines and Viet Nam have either incorporated risk assessment into guidelines and/or use it for assessing national-level response. Mongolia carried out risk assessments on 100% of the 145 events reported at the national level, with 38% of these events requiring further investigation or action. Mumps, rubella, anthrax, polio and rabies also underwent systematic risk assessments to provide guidance for proportionate response. Viet Nam undertook systematic risk assessments for all five events that required national-level action, of which rapid response was implemented in four events, two of which included technical assistance from WHO. The Lao People's Democratic Republic has incorporated a risk assessment component for event reporting into its national surveillance guidelines.

Risk assessment technical materials are currently under development in the Region. China held a workshop on guideline development for risk assessments of infectious diseases in June 2012. Singapore trains people from the MoH in qualitative and quantitative risk analysis, as well as developing risk assessments through journal clubs and on-the-job training. Malaysia undertook training for event screening and rapid/emerging disease risk assessment in April 2011. The Lao People's Democratic Republic also held a risk assessment workshop for zoonotic risk assessments in October 2011, and Mongolia trained 40 staff members with backgrounds from the health,

veterinary and emergency management sectors in 2011. In Cambodia, the Lao People's Democratic Republic and Mongolia, risk assessment has been included in the field epidemiology training (FET) curriculum. During the reporting period, a wide range of short risk assessment projects were completed by officers during their time spent in the FET fellowship programme at the Regional Office.

In the Lao People's Democratic Republic, rapid response capacity at the national and subnational levels is mostly being built through the FETPs. Development of a Deployment Standard Operating Procedure was translated into the Lao language and distributed at the national and provincial levels. In Cambodia, rapid response teams (RRT) were deployed in a number of outbreak response investigations for chikungunya, influenza H5N1 and rabies over the reporting period.

The Philippines has developed a system to coordinate responses to major events, emergencies and disasters through monitoring and coordination of events via team deployment and logistics augmentation. In addition, a joint-response mechanism involving key stakeholders and development partners was established in 2011. This mechanism facilitates seamless coordination of outbreak response operations. In addition, a special tool, called SPEED, was developed for early detection of outbreaks in the aftermath of a disaster. This tool was used during the floods in late 2011.

Response under this focus area requires multiple work areas to work together, including surveillance, risk assessment, risk communications, FETP and RRT. For example, in Mongolia about 40 epidemiologists have undergone one-month training on outbreak response, surveillance and risk assessment through a WHO local fellowship training programme in order to staff newly established subnational public health units on surveillance and rapid response. In Viet Nam the FETP contributed effectively to field investigations and rapid response to a number of outbreaks, including outbreaks of hand, foot and mouth disease, cholera, dengue, influenza, *Streptococcus suis* infection and inflammatory palmoplantar hyperkeratosis syndrome.

The Lao People's Democratic Republic's FETP was externally evaluated in May 2011, which provided recommendations to improve programme management, strategy, supervision, graduate utilization and official recognition. The WHO country office in the Lao People's Democratic Republic has been carefully monitoring the progress of the FETP. The Lao People's Democratic Republic has been carrying out operational projects aligned to health system needs (e.g., rubella vaccine is now included in the national immunization programme after conducting a study of antibody seroprevalence among pregnant women).

## CASE STUDY 1: ASSESSMENT OF THE FIELD EPIDEMIOLOGY TRAINING PROGRAMME IN MONGOLIA

At the request of the Government of Mongolia, a multinational team carried out an assessment on the Mongolian Field Epidemiology Training Programme (MFETP) from 28 July to 1 June 2012, coordinated by the Regional Office. The assessment team consisted of the programme director of the Malaysia FETP, the programme director of the Lao FETP, a FETP expert from United States Centers for Disease Control and Prevention, a WHO staff member from the Lao People's Democratic Republic and the Regional Office FETP coordinator, as well as two senior epidemiologists in the National Centre for Communicable Diseases (NCCD). The assessment aimed to assess the current progress of the Mongolian Field Epidemiology Training Programme and provide suggestions and recommendations for a long-term sustainable MFETP in Mongolia.

MFETP was established as a one-year modified Field Epidemiology Training Programme in 2009, with collaboration and support from WHO. The programme has been institutionalized in the NCCD, Ministry of Health, Mongolia. The programme has produced 18 graduates in the last two years with five trainees in the current third cohort. Based on its clear achievements, the evaluators felt that MFETP has already had a positive impact on Mongolian public health system.

The assessment team also concluded that the one-year programme provided the trainees with adequate experience in achieving competencies in surveillance, response and operational research. Most trainees in MFETP, however, are from national health institutions. Inadequate English language skills are the major barrier for recruiting trainees, especially those at the provincial level.

The MFETP has increased the technical capacity in performing comprehensive analytical epidemiological studies in the country. The transition of roles of graduates from "learning-by-doing" to "learning-by-teaching" will certainly benefit graduates as well as incoming trainees. After the third cohort, a critical mass of graduates will be available to serve as future supervisors. The assessment team also recommends that the MFETP should have three to five additional years of external technical and financial support to ensure the quality of the programme.

To maintain sustainability of the programme, the assessment team recommends that the MFETP should have a long-term strategic plan, with an adequate national budget and human resources. The strategic plan should involve multiple sectors and ensure the participation of all stakeholders at the national and subnational levels.



## MAJOR CHALLENGES

- ▶ Defining and using case definitions (rather than clinical diagnoses) for surveillance purposes. This is being resolved through consultations with clinicians and laboratory staff and the development of information, education and communications materials on case definitions and sample collection for surveillance and hospital staff.
- ▶ The long-term sustainability of ILI/SARI sentinel sites, especially where logistics, including sample collection and transportation, are funded by external donors.
- ▶ Retention of trained staff. Hospital staff turnover is high, creating the need for frequent refresher training and monitoring.
- ▶ The basic understanding of surveillance concepts and need for standardization is limited at the subnational level. This is being addressed in the FET curriculum.
- ▶ Risk assessment has been allocated to an area in MoH, however capacity and commitment for implementation remain a challenge.
- ▶ Risk assessment is mostly being carried out in an ad hoc manner. Streamlining and applying systematic processes and methods for risk assessment will be a challenge
- ▶ Increased coordination is required between those who conduct risk assessments and risk communications.

## NEXT STEPS

- ▶ Develop and adapt risk assessment processes and methods for Member State use.
- ▶ Undertake documented risk assessments for event reporting from EBS on a day-to-day basis.
- ▶ Improve the sharing of surveillance information via web posting.
- ▶ Implement the FET evaluation recommendations provided in 2011.
- ▶ Complete evaluations of implementation of FETPs in those countries where it has not been done within the last 18 months.
- ▶ Develop and pilot the concept of Field Epidemiology Training Plus as a mechanism to utilize FET to strengthen public health systems and to sustain the current capacity-building efforts.

## FOCUS AREA 2: LABORATORIES

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### OVERVIEW

Under IHR (2005), Member States should have the infrastructure in place to provide accurate public health laboratory diagnostic services to support surveillance and outbreak response to pathogens that may lead to an event of national or international concern. Strengthening laboratory capacity at the national and regional levels is the second focus area of APSED (2010), which contributes to other focus areas, such as surveillance, risk assessment and outbreak response. As per the APSED (2010) Workplan, WHO will provide guidance and technical expertise to Member States to establish an integrated public health laboratory network that is the foundation for all surveillance and response activities.

An integrated public health laboratory system includes a network of three categories of laboratories, namely diagnostic, reference and research, and aims to improve laboratory capacity and efficiency to support surveillance and outbreak response. The core functions of the public health laboratory network are to:

- **Support public health surveillance:** Diagnostic laboratories provide guidance related to collecting appropriate patient specimens, selecting and performing diagnostic tests, further typing of agents (such as for antimicrobial resistance), and—in case the causative agent cannot be characterized on site—refer the specimens to national and international reference laboratories. For example, national reference laboratories are encouraged to train and build capacity at the subnational level by conducting external quality assurance programmes (EQAPs).
- **Support outbreak response:** In the event of an outbreak of a known EID or novel pathogen, a system needs to be in place to enable the timely characterization of such pathogen for appropriate response. This referral system will be based on the surveillance system in place but should use SOPs for rapid referral of specimens, prioritization of outbreak specimens for testing and ensuring around-the-clock availability of staff. Such a system should also include a mechanism for surge capacity to scale up diagnostic support.
- **Act as a national resource and coordinating centre:** The national public health laboratory should support the development and implementation of a national laboratory policy, establish and coordinate a functional national laboratory quality system, provide training in diagnostic techniques and biosafety procedures, and monitor antimicrobial resistance, where applicable.



WHO

Laboratory workers at the Research Institute for Tropical Medicine in the Philippines testing samples for emerging diseases. APSED has helped establish laboratory networks in Member States.

Overall, Member States have made much progress towards establishing or strengthening their public health laboratory networks. APSED milestones for this reporting period have been achieved and a strategic plan is in place to move forward with strengthening laboratory capacity in the Region. With respect to key milestones, as specified in the APSED (2010) Workplan, this focus area is on track with a guidance document for public health laboratories completed (Year 1) and a draft workplan for an EQAP for the diagnosis of dengue and other EIDs has been prepared (Year 2). The key achievements in this area at the regional and country levels are highlighted below.

### KEY ACHIEVEMENTS

- ▶ A guidance document for the establishment of a public health laboratory network was developed and presented at the Second Meeting of the TAG on APSED (2010) in July 2012.
- ▶ The majority of Member States have strengthened their laboratory capacity for surveillance and outbreak response by developing legislative documents, workplans and conducting training. For example in the Lao People's Democratic Republic, a ministerial decree and a laboratory task force were established. In Mongolia a national plan for strengthening laboratory services for 2011–2015 was developed.



- ▶ Establishment of laboratory networks has been initiated by China, the Lao People's Democratic Republic, Mongolia and the Philippines.
- ▶ External quality assurance (EQA) for different diseases has been conducted in several Member State laboratories, including those in Cambodia, the Lao People's Democratic Republic, Mongolia and Viet Nam.
- ▶ At the regional level, Regional Office has prepared a work plan for an EQAP for the diagnosis of dengue and other EIDs that will be rolled out during the next reporting period.

## **SUMMARY OF ACTIVITIES**

Several key activities related to laboratory strengthening are ongoing through the development of public health laboratory networks in Member States. Such activities include improving biosafety, quality assurance and specimen referral.

A guidance document describing the role of public health laboratories for alert and response was developed. This document was based upon several meetings and informal consultations, including a biregional meeting on the role and establishment of a public health laboratory network that was held in Malaysia in November 2011. Several Member States have prepared national workplans to establish public health laboratory networks that are in line with the APSED framework. An important first step in the development of such a network is to establish a national laboratory steering committee to discuss the implementation of the national laboratory workplan.

In the Lao People's Democratic Republic, a ministerial decree regarding strengthening laboratory capacity was issued. A national health laboratory policy technical working group was formed and health laboratory policy was developed through a series of meetings. A national focal point for laboratories was designated that will be responsible for the implementation of this policy and the monitoring of its progress.

Laboratory assessments were conducted in Mongolia and the Lao People's Democratic Republic that included human resources, supplies and equipment. In the Lao People's Democratic Republic the assessments were completed in November–December 2011 at 20 laboratories: three central hospitals, 16 provincial hospitals, and the National Centre for Laboratory and Epidemiology.

In order to initiate the establishment of a laboratory network in Mongolia, guidelines on establishing such a network were developed and piloted in five provinces. Currently, the MoH is in the process of approving the guidelines.

In the Philippines, five subnational reference laboratories for influenza have been established. The diagnostic services provided by these laboratories will be expanded to include other priority diseases, including dengue.



WHO

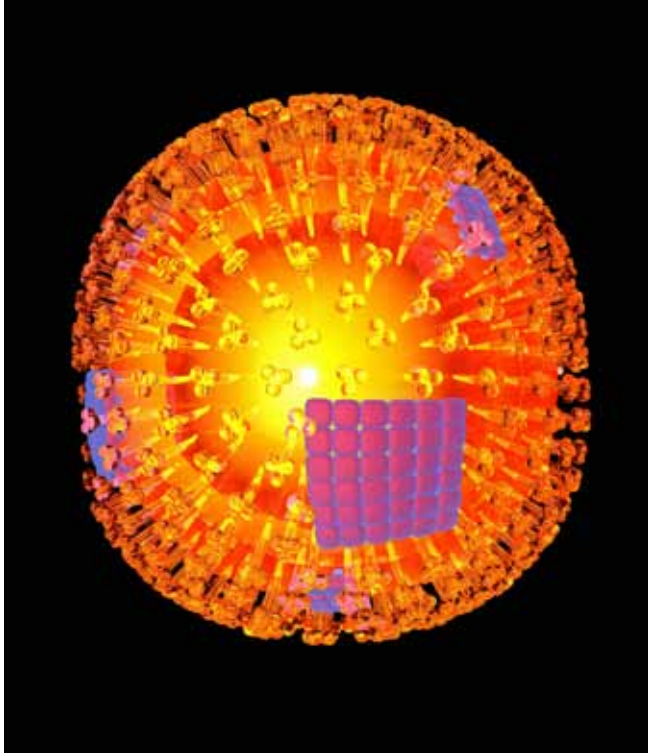
**In the Philippines five subnational reference laboratories for influenza have been established.**

In Viet Nam, laboratory capacity for surveillance and outbreak response to diarrhoeal (e.g., cholera) and other priority diseases (e.g., dengue and chikungunya) has been strengthened at national and subnational levels through training of laboratory techniques and diagnostics for these agents.

Some countries have focused on strengthening laboratory information management systems (LIMS). Cambodia developed and piloted a new LIMS in several hospitals with the aim of rolling it out by the end of 2012 in all government laboratories that perform bacteriological testing.

EQAPs are an important tool for assessing diagnostic accuracy and identifying areas for corrective action and training. As EQAPs operate regularly, they are an ongoing capacity-building exercise and opportunity for networking between subnational and national levels, as well as national and international levels. An EQAP for EIDs with dengue as a pathfinder has been under development since the beginning of 2012. A pilot study for the molecular and serological diagnosis of dengue was conducted in two national laboratories of two Member States. This pilot, as well as experiences with the WHO global EQAP for influenza, will be used as a basis for an EQAP for the diagnosis of dengue and EID development. An informal consultation was held in June 2012 to discuss a more comprehensive EQAP for EIDs starting with dengue virus.

## CASE STUDY 2: INFLUENZA-LIKE ILLNESS (ILI) SENTINEL SITE SURVEILLANCE IN CAMBODIA



AFP

A sentinel site surveillance network for ILI was established in Cambodia in 2006. The purpose of this network was to provide baseline epidemiological data on ILI, to detect clusters or outbreaks of ILI, and to characterize circulating influenza viruses. Starting with six sentinel sites in 2006, the network has expanded over the years to include 14 sites by 2010.

Using standardized methodology and case definitions, five to 10 nasopharyngeal swabs are collected per site per week. Specimens are sent for testing to either the Institute Pasteur du Cambodge or the National Institute of Public Health. Laboratory testing includes real-time and multiplex reverse transcriptase polymerase chain reaction for the detection of influenza A(H3N2),

A(H1N1), A(H1N1)pdm09, A(H5N1) and influenza B. Hemagglutination inhibition assays for virus isolation and antigenic characterization are also performed.

For each site, weekly aggregated data are collected, including the total number of outpatients and total number of ILI outpatients. Additional data are collected from those who contribute specimens. Mobile phone text messaging is used to transmit the data to a central database at the Communicable Disease Control Department of the Ministry of Health and feedback sent to participating sentinel sites.

Evaluation of ILI sentinel surveillance was performed by the Ministry of Health, WHO and the United States Centers for Disease Control and Prevention in 2012, five years after the start of ILI surveillance. The evaluation found the surveillance system to be a good and well-functioning system that meets its objectives. The data produced by the network are used to prepare a Respiratory Disease and Influenza Bulletin and virological data are sent to WHO for vaccine recommendations.

Several Member States have conducted in-country EQAPs. For example, an EQAP for the diagnosis of bacteriological agents with participation of five laboratories is under way in Cambodia. In Mongolia, proficiency tests were conducted among 14 bacteriology and two virology laboratories and an EQAP for tick-borne diseases and hanta virus infections was performed.

In Viet Nam laboratory biosafety has been enhanced during the reporting period. A technical guideline, *List of Infectious Microorganisms and Requirements of a Biosafety Laboratory*, was approved by the Government and will take effect starting 1 August 2012. A draft guideline, *Issuing and Re-issuing Certificates for Biosafety Laboratories*, was developed and is awaiting approval. Additionally, biosafety and bio-risk assessments in selected biosecurity level 2 laboratories were carried out in 2011 in Viet Nam in order to update biosafety procedures and practices, including decontamination and management of infectious waste and subsequent training was provided for laboratory staff.

It is important for laboratories in Member States, both at national and subnational levels, to be able to properly package and transport specimens to reference laboratories, including WHO collaborating centres. Shipping of biological specimens—both within countries and internationally—to reference laboratories is regulated by the International Air Transport Association (IATA). Regulations require that shippers be licensed in the shipping of dangerous goods through specific training and a subsequent examination that is conducted by an IATA-accredited trainer. During the reporting period, regional training for the shipment of dangerous goods was conducted in Viet Nam for 30 participants from nine countries and in Cambodia for 15 participants from seven countries. The Emerging Disease Surveillance and Response (ESR) unit in the Regional Office organized another regional training in the Lao People's Democratic Republic in July 2012 with participants from eight Member States. Country-level training will continue in the future to maintain and expand specimen packaging and transport capacity across the Region.

## MAJOR CHALLENGES

- ▶ Efficient referral and shipping of specimens in country and internationally remain a challenge. During the next reporting period training will be provided and a draft action plan for specimen referral will be developed.
- ▶ In some Member States, technical challenges such as the lack of equipment and reagents to conduct laboratory testing, for example polymerase chain reaction (PCR), remain. When establishing a public health laboratory network, this low baseline capacity needs to be taken into consideration.
- ▶ Accurate diagnosis of diseases, which is crucial for alert and response, needs to be improved for priority diseases through training and quality assurance programmes.
- ▶ National- and subnational-level coordination among laboratories remains a challenge as they have limited interaction with each other.
- ▶ Human resources remain a challenge. There is a lack of skilled staff and their retention at public health laboratories is low.

## NEXT STEPS

- ▶ Establish a national laboratory steering committee in those Member States where this process has not yet been initiated.
- ▶ Develop a regional EQAP for EIDs with proficiency testing for dengue virus diagnosis (as a pathfinder for other pathogens) to be rolled out during the next reporting period. Support in-country EQAPs conducted by Member States and facilitation of interactions with WHO collaborating centres.
- ▶ Develop a strategy for efficient specimen referral in limited-resource settings from subnational to national and international laboratories. This includes attention to biosafety (safe handling and packaging of infectious materials) and stability of specimens during long periods of transit under harsh environmental conditions.
- ▶ While strengthening laboratories at the national level, attention needs to be shifted more to the subnational-level laboratories in terms of diagnostic capacity and defining their role in supporting surveillance activities.

## FOCUS AREA 3: ZONNOSES

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### OVERVIEW

The zoonoses focus area aims to facilitate the development of a functional coordination mechanism that is effective in bringing together all appropriate stakeholders. Under APSED (2005) the coordination mechanism was aimed at organizing coordinated responses. Under APSED (2010) the coordination mechanism is also being used to develop risk-reduction strategies, supported by research for selected priority zoonotic diseases. Working collectively for both outbreaks and on a routine basis reduces the risk to human health associated with both known and unknown emerging zoonoses.

Given the unique nature of zoonotic diseases, ensuring sustainable and effective coordination and collaboration mechanisms between the human and animal health sectors is vitally important and needs to be strengthened further. The sharing of surveillance information, carrying out research and coordinating responses to reduce the risk of disease transmission can all contribute to building this collaboration.

Member States have made progress towards establishing mechanisms to strengthen zoonoses outbreaks and to coordinate multisectoral risk-reduction strategies. The key milestone identified within the framework of the APSED (2010) Workplan, which is establishment of coordination mechanisms at all levels (subnational, national and regional) and/or a strengthened focus on zoonoses outbreaks and for the coordination of multisectoral risk-reduction strategies, has been achieved in some countries, but others are in the process of establishing such mechanisms.

### KEY ACHIEVEMENTS

- ▶ The first meeting on laboratory strengthening for emerging infection diseases in Asia Pacific region was conducted at the end of 2011 and was the first official joint meeting on the human and animal health laboratories in the Association of Southeast Asian Nations (ASEAN) region.
- ▶ The majority of Member States have established a zoonoses coordination mechanism aimed at strengthening national and provincial capacity for responding to zoonoses outbreaks and for coordinating multisectoral risk-reduction strategies (e.g., China, the Lao People's Democratic Republic, Mongolia and Viet Nam).
- ▶ Legislative documents and national policies for zoonoses have been developed and adopted. For example, the Philippine Interagency Committee on Zoonoses (PhiICZ) was established through an Administrative Order issued by the Office of the President.

AFP



**A veterinary services worker prepares to take a swab for avian influenza virus test near Kuala Lumpur, Malaysia.**

### **SUMMARY OF ACTIVITIES**

In the Western Pacific Region, a wide range of activities has been undertaken at the regional and national levels under this focus area. At the regional level, three regional meetings were conducted to discuss zoonoses issues, including collaboration between human and animal sectors and laboratory strengthening in this area, such as:

- ▶ Laboratory strengthening for emerging infectious diseases in the Asia Pacific region, in 2011, Malaysia;
- ▶ Forum of collaborating/reference centres on emerging infectious diseases and zoonoses, in 2011, Japan, and
- ▶ Workshop on collaboration between human and animal health sectors on zoonoses prevention, in 2012, the Philippines.

**Constant close encounters between animals and humans in the Region bring the risk of such disease outbreaks as swine flu, and other emerging infectious diseases.**

WHO



The biregional laboratory meeting (2011, Malaysia) was the first meeting that brought together animal health and human health sectors at a regional level to discuss laboratory issues for zoonoses. The meeting emphasized the close working relationship between the Food and Agriculture Organization of the United Nations (FAO), the World Organisation for Animal Health (OIE) and WHO at the regional level, and the long-standing relationship between WHO and ASEAN. Recommendations from this meeting were in line with the APSED (2010) Workplan, especially the establishment of a formal mechanism for collaboration between the public health and animal health sectors.

As highlighted above in key achievements, many Member States have established mechanisms for collaboration between the public health and animal health sectors during the past year. In the Lao People's Democratic Republic, a zoonoses coordination mechanism including a signed memorandum of understanding between the Ministry of Health and Ministry of Agriculture and Fisheries was implemented. In Cambodia, a national policy for zoonoses was drafted and a memorandum of understanding signed between the Ministry of Health and the Ministry of Agriculture, Forestry and Fisheries. A similar mechanism was established in Viet Nam in order to share surveillance information and coordinate the response to zoonotic diseases, with the Ministry of Health and the Department of Animal Health jointly developing an inter-ministerial circular on coordination and collaboration between human and animal health. PhilCZ was created in the Philippines through an Administrative Order issued by the Office of the President.

An intersectoral coordination mechanism on zoonoses was established at all levels in Mongolia. Additional milestones for Mongolia include the development and approval of an animal and human anthrax risk-reduction strategy and brucellosis control strategy. Additionally, a zoonoses reference laboratory in the health sector was established, as well as a web-based information exchange and surveillance system between the animal and human health sectors.

Member States carried out operational research to generate evidence-based information and to improve public health interventions related to major zoonotic diseases, including anthrax and rabies. This has included the documentation and review of current risk-reduction strategies. For example, a study to determine the burden of leptospirosis was conducted in Cambodia and guidelines for surveillance, prevention and control of streptococcus infection were developed in Viet Nam. In terms of awareness, Rabies Day is held annually in Cambodia and a working group has been established for the prevention and control of rabies. In Mongolia mapping studies on the burden of tick-borne diseases was conducted.



### CASE STUDY 3: ESTABLISHMENT OF A COORDINATION MECHANISM FOR ZOOSES PREVENTION AND CONTROL IN MONGOLIA



Animal and human health workers respond to an anthrax outbreak, Mongolia 2011.

WHO

Mongolia is one of the countries with the highest risk of zoonoses due to a large livestock population and the closeness of contact between humans and animals. Guided by APSED, Mongolia established a functional coordinating mechanism between the animal and human health sectors for zoonoses prevention and control at all levels in 2010. Its membership includes the health and animal sectors, the National Emergency Management Agency and WHO.

Under the coordination mechanism the two sectors shared surveillance data, outbreak and event information, and laboratory resources in a timely manner, and conducted joint risk assessments, coordinated responses and collaborative research, and developed joint risk reduction and response strategies. In 2011, the mechanism was further expanded to include food safety, emergency management and the effects of climate change on zoonotic diseases.

During outbreaks of animal anthrax and rabies in 2011, the sharing of event information 24 hours a day, 7 days a week led to early detection and an effective response. Joint rapid response teams, consisting of veterinarians, medical epidemiologists and emergency officers took rapid action to conduct risk assessments and conduct joint responses, including the restriction and control of animal movements, compulsory animal vaccination and culling of possible carriers. The team identified populations at risk of anthrax and rabies infection, established a telephone "hotline" for health-care providers and conducted a joint awareness campaign for the prevention of disease among humans. Consequently, no human anthrax and rabies cases were reported in the animal outbreak areas.

Member States also conducted national meetings and/or workshops to discuss zoonoses. For example, in the Philippines, a national zoonoses consultative workshop was carried out in 2011; and in the Lao People's Democratic Republic the first national annual One Health conference was conducted in 2011. In Viet Nam, a two-day workshop on prioritization and mapping of activities on zoonotic diseases was hosted by the General Department of Preventive Medicine in collaboration with the Department of Animal Health (Ministry of Agriculture and Rural Development), FAO in Viet Nam and the WHO country office in Viet Nam.

## **MAJOR CHALLENGES**

- ▶ Ensuring close and sustainable collaboration between the animal and human health sectors of Member States.
- ▶ Obtaining approval and implementation of national policies for zoonoses.

## **NEXT STEPS**

- ▶ Further strengthen intersectoral coordination mechanisms and advocate for implementation at all levels (subnational, national and regional) to prevent and facilitate early detection of emerging infectious diseases at the animal–human interface.
- ▶ Further support of operational research to generate evidence-based information and to improve public health intervention techniques.
- ▶ Organize annual workshops to share best practices, experiences and research findings.

## FOCUS AREA 4: INFECTION PREVENTION AND CONTROL

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### OVERVIEW

In APSED (2010), Member States acknowledged that establishing effective infection prevention and control (IPC) practices in health-care settings is essential to reduce the risk of transmission of emerging diseases to health-care workers, patients, their families and the community. In particular, effective IPC practices in health-care facilities are essential when outbreaks occur because of the risk that a facility might spread the infection.

Establishment of a national oversight structure of an IPC programme (e.g., a national multidisciplinary IPC committee) is defined as a key milestone for Year 1 within the framework of the APSED (2010) Workplan. This milestone has been achieved by the majority of countries in the Region.

### KEY ACHIEVEMENTS

- ▶ A national IPC policy or strategy has been established in many Member States, including Cambodia, the Lao People's Democratic Republic, Malaysia, Mongolia and Viet Nam.
- ▶ A national IPC committee or working group has been established in many Member States, including Cambodia, the Lao People's Democratic Republic, Malaysia, Mongolia and Viet Nam. The establishment of a national committee is ongoing in the Philippines.



WHO

A rapid response team member draws blood from a villager in Sre Som Thmey, Cambodia.

- ▶ A national IPC resource centre has been established in the Lao People's Democratic Republic and Mongolia, and a proposal has been developed for the establishment of a national resource centre in the Philippines.

## SUMMARY OF ACTIVITIES

In the Western Pacific Region, Member States have conducted a wide range of IPC activities in line with their national APSED (2010) workplans. National policies/strategies on strengthening IPC in countries have been developed and approved in most countries. For example, in Mongolia, an IPC strategy for 2012–2016 was developed and approved. In Viet Nam, a national IPC master action plan was developed for 2011–2015. The Philippines reported that legislation had been drafted for the establishment of a national committee.

Member States have made progress in establishing national organizational structures, such as national multidisciplinary IPC committees or working groups, to support the development and implementation of country-specific national IPC policies, technical guidelines and training tools. In Mongolia, the IPC coordinating committee, the infection control committee and the infection control team at all health facilities levels was established during 2011–2012. In 2011 in the Lao People's Democratic Republic, the MoH drafted an IPC strategy for district health centres, which is being finalized. In Cambodia, a national IPC team within MoH was established, as were provincial and district IPC focal points and teams in all health departments and hospitals. In the Philippines, the establishment of a national committee is under way.

To strengthen IPC capacity and disseminate national IPC standards to hospitals, training programmes were conducted in some countries in 2011, including Cambodia, the Lao People's Democratic Republic, Mongolia, the Philippines and Viet Nam. In Cambodia, a dedicated IPC training unit equipped with a newly developed national IPC training package was established to support the national IPC committee. In 2011, the Lao People's Democratic Republic and Mongolia reported establishing national IPC resource centres. In the Lao People's Democratic Republic, this resource center includes 12 stations for IPC demonstrations. In Mongolia, 81 infection control practitioners and 265 nurses and clinical staff were trained at the IPC resource centre in the last 18 months. In Viet Nam, a national training curriculum on IPC for physicians, nurses and microbiologists was developed in collaboration with the Viet Nam Nurses Association, with technical support from WHO country office.

## MAJOR CHALLENGES

- ▶ Lack of an IPC culture or prioritization in clinical settings, and limited coordination between ministries of public health and medical-care providers.
- ▶ In a few Member States, limited infrastructure (lack of water, etc.) and shortage or even lack of medical supplies including masks, soap, etc., at the health facilities leads to poor infection prevention and control.

## NEXT STEPS

- ▶ Proceed with establishing an organizational structure for national IPC programmes and roll out IPC policy to health facilities at the national and subnational levels.
- ▶ Conduct advocacy meetings for MoH and hospitals senior management to promote an IPC culture.



WHO

Philippine nurses learning the principles of clinical management and infection control.

## FOCUS AREA 5: RISK COMMUNICATIONS

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### OVERVIEW

Public health emergencies are unpredictable events that are usually characterized by uncertainty, confusion and a sense of urgency. These events can have both direct and indirect social and economic impacts that may have far greater implications and repercussions. While it is not possible to prevent health emergencies, their adverse direct and indirect impacts can be mitigated through effective risk communications.

A number of key public health events have shown that public health emergencies place great demands and critical pressure on communications resources. In some contexts, the skill set, knowledge and competencies of communications staff might not be appropriate to meet expectations during public health emergencies.

Within the framework of APSED (2010), the risk communications focus area defines how health emergency communications, operational communications and behaviour-change communications fit together and complement each other. It shows the inherent value of each component in the context of public health and clarifies the differences, as well as the interface, among these different components and what capacity gaps currently exist.

The APSED (2010) Risk Communications Workplan has set a vision in which all Member States will have risk communications integrated into routine prevention functions and as an essential component of the health emergency response actions within the MoH within five years. Two key milestones for risk communications during the first two years of the workplan include identifying focal points and teams for health emergency communications, and developing guidelines for health emergency communications and for media response, monitoring and analysis.

### KEY ACHIEVEMENTS

- ▶ The majority of Member States have identified focal points/teams for health emergency communications, with some also facilitating the development of risk communications workplans (e.g., the Lao People's Democratic Republic, Mongolia and Viet Nam). The risk communications workplans identified activities under three key components: health emergency communications; operational communications; and behaviour-change communications. These plans have already been applied during public health events in countries.



WHO

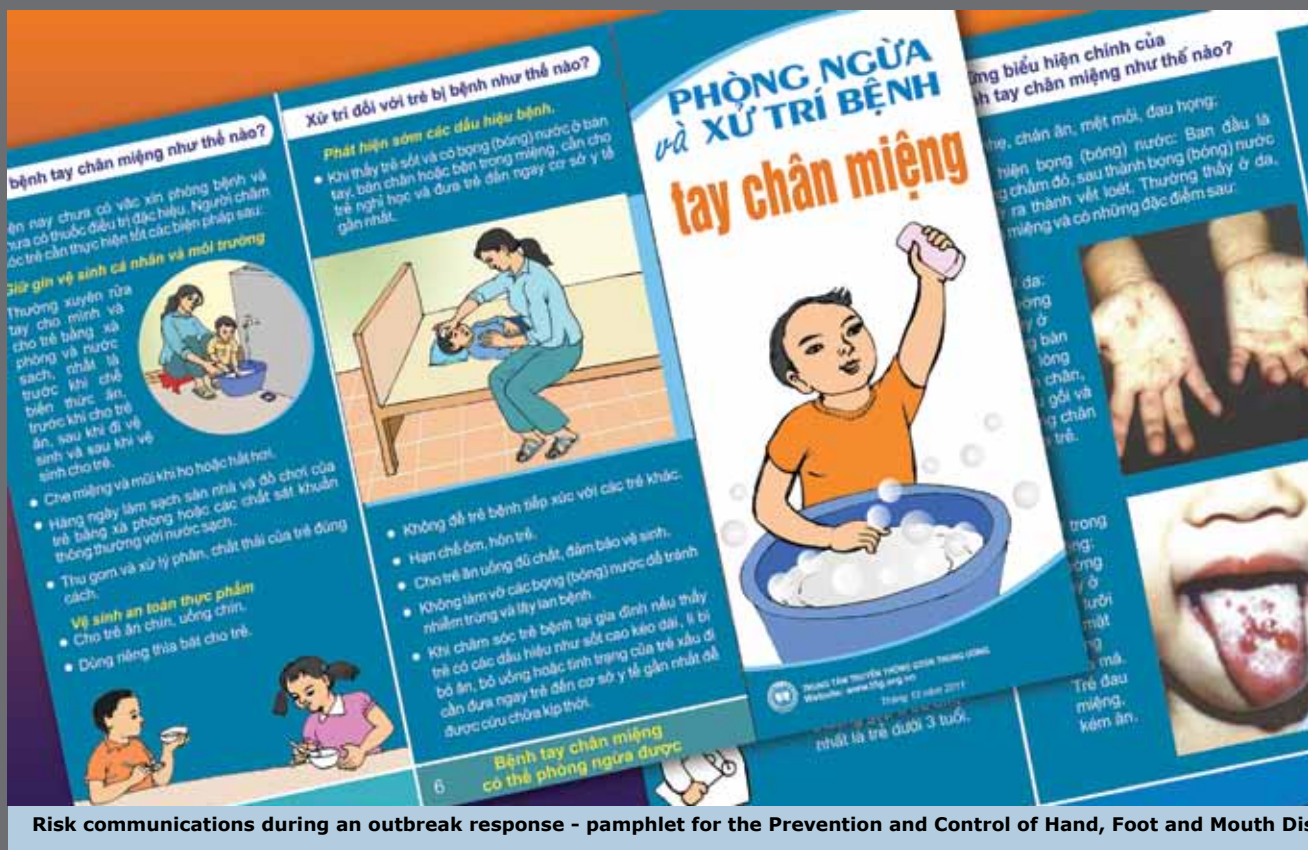
**A press conference at WHO China Country Office informs the public about an influenza outbreak.**

- ▶ The Regional Office facilitated the development of an operational framework for health emergency communications that can be adapted for various specific health emergencies.
- ▶ Guidelines for health emergency communications and media response, monitoring and analysis were developed to assist Member States in developing their national communications and media response, monitoring and analysis.
- ▶ A regional health emergency communications workshop for Asia Pacific countries was held in November 2011, which included a tabletop exercise for Member States. The activity provided an opportunity to gain insight into the challenges of ensuring timely and transparent communications to the public during a health emergency situation.
- ▶ Building on lessons learnt from the influenza A(H1N1) pandemic in 2009 and from the experience during the tabletop exercise, representatives from Member States recognized the value of having risk communications procedures, protocols, mechanisms and human resources in place and functional in case of a public health event.

## CASE STUDY 4: RISK COMMUNICATIONS IN VIET NAM: HAND, FOOT AND MOUTH DISEASE

In 2011, Viet Nam witnessed an unprecedented rise in cases of hand, foot and mouth disease (HFMD), which has been endemic in the country since 2003. The first few HFMD cases were reported in February 2011, and numbers rose swiftly each month to a peak of 20 316 cases in September 2011. By the end of 2011, over 110 800 HFMD cases had been reported with more than 165 deaths across the country. HFMD cases and deaths were mostly concentrated in Viet Nam's southern region. HFMD is caused by a group of viruses known as Enteroviruses (EV). One of these viruses, EV71, which can cause severe complications including neurological, cardiovascular and respiratory problems, accounted for nearly 44% of all HFMD cases and 80% of related deaths in Viet Nam.

As the HFMD deaths began to rise significantly in August 2011, Viet Nam's MoH responded quickly to increasing media and public concerns. In late August 2011, Viet Nam's Minister of Health called on the WHO Viet Nam Country Office to take the lead on risk communications, as well as to provide support in the clinical management of cases, infection control and prevention, surveillance and epidemiology, and for legislation. At the national level, the MoH's subcommittee on communications began weekly meetings with key MoH and relevant ministry stakeholders, the WHO risk communications officer and United States Centers for Disease



Ministry of Health, Viet Nam

Risk communications during an outbreak response - pamphlet for the Prevention and Control of Hand, Foot and Mouth Disease



Control and Prevention representatives to establish a monitoring and reporting system. Situation reports were issued weekly and disseminated to MoH counterparts and the media.

A joint MoH–WHO press release on the prevention and control of HFMD was issued in early September 2011 followed by a HFMD information note that was released to the public. The WHO Country Office gave many media interviews, consistently advocating good hand hygiene, environmental cleanliness and early identification and treatment, especially of severe cases.

The MoH worked with WHO Country Office, the Regional Office and international partners to identify areas of coordinated technical support for risk communications activities aimed at preventing and controlling the spread of HFMD, particularly in children under the age of 5 years. These activities included a nationwide public awareness campaign highlighting preventive measures for HFMD, the focus of which was hand-washing and good hygiene. In provinces where infection rates were highest, WHO provided support to review and disseminate HFMD prevention guidelines. These guidelines were distributed to the hardest-hit local communities and door to door for parents and care-givers of children under 5 years of age. Health-care workers and members of women's unions received rapid training to support the door-to-door communication efforts.

Longer-term risk communications activities are on-going to continue to control HFMD as well as to distill lessons learnt from this event that can be applied to future public health outbreaks. A rapid assessment of MoH communications activities for the prevention and control of HFMD, and the *Communications Plan for Health Emergencies (2012–2016)* based on lessons learnt from HFMD in 2011 are currently being finalized. In addition, an assessment was conducted of MoH messaging and media reporting during the event.

The 2011 HFMD situation in Viet Nam reaffirmed that risk communications are fundamental to Viet Nam's ability to respond effectively to public health emergencies with informed decision-making, positive behaviour change and the maintenance of public trust. Collaboration between MoH counterparts and international partners was instrumental in identifying and implementing risk communications activities that would have an immediate impact on vulnerable populations. The introduction of a subcommittee on risk communications within the MoH has greatly improved information dissemination with key stakeholders and the media. Viet Nam's Ministry of Health recognizes, however, the need to build its risk communications capacity as a fundamental component in managing future public health emergencies and ensuring a sense of trust during outbreaks. Improved surveillance, a flexible national public health emergency response plan, which includes a risk communications component, and the need for targeted media training for Ministry of Health communications staff are critical areas that require further development.



sease, Viet Nam 2011

## SUMMARY OF ACTIVITIES

In the Western Pacific Region, Member States have undertaken a wide range of activities to strengthen risk communications functions at the country level.

Cambodia has established its risk communications unit within the disease control department and the team is responsible for the communications response for outbreaks and emergencies.

In the Lao People's Democratic Republic, the Health Communications Task Force was established and endorsed by the Ministry of Health. The task force addresses communications for both emerging infectious diseases and noncommunicable diseases, and a five-year action plan is being drafted. In addition, a National Health Communications Policy was developed and has been submitted for the Prime Minister's endorsement. In line with the policy, a strategy was developed for the Health Minister's approval.

In Mongolia, a risk communications team for emerging diseases and public health emergencies in the National Centre for Communicable Diseases was established at the national and regional levels. A crisis communications room at the IHR National Focal Point office was also established.

A different approach to strengthen risk communications at the national level has been applied in Viet Nam: a new subcommittee on risk communications was established within the MoH and a focal point for risk communications was identified. The early response structure paved the way for good dissemination of information during health emergencies and in maximizing the online media. The Viet Nam Government also used existing medical networks for its risk communications.

Member States have already tested their newly established health emergency communications mechanisms. For example in Viet Nam, the subcommittee for risk communications was mobilized for the recent outbreaks in the country, including hand, foot and mouth disease. In the Lao People's Democratic Republic, health emergency communications were applied for a dengue outbreak in the provinces (Attapue, Bokeo, Luangprabang and Vientiane), as well as for the communications needs assessment for anthrax for the provinces of Champasak and Salavanh.

Members States have paid considerable attention to training at the national level. For example, the Philippines mainstreamed the concept of risk communications in the context of health emergencies with its series of orientation and training sessions for its communications teams from the national and local levels. For Singapore, training for risk communications takes the form of on-the-job training as the MoH deals with risk communications issues on a regular basis. As part of its contribution to the Region, Singapore

provides technical support to regional organizations in sharing its best practices and approaches for health emergency communications.

A few countries in the Region developed and tested policies and SOPs (Malaysia, Mongolia and Viet Nam). For example in Malaysia, SOPs include lines of communications, identification of spokespersons and message clearance approval processes.

The Regional Office organized a regional health emergency communications workshop in November 2011. There were 50 participants from 15 countries and areas in the Asia Pacific region that came together to share information and reflect on national and regional experiences on risk communications from past health emergencies.

As a follow-up from the regional workshop, the development of operational frameworks and communications protocols for key public health events became the main focus of an informal consultation among experts from nine countries held in June 2012. The framework is being finalized for use by Member States. Countries have also been identified to facilitate the testing of the framework and guidelines.

## **MAJOR CHALLENGES**

- ▶ Ad-hoc risk communications arrangements are still in place for some countries due to limited skills and resources although Member States have tried to put in place mechanisms to address this challenge.
- ▶ In most countries, an operational framework and structure for health emergency communications within the MoH are lacking, and planning for risk communications during public health events remains limited. In some Member States, there is relative difficulty in differentiating the health emergency communications function the existing health education and health promotion programmes.
- ▶ Despite all the activities mentioned above, national risk communications policy is still weak in some countries. Other countries are struggling to transform policy into action that would involve converting the health emergency communications operational framework into practical guidelines that can be used during public health emergencies.
- ▶ The lack of strong political and financial commitments from relevant ministries to develop a strong mechanism to coordinate risk communications across all sectors needs to be addressed. Moreover, involving other sectors in public health emergency communications is quite a challenge in most countries.

## NEXT STEPS

- ▶ Establishment of a structure or mechanism to proactively and efficiently coordinate health emergency communications during public health emergencies, to be coordinated by focal points.
- ▶ Ensuring that tools are in place for health emergency communications is one of the main priorities and would entail developing and testing of communications procedures, guidelines and protocols, including interface with other existing programmes of the MoH. The testing of these tools and procedures will be done using real-life events and situations.
- ▶ Advocacy for health emergency communications will be done through regular national and regional meetings to sustain interest and to attain policy and programme support.
- ▶ Development of appropriate feedback mechanisms to inform health emergency communications will be an integral part of the SOPs and will also be tested using regional disease- or hazard-specific health emergency communications exercises.



WHO

Through APSED, WHO has worked closely with Member States to develop communications materials for use during disease outbreaks.

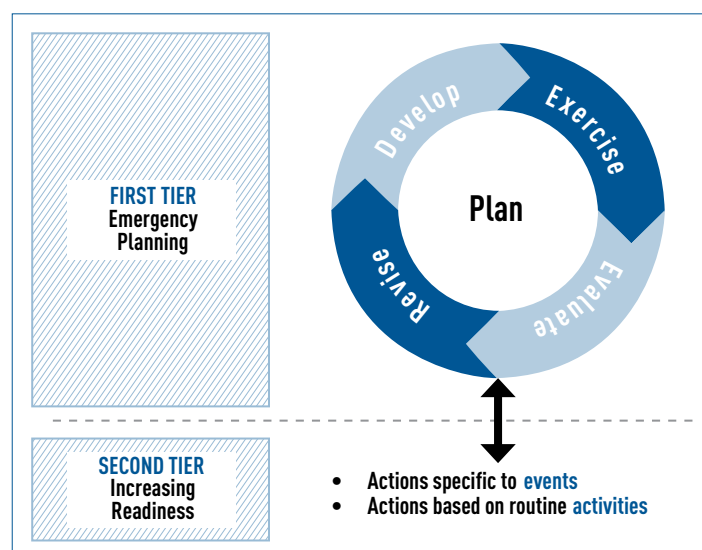
## FOCUS AREA 6: PUBLIC HEALTH EMERGENCY PREPAREDNESS

### OVERVIEW

National preparedness to respond to acute public health emergencies is vital to mitigate any negative impact on health, as well as economic and social development. Strengthening of public health emergency preparedness should build upon the foundations laid for pandemic influenza preparedness and the important lessons learnt from the response to the influenza A(H1N1) pandemic in 2009. It is envisioned that by 2015, Member States in the Western Pacific Region will have overarching, flexible national public health emergency preparedness and response plans (PHEP) and a national command, control and coordination structure for health response that is supported by a functional emergency operation centre (EOC) within the health sector to effectively respond to all acute public health emergencies of national and international concern, including an influenza pandemic.

A two-tiered approach for emergency planning and improving readiness for pandemic and other public health emergency preparedness has been developed to guide the implementation of this focus area of APSED (2010). The first tier promotes emergency planning by developing, exercising, evaluating and revising emergency plans. The second tier focuses on increasing public health readiness to activate the plan by strengthening event-specific activities and actions related to routine generic capacity build-up (See Figure 1).

Figure 1: Two-tiered approach for public health emergency preparedness



In addition, APSED (2010) recommends a step-by-step approach to formulate an overarching generic PHEP. The objective of the approach is to move from pandemic influenza to emerging diseases and, eventually, towards generic public health emergency preparedness.

The highlight of this focus area is the development of a PHEP that incorporates a common platform for command, control and coordination of response operations through the EOC. The PHEP and EOC enable timely decision-making and response that are required due to the rapidly changing nature of public health emergencies, increasing public pressure and legal requirements under IHR (2005). Unpredictable hazards, multiple entry points for both hazards and people, and the numerous response actions needed require efficient coordination among multiple departments. PHEP and EOC are tools that can be used to enhance this coordination. PHEP and EOC also provide important links with other components or focus areas by providing the streamlined structure to connect them, such as surveillance, risk assessment, response, risk communications, response logistics, coordination of surge capacity, and health-care facility and point-of-entry preparedness.

WHO has found that countries benefit from establishing EOCs within the MoH to manage all public-health-related events. Furthermore, WHO recommends using an incident management system (IMS) to allow public health professionals, such as surveillance officers, laboratory experts, risk



WHO

Points-of-entry preparedness is an important part of national and regional public health emergency preparedness and response.

assessment experts, logisticians, risk communications officials, and other technical and administrative officers, to work together in one location, thus allowing evidence-based, accurate and effective decision-making. An IMS is a systematic, proactive approach to ensure coordinated actions from all stakeholders to prevent, protect against, respond to, recover from, and mitigate the effects of public health events, regardless of cause, size, location or complexity, in order to reduce the loss of life.

One of the most important supporting functions of an IMS is response logistics to ensure a very timely response during emergencies. Response logistics focuses on developing or strengthening logistics within the national command-and-control structure and EOC in the MoH to cover core logistics functions during public health emergencies. Therefore, EOCs using IMS bolstered by response logistics contain the key ingredients to ensure effective emergency response to all public health events.

National IHR Focal Points (NFPs) play a vital role in facilitating IHR event communications, information sharing and MoH–WHO joint risk assessments in responding to a public health emergency of international concern. The 2011 IHR Review Committee’s recommendations reiterate that “States Parties should ensure that designated National IHR Focal Points have the authority, resources, procedures, knowledge and training to communicate with all levels of their governments and on behalf of their governments as necessary”. It is critical that functional operating procedures for communications and updated terms of references for the NFPs are made available and the key functions of the NFPs are tested and maintained through a periodic regional exercise.

Points-of-entry (POE) preparedness is an integral part of the overall national and regional public health emergency preparedness and response efforts. Strategic approaches to strengthening the POE public health function include use of existing tools, guidelines, facilities and services to strengthen routine public health functions at POEs; encouraging POE participation in national and local systems for surveillance and response; maintaining emphasis on the importance of pre-arrangements with relevant agencies and service providers; and encouraging regional collaboration and networking of POE public health authorities to ensure coordinated public health measures at international borders.

The key APSED (2010) Workplan milestones for this focus area include: conducting a regional exercise to test and maintain the functions of NFPs and the WHO IHR Contact Point; development and dissemination of the key messages and guidelines to advocate the new role of POE under IHR (2005); and development of guidelines on establishing response logistics within the health sector. In this reporting period, the following key achievements were realized at the regional and country levels.

## CASE STUDY 5: EMERGENCY OPERATIONS CENTRE, WHO REGIONAL OFFICE FOR THE WESTERN PACIFIC



WHO

**The Emergency Operations Centre is an integral part of the WHO Western Pacific Regional Office operational platform.**

In recent years, the Western Pacific Region has been an epicentre for emerging diseases and natural disasters, having profound national and international implications for public health and economic security. Examples include SARS and the Great East Japan Earthquake of 2011, which resulted in enormous loss of life and serious damage and destruction to health infrastructure and health systems.

During these events, the WHO Regional Office for Western Pacific played a unique role to support Member States in fighting threats to public health, which often went beyond national borders. One of the lessons learnt is that emergencies continue to occur and the response to these events requires several public health disciplines to work closely together in order to quickly save lives.

The Emergency Operations Centre (EOC) proved to be an essential technical, information and management hub that was critical for ensuring coordinated response in those times of crises. The EOC served as a central command-and-control facility responsible for carrying out emergency management and response functions at both the strategic and tactical levels.

As time passed, it became clear that the role of the EOC goes beyond response operations. The Regional Office EOC has been expanded to include preparedness planning, ongoing daily monitoring and assessment of events, sharing information, training and exercises, coordination, and evaluation. The EOC has become an integral part of the Western Pacific Region's common operational platform.



## KEY ACHIEVEMENTS

- ▶ The steps for moving from pandemic preparedness towards generic public health emergency planning were agreed upon at the Informal Consultation on Public Health Emergency Planning in March 2012.
- ▶ Through the development of the *Practical Guide: Establishing Emergency Operations Centres and Response Logistics Systems in Ministries of Health*, a clear direction has been given to Member States in defining the roles and functions of an EOC, an incident management system and how they are supported by response logistics.
- ▶ A *WHO Guide for Public Health Emergency Contingency Planning at Designated Points of Entry* was published and distributed among Member States to assist in their core capacity development at the designated POE with particular focus on developing a public health emergency contingency plan for responding to events that may constitute a public health emergency of international concern.
- ▶ An annual IHR event communication exercise, IHR Exercise Crystal, was carried out in December 2011 with participation of National IHR Focal Points from 18 Member States.
- ▶ All countries in the Western Pacific Region that responded to the IHR National Capacity Monitoring Questionnaire reported that coordination between relevant ministries on events that may constitute a public health event of international concern was in place in 2011.

## SUMMARY OF ACTIVITIES

In the Western Pacific Region, the focus for public health emergency management has been on pandemic influenza preparedness and response. Countries have been encouraged to regularly test, review and update their national pandemic preparedness and response plans based on lessons learnt from pandemic influenza in the Region. For example, in China, the Lao People's Democratic Republic, Mongolia and Viet Nam, the national pandemic influenza response plan was reviewed based on the lessons learnt from pandemic (H1N1) 2009. In China, the Lao People's Democratic Republic and Mongolia, a national plan was also developed for public health emergency preparedness and response.

At the regional level, the Informal Consultation on Public Health Emergency Planning was held in March 2012 in Manila to identify generic elements or components of pandemic influenza, emerging diseases and other public health emergency preparedness events and to agree upon the steps for moving from pandemic preparedness toward generic public health emergency planning in the Western Pacific Region. The meeting concluded that:

- ▶ Influenza remains a high-priority disease and activities to ensure readiness for a pandemic remain a high priority for the Region.
- ▶ High-level support for public health emergency planning and readiness is essential for bringing together parties from across the MoH.
- ▶ Developing generic capacities for emergency response has the potential to maximize use of resources in resource-limited Member States.
- ▶ Coordination can be enhanced by the establishment of an EOC within the MoH.
- ▶ The first step of moving from pandemic preparedness to emerging infectious diseases planning will involve broadening the plan to identify the generic elements essential to emergency response.
- ▶ The addition of an overarching framework and development of SOPs will ensure all responders are fully acquainted with their roles and responsibilities.

The Informal Consultation on EOCs and Response Logistics was held in May 2012 with the participation of Member States and experts to develop guidance material on roles and functions of EOCs, IMSs and response logistics. While it was agreed to articulate each of them as separate entities, it also became clear that EOCs would be the pivotal axis for emergency response, using an IMS and supported by response logistics. A response logistics framework has been defined to outline the key elements of response logistics and the tasks for a response logistician in a MoH. SOPs were developed to describe the different functions of an IMS, defining their respective roles and responsibilities. Following the informal consultation, a practical guide was drafted to guide Member States in establishing EOCs, IMSs and response logistics. The draft will be finalized after incorporating the comments from Member States and participants of the regional TAG meeting in July 2012.

In December 2011, IHR Exercise Crystal 2011 was conducted as the annual scenario-based IHR event communications exercise. It included the participation of NFPs from 20 Member States and aimed to validate the accessibility of the NFPs through various means of communication and test their assessment of public health events and the notification process as required by IHR (2005). As a result of this exercise, all countries recognized the vital role of NFPs in detecting, verifying, assessing and responding to public health events of international concern and the need to strengthen their role.

Regional priorities to enhance POE capacities and emergency preparedness have been identified and agreed upon through the regional meeting on POE held in October 2011. Better understanding on the new role of POE has been observed and countries have now designated POE for IHR

core capacity development, including developing a public health emergency contingency plan.

Other key activities completed in the reporting period include:

- ▶ Pandemic influenza rapid containment exercise (“PanStop Exercise”) in Manila, Philippines, in December 2011;
- ▶ A meeting to review and strengthen regional pandemic influenza preparedness and response in Beijing, China, in March 2011; and
- ▶ A logistics drill for the assessment of capacities for emergency stockpile deployment from the regional stockpile to Mongolia in 2011.

### **MAJOR CHALLENGES**

- ▶ Difficulty in coordinating multisectoral collaboration and communications in establishing a framework for public health emergency planning to respond to multi-hazards.
- ▶ Lack of technical staff appropriately trained and available for deployment for public health emergency response at all levels, including provincial and district levels.
- ▶ The concept of the EOC functions and their utilization for routine and emergency operations is relatively new to Member States, thus WHO’s guidance is required in assisting Member States in developing such functions.
- ▶ Ensuring that the NFPs are equipped with appropriate authorities and streamlined procedures for event communications within the countries and with WHO.

### **NEXT STEPS**

- ▶ Finalization and distribution of the *Practical Guide: Establishing Emergency Operations Centres and Response Logistics Systems in Ministries of Health* and provision of in-country technical support in establishing and strengthening EOCs, associated with IMS and supported by a response logistics system within the MoH in selected priority countries.
- ▶ Identification of focal points for response logistics within the MoH and provision of training on response logistics at the regional level.
- ▶ Strengthening and maintaining functions of NFPs through advocacy and the development of appropriate authorities and regular training at the regional and national levels. Improving IHR event communications through the better use of the event information site (EIS) by widely sharing best practices.

## **FOCUS AREA 7: REGIONAL PREPAREDNESS, ALERT AND RESPONSE**

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### **OVERVIEW**

This focus area in APSED (2010) has been recognized as one of the key priority areas. It was requested by Member States and recommended by the TAG because a regional system for cooperation, collaboration and information-sharing is critical in protecting against emerging diseases in the Region. Within the framework of this area, the following key activities are included: regional surveillance and risk assessment; regional information-sharing system; and regional preparedness and response.

During the reporting period, the Regional Office contributed to capacity strengthening for the detection and response to outbreaks through developing and enhancing national public health professionals' competencies in field epidemiology. Technical support was also provided to a number of countries to review and strengthen their national surveillance and response systems.

In the APSED (2010) Workplan, establishment of systematic risk assessment at the regional level was identified as a key milestone for Year 1. To achieve this, a risk assessment tool for acute public health events was developed in 2011–2012 to guide a systematic process for gathering, assessing and documenting information to determine risks that inform public health actions. This tool allows for systemization of risk assessment at both the regional and country levels.

The key achievements in this area at the regional level are highlighted below, followed by a detailed description of activities. Activities that took place at the country level can be found in the section on Focus Area 1.

### **KEY ACHIEVEMENTS**

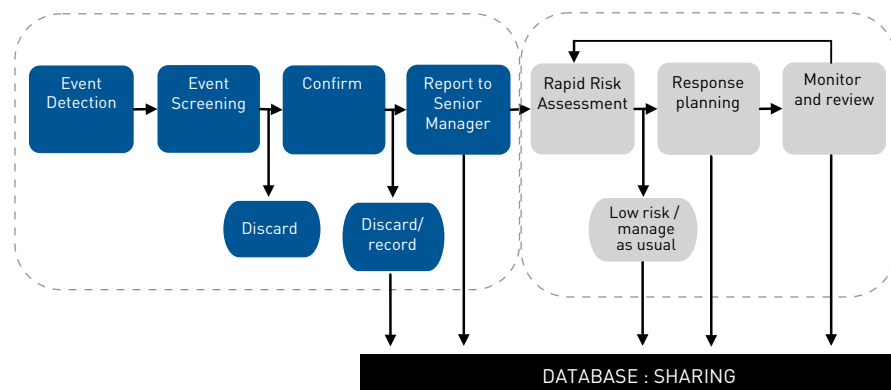
- ▶ A user-friendly, flexible and relational database for event-based surveillance (EBS) was developed in 2011 based on the EBS guide (2009) and it is used daily by DSE in the Regional Office to assess and record each event and present these at the daily outbreak team meeting.
- ▶ A comprehensive annual report on dengue, based on the reported IBS data from Member States, was produced and published for the first time in 2011.
- ▶ Regional biweekly updates on influenza, dengue, and hand, foot and mouth disease (HFMD) in the Western Pacific Region have been institutionalized and published on the Regional Office website since 2011.

- ▶ The Regional Office is providing input and expertise into the drafting of the global manual to guide risk assessments for acute public health events.
- ▶ Processes and methods for risk assessment applications for day-to-day practice for acute public health events is under development.
- ▶ Regional FETP has been operational at the country level.
- ▶ A mechanism for regional information sharing system has been established at the Regional Office through the *Western Pacific Surveillance and Response* (WPSAR) journal.

## SUMMARY OF ACTIVITIES

In the Regional Office, EBS is ongoing for the rapid identification, verification, assessment and response to EID events (human or animal) at the regional level. The Regional Office has used the EBS system since 2008, and it has been continually refined and improved. It now includes four key steps: capturing the event; initial screening; collecting additional information, including verification; and assessing the risk (See Figure 2).

*Figure 2: Event-based surveillance*



The creation of a user-friendly, flexible and relational database for EBS began in 2011. The Regional Office EBS database allows all events detected by rumour surveillance officers to be archived and monitored from a single location, allowing for quick access to both current and historical event information, both public and confidential. Such accessibility and capacity allows for timely assessments of new events for a better-informed response. The database is used daily by DSE in the Regional Office, and includes the category of the event (e.g., infectious disease, food-related), number of human or animal cases and deaths, place of occurrence (e.g., country, province), time of occurrence, and actions conducted by the country and/or WHO. Ongoing events are updated routinely. Monthly or annual summary reports on the number of events that were new, updated or closed can be



AFP

A boy with dengue fever sleeps on a chair at a Manila hospital in 2012.

automatically generated. A report on the summary of the events that occurred during the past three years in the Western Pacific Region and the newly developed EBS database is currently being prepared for submission to WPSAR.

The Regional Office has been sharing its EBS database template with Member States through its FET Fellowship Training Programme. The Regional Office has been providing technical assistance to countries regarding EBS and the database.

In 2011, the Regional Office produced the first comprehensive dengue annual report. The report, freely available through WPSAR, describes the burden of this regional priority disease, along with the annual numbers of cases and deaths for 2010 from the surveillance systems in each Member State where dengue is endemic. The dengue annual report for 2011 is currently being prepared and will include additional information on gender distribution, sampling and updated information on case definitions. An additional analysis of age- and sex-disaggregated dengue surveillance data was published in WPSAR in 2011.

While the Regional Office has always monitored emerging diseases that have become endemic and common in the Region (e.g., dengue, HFMD), systematically applying IBS methods to monitor the disease trends more routinely has become increasingly emphasized. Routine, timely and more systematic updates allow Member States to be aware of any possible threats in the Region. Since 2011, biweekly updates on the latest situation for dengue, HFMD and influenza are shared through the public Regional Office website. These reports include information on the latest number of cases, deaths and weekly or monthly trends in disease activity, along with comparisons to the previous year. Member States are encouraged by the Regional Office to share such information in a timely manner so that the Region as a whole can be better informed and prepared.

Draft guidelines for country activities to improve IBS systems, especially in developing countries in Western Pacific Region, are under development. The aim of the guidelines is to ensure that current IBS systems are useful for monitoring disease trends and allow for appropriate risk assessment for outbreak-prone diseases. The guidelines should be completed by the end of 2012, with a wide consultation including relevant Member States and external experts to be undertaken in early 2013.

In 2012 a manual to guide risk assessments for acute public health events was published by WHO; the Regional Office was actively involved in the drafting process. The document provides guiding principles for risk assessments for acute public health events. It is aimed at national departments with health-protection responsibilities, NFPs and WHO staff. It was developed over a one-year period through a multi-region consultation of WHO technical officers following a request for guidance from Member States. It is publicly available on the WHO website.

Since January 2011 there has been an increase in activity for risk assessments at the regional level. Risk assessments were commonly used prior to 2011 for acute public health events, but in an ad hoc manner. Understanding when risk assessments should be used and what process and methods to use for systematically assessing risks associated with potential and actual acute public health events has been challenging. As well as the global manual previously described, the Regional Office has also developed a process by which risk assessments can be applied in day-to-day practice for acute public health events.

Based on the guiding principles for risk assessments, four practical guides were developed and contextualized for the Western Pacific Region during 2011 and 2012. The aim of these guides is to provide a process and methods for the four most common situations where risk assessments are used for acute public health events. These practical guides were developed through a consultative process in June 2011 with risk assessment and public health experts from the Region. The process and methods continue to be

refined through feedback after being piloted in the Regional Office and in some Member States. The practical guides for risk assessment are for:

- ▶ Event screening for systematically assessing the need to report potential public health events detected through the EBS system at the Regional Office to the daily outbreak team meeting. This guide has also assisted a number of Member States to assess information about acute public health events in every day practice. Moreover, in April 2011 risk assessment training using draft tools for event screening and emerging disease/rapid assessments were undertaken for MoH in Malaysia with the technical support of the Regional Office.
- ▶ Rapid risk assessment for acute public health events aimed at further assessing the level of risk and determining the proportionate response for reported acute public health events. The method is being used daily by the surveillance team and managers at the Regional Office. The process for use is still being refined. Two Member States are currently involved in pilot projects with this method.
- ▶ Emerging infectious disease risk assessments aimed at providing a flexible systematic framework for a group of people to assess the level of risk posed by an infectious disease and prioritize actions for reducing the level of risk. This can form the basis of recommendations for public health managers in the medium to long term. The first draft was presented in July 2011 and continues to be refined. The framework is used on a regular basis at the Regional Office by FET fellows who undertake a project assessing risks of a priority disease from their home country during their two-month stay at the Regional Office.
- ▶ Risk assessments for communicable diseases following humanitarian emergencies aimed at assessing the current threat of communicable diseases to individuals and displaced populations following a humanitarian emergency. It also highlights strategies for mitigating such threats. This guide was finalized in June 2011 and has been used by the Regional Office following floods and earthquakes in the Region and also by the Japan National Institute of Infectious Disease to assess the risk posed by infectious diseases following the earthquake, tsunami and nuclear incident in March 2011.

The Regional Office carries out risk assessments at the regional level for acute public health events in the Western Pacific Region and for events that may pose a risk to Member States in the Region. From 1 January 2011 to 30 June 2012, 12 risk assessments were conducted by the Emerging Disease Surveillance and Response Team. While one risk assessment was undertaken with a Member State, the majority have been undertaken within the Regional Office to provide recommendations for WHO senior management





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Enhanced surveillance under APSED provides crucial early detection and reporting of cases during disease outbreaks.

on proportionate response and risk communications. During this period the process and methods have been refined and are currently being streamlined. Risk assessments undertaken in 2011 include “Scarlet Fever in Hong Kong”, in collaboration with Centre for Health Protection in Hong Kong (China).

Regional response support was provided to countries for a number of events including, but not limited to, leptospirosis in the Philippines in 2011, HFMD in Viet Nam in 2012, cholera in the Philippines in 2012 and HFMD in Cambodia in 2012.

#### **Leptospirosis, Iloilo Province, Philippines, 17 August to 30 September 2011**

WHO undertook three missions to Iloilo Province in Region VI in the Philippines to provide technical support for the development and implementation of a post-flooding protocol for enhanced surveillance of leptospirosis. For two missions, WHO staff members were accompanied by representatives from the University of the Philippines and the Research Institute for Tropical Medicine and by the Department of Health on another mission. The enhanced surveillance protocol as a whole provided early detection and reporting of cases and monitored the geographic distribution of the cases.

### **Hand, Foot and Mouth Disease, Viet Nam, June–October 2011**

Viet Nam had 110 897 cases of HFMD in 2011 across 63 provinces, including 166 deaths in 30 provinces and cities. At the request of the Ministry of Health, WHO worked with its partners in providing technical support in the implementation of prevention-and-control measures against the disease. In June 2011, WHO conducted a training workshop to enhance HFMD surveillance and to introduce the guidelines on clinical management and the public health response for HFMD for health staff in southern Viet Nam. WHO worked with the MoH in developing a communications strategy as a priority action in line with APSED principles. In September 2011, the Regional Office committed to financial and technical support for communications activities that would have an immediate focus on the prevention and control of HFMD.

### **Cholera, Philippines, June 2012**

Following the declaration of an outbreak of cholera in Catanduanes Province in Region IV of the Philippines in June 2012, the Regional Office undertook a risk assessment and subsequently set up an event management team to examine the potential support required by the Department of Health. The Global Outbreak Alert and Response Network (GOARN) was used to recruit two international experts with clinical management expertise as requested by the Department of Health. They were deployed to Region IV and provided guidance on improving existing cholera guidelines and training on cholera management for clinicians and other health-care workers.

### **Hand, Foot and Mouth Disease, Cambodia, July 2012**

Since April 2012, a number of very young children suffering from shortness of breath, high fever, respiratory and/or neurological symptoms had been admitted to a large charity paediatric hospital in Phnom Penh. After the MoH Cambodia and WHO communicated about the event on 29 June, WHO set up an event management team and conducted an initial risk assessment. MoH Cambodia formally notified WHO of the event through the IHR National Focal Point on 1 July. Within a few days, a risk communications expert from WHO headquarters and two epidemiologists from the Regional Office were deployed to enhance the surge capacity at the WHO country office to work with MoH Cambodia, contributing to the rapid assessment of its etiology as a severe form of HFMD and the effective communication of that information.

The Regional Office developed and launched a FET Fellowship Training Programme in 2011 which aims to build a capacity in epidemiology including surveillance at the country level. During the assessment period there were fellows from Australia, China, Hong Kong (China), Japan, the Lao People's Democratic Republic, Malaysia, Mongolia and the Republic of Korea trained via this programme. These fellows have completed projects including risk assessments of priority diseases. The findings of the risk assessments and appropriate recommendations were shared by the Regional Office FETP fellows with their home countries upon their return.



WHO staff monitor and assess disease outbreaks and other acute public health events to advise on public health responses.

During the reporting period evaluations of FET were carried in a few Member States (Cambodia, the Lao People's Democratic Republic and Mongolia) with technical assistance of the Regional Office (See Focus Area 1).

In November 2011 the third Biregional Scientific Conference on FET/FETP was held by the Regional Offices for South-East Asia and the Western Pacific in conjunction with the Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) 2011 in Indonesia. It focused on how each participant could contribute to the newly developed FETs/FETPs in order to strengthen the public health system of each country. The objectives of the workshop were to:

- ▶ share and document experiences and achievements of newly developed programmes and conduct ongoing assessments of the programmes;
- ▶ refine and finalize the FET assessment framework based on the experience of a pilot assessment and to agree on the next steps for assessment activities for FETs;
- ▶ develop an action plan and define roles based on the sustainable model for international partners to support FETs/FETPs; and
- ▶ foster mutual partnership among FETs/FETPs.

As a result of this conference it was agreed that:

- ▶ WHO will continue to identify and support countries that wish to strengthen capacity in field epidemiology;

- ▶ assessments and evaluations of existing and newly established programmes be further conducted, as appropriate;
- ▶ in the Western Pacific Region, assessments for sustainability of FET should be conducted in Cambodia and Mongolia, and assessment results reported back to the next conference in 2012;
- ▶ Member States should be encouraged to review the section of the APSED (2010) Workplan relevant to FET and advised to include FET-related activities in their national APSED workplans;
- ▶ WHO should further develop the concept of “FET Plus” in consultation with Member States, technical experts and partners; and
- ▶ WHO should enhance the mechanism to coordinate effective support for FET and FETPs, in consultation with other partners, including annual regional forums and existing networks.

Regional information-sharing has been established at the Regional Office through the *Western Pacific Surveillance and Response* (WPSAR). WPSAR is an open access journal established to encourage countries of the Western Pacific Region to share information on the surveillance of and response to public health events in this Region. It commenced publication in late 2010 and to date has published eight issues, comprising 53 articles. Articles can be submitted on the implementation or evaluation of surveillance systems, investigations of public health events, risk assessments for rapid response and policy development, outbreak investigations, and research on routine public health activities. Public health events may be in any of the following areas: communicable diseases, natural disasters, bioterrorism, and chemical and radiological events.

WPSAR is aimed at people studying, conducting research or working in the surveillance of and response to public health events both within the Region and globally. The 300 subscribers are from 42 countries (21 from the Western Pacific Region) and comprise, among others, people from government (40%), United Nation organizations, including WHO (13%), universities (11%), nongovernmental organizations (5%) and research institutions (5%). On average, there were 1000 unique visitors and 1362 visits per month to the WPSAR website.

Training for data analysis and scientific writing is conducted by WPSAR staff for people who work in the surveillance of and response to public health events at the national level. This capacity is further strengthened through training-of-trainers workshops for national staff to train subnational staff. The training emphasizes the importance of critically analysing surveillance and response activities to stimulate discussions about options for improvements.

Surveillance Data Analysis and Scientific Writing Workshop materials were developed and a pilot workshop was conducted in Mongolia in July 2011

## CASE STUDY 6: BUILDING CAPACITY IN INFORMATION-SHARING THROUGH WPSAR

One goal of the *Western Pacific of Surveillance and Response* (WPSAR) journal is to build capacity in communicating epidemiological findings in the Western Pacific Region. Many Member States have strengthened their surveillance systems, which produce valuable information but they may not feel confident in preparing manuscripts for publication to disseminate the information widely. Alternatively, reports for surveillance and response activities may be produced, but they have only limited circulation due to the lack of a suitable avenue for publishing.

WPSAR has two main channels in which to assist Member States in building capacity for epidemiological writing—offering pre-submission guidance and editing of articles and a Surveillance Data Analysis and Scientific Writing Workshop. The four-day workshop introduces students to a structured approach to writing scientific papers that breaks up the writing process into a series of smaller steps. The participants work through each of these steps on their own manuscript, under the guidance of facilitators. The outcome of the workshop is a draft manuscript. Evaluations from the participants of the most recent workshops were positive, with each presentation ranked an average of between 4.1 and 4.6 out of 5, where 5 was a rating of “excellent”. Most of the respondents indicated that they would be likely to write another scientific article in the future with the support from a co-author.

An author from a previous workshop, who has gone on to publish an article in WPSAR, said, “Thank you! Your writing course was very very helpful in writing up this manuscript”.

WPSAR has published several articles that required pre-submission guidance and editing. Some comments provided by these authors during the publication process appear below:

“The whole peer review process was a real good learning experience for me and I learnt a lot from this.”

“Thank you once again for your guidance and support to produce the final manuscript; it was a very valuable learning process. Looking forward to seeing this manuscript published.”

“Thank you for the careful review process with this manuscript. We appreciate the time that has been invested in assisting an early career researcher to produce a publishable manuscript.”



WHO

(10 participants) and a workshop was conducted in Viet Nam in July 2012 (16 participants; two training-of-trainers).

### MAJOR CHALLENGES

- ▶ Linking regional (the FET Fellowship Training Programme at the Regional Office) and country activities.
- ▶ Embedding risk assessment more firmly into the day-to-day use at the Regional Office.

### NEXT STEPS

- ▶ Develop a standardized approach for IBS in the Region, including harmonizing case identification, laboratory confirmation and reporting of priority infectious diseases such as HFMD, dengue and influenza.
- ▶ Pilot testing of rapid risk assessments for acute events at the country level with WHO technical assistance.
- ▶ Carry out training in event screening and rapid risk assessment for FET fellows at the Regional Office.
- ▶ Undertake risk assessments with Member States as opportunities arise.



Medical staff in the Philippines check an X-ray of a suspected flu victim.

WHO

## FOCUS AREA 8: MONITORING AND EVALUATION

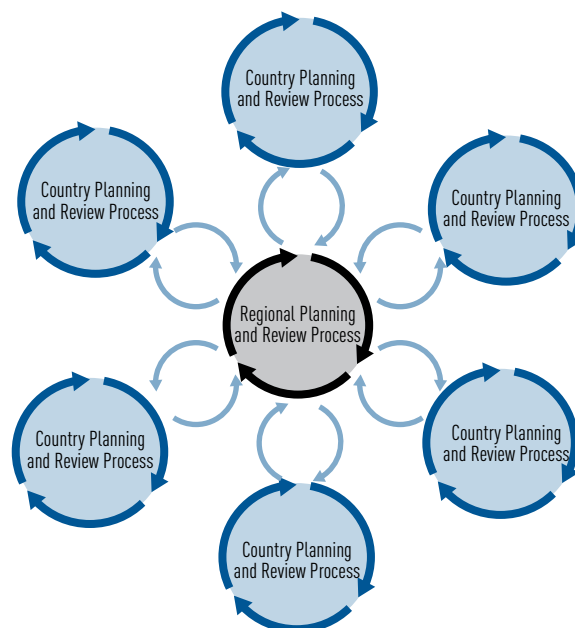
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### OVERVIEW

Monitoring and Evaluation (M&E) is a focus area for capacity-building under APSED (2010) and is an integral component of its implementation. It aims at meeting accountability and learning needs; it is led and owned by Member States; and it is integrated with other existing M&E systems (e.g., IHR monitoring or those of other donor or partner programmes) to achieve harmonization and synergy in monitoring, evaluating and reporting to reduce duplication of effort.

Central to the successful implementation of a country-owned M&E system is the establishment of an integrated national and regional planning and review process. The proposed process has two components, namely, the national planning and review process and the regional collective planning and review process (See Figure 3). The national process includes regular national-level planning and review meetings or workshops with the participation of government representatives from each APSED (2010) Focus Area and other in-country stakeholders and partners. The regional process is represented by a regional forum (e.g., annual regional TAG meeting or an equivalent) that brings Member States, WHO, donors and partners together to review regional progress, discuss common issues and jointly formulate recommendations for priority activities in the coming year.

*Figure 3: An integrated national and regional planning and review process*



Six essential elements of the M&E have been identified: 1) development of a national-level M&E mechanism to organize a national planning and review process; 2) formation of a National M&E Team through an appointment of the National M&E Focal Point/Facilitator and the M&E Focal Point from each technical Focus Area; 3) development of a national workplan; 4) utilization of monitoring indicators including but not limited to the IHR monitoring indicators and six APSED (2010) Performance Indicators, while data collection, verification, analysis and reporting are coordinated by the National M&E Team; 5) development of the national and regional progress reports on a yearly basis for sharing of information and a collective review of progress made; and 6) conduct of an annual TAG meeting as a regional forum in which regional progress is monitored and key recommendations formulated.

Key workplan milestones for this Focus Area are of incremental nature, while an annual cycle of activities must be ensured on an ongoing basis. These include the establishment of an integrated national and regional planning and review process, development of national and regional workplans in line with the APSED (2010) Workplan, and conduct of national planning and review meetings and annual regional TAG meetings. A post-implementation full-scale exercise to test national and regional systems and capacities to respond to EID outbreaks and public health events is scheduled. Since the inception of APSED (2010), steady progress has been reported by Member States in achieving these milestones.



WHO

**APSED meeting at WHO Regional Office in Manila, Philippines. Such meetings promote the sharing of resources, information and ideas to make the Region better able to deal with emerging diseases.**



## KEY ACHIEVEMENTS

- ▶ *A Practical Guide on Establishing an Integrated Planning and Review Process—Capacity-Building for APSED (2010) Monitoring and Evaluation* was drafted and disseminated among Member States.
- ▶ Fifteen countries in the Western Pacific Region have developed and formally submitted their national workplans to WHO to strengthen their capacities to detect, assess, report and respond to acute public health events as required by IHR (2005).
- ▶ The National M&E Focal Points and M&E Teams have been identified and national planning and review processes established in a number of countries.
- ▶ Nineteen IHR State Parties submitted responses to the IHR National Capacity Monitoring Questionnaire in the Implementation of IHR Core Capacities in 2011 and 19 State Parties submitted responses in 2012.
- ▶ The original set of six supplementary APSED (2010) Performance Indicators has been piloted in selected countries for further revision.

## SUMMARY OF ACTIVITIES

Following the recommendations of the first TAG meeting in late 2011, the Regional Office developed a draft guide to assist Member States in establishing an integrated national and regional planning and review process. *A Guide to Establishing an Integrated Planning and Review Process—Capacity-Building for APSED (2010) Monitoring and Evaluation* is considered a living document that continues to be reviewed and updated in order to reflect the operational reality and capacity development needs of Member States at different stages of APSED (2010) implementation. The Guide provides an overview of the APSED (2010) M&E system supported by practical tools, including the samples of the terms of reference of the National M&E Team, the meeting agenda of pre-TAG and post-TAG national planning and review meetings, a detailed guide to defining APSED (2010) Performance Indicators, and the examples of reporting templates for the annual progress reporting that could be utilized for systematic reporting by Member States.

Of the 27 States Parties to IHR (2005) in the Western Pacific Region, 15 countries have developed and submitted their national workplans to WHO to strengthen their core capacities as required by IHR (2005). Of the 27 State Parties, 14 countries have requested and received extensions to the initial deadline for establishing IHR core capacities (See Annex 1), while the Philippines shared its workplan on a voluntary basis to demonstrate its commitment to the continuity and sustainability of IHR compliance as part of its continuous quality improvement cycle. The APSED (2010) Workplan has been utilized as a guidance document for these countries to develop

## CASE STUDY 7: ESTABLISHING A NATIONAL MECHANISM IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC

The National Workplan for Emerging Infectious Diseases (EID) and Public Health Emergencies (PHE) for 2011–2015 was developed in collaboration with national counterparts in May 2011, following the introduction of the newly updated APSED (2010). Monitoring and evaluation, along with public health emergency preparedness, was not in the previous national plan (2007–2010), but they were included in the new workplan in order to effectively monitor the progress of implementation.

Until 2011, there was a mechanism in place to jointly review the National Avian Influenza Control and Pandemic Preparedness Plan by the Government, along with the National Committee for Communicable Diseases Control, United Nations agencies, the World Bank, the Asian Development Bank and nongovernmental organizations, coordinated by the National Emerging Infectious Disease Coordination Office (NEIDCO). A parallel review system existed in the country for the implementation of the National Workplan for EID (2007–2010) for which ad hoc assessments were conducted, including baseline data collection with MoH in 2007, external reviews with the Australian Agency for International Development and the Canadian International Development Agency in 2008 and 2010 and internal assessments with WHO Country Office and WHO headquarters in 2009 and 2010.

Upon discontinuation of these national review frameworks, a new national planning and review mechanism has been proposed to integrate the existing in-country review platforms and provide a strategic direction and priority actions for managing health security threats from emerging diseases and other acute public health events.

The new mechanism involves a national monitoring and evaluation team and an annual stakeholder review meeting at the country level. It supports the planning and review process for the National Workplan (2011–2015) in line with APSED (2010), by ensuring, in particular, the coordination and harmonization in workplan activities, monitoring and evaluation requirements, and allocation of resources at the national level. The process encourages participation of the donor and partner agencies. It also contributes to linking the national activities to relevant regional strategies and platforms for international collaboration in improving capacity in preparedness, alert and response to all public health events. The national meetings also provide a forum to collectively review the IHR core capacity indicators and complete IHR Monitoring Questionnaire with a detailed description of the current capacities. The national exercise at the meeting in May 2012 facilitated the decision on the IHR extension issue.

Tremendous efforts are required to realize the long-term goal of having one workplan for EID and PHE, with a unified and coordinated M&E system with harmonized indicators across all partners' programmes in the country. Establishing the national stakeholder planning and review process is a first and important step towards achieving this goal.

key activities for implementation in line with IHR (2005) core capacity requirements.

Nineteen IHR States Parties submitted their responses to the IHR National Capacity Monitoring Questionnaire in the Implementation of IHR Core Capacities in 2011. Since 2010, countries have been encouraged to complete the IHR Questionnaire annually as part of their national-level monitoring and evaluation of progress towards building capacity in 13 core capacity areas identified by IHR (2005). Regionally aggregated outcomes of the questionnaire responses are shared with Member States at the annual TAG meetings. The global deadline for submission of the IHR Questionnaire for 2012 was 1 August 2012. As of early August 2012, 19 IHR State Parties submitted their responses to the IHR Questionnaire.

A number of countries, including the Lao People's Democratic Republic, Malaysia and Mongolia, have established a national M&E mechanism and already have an integrated planning and review process in place. Mongolia has reported that APSED (2010) framework contributed to strengthening national planning and M&E capacity for EID through wider consultation of different stakeholders from the health and non-health sectors and provided clear strategies and guidance for national implementers.

The original set of six supplementary APSED (2010) Performance Indicators was developed at the Informal Consultation to Develop Supplementary Indicators for the Asia Pacific Strategy for Emerging Disease (2010) in September 2010. These indicators, aligned with IHR core capacity requirements, aim to measure the combined results of the capacity-building efforts of all APSED Focus Areas, while emphasizing the importance of both the qualitative and quantitative information. These indicators were piloted in the Lao People's Democratic Republic, Mongolia and Viet Nam in early 2012. The main benefit of utilizing these indicators reported by countries was that it provided a means to access core capacity quantitatively and look at outputs rather than just process/inputs. Following the comments received from countries on the definition of quantitative indicators, the original six indicators were reviewed in June 2012 and some were rephrased to clarify definitions.

## **MAJOR CHALLENGES**

- ▶ Ensuring harmonization and standardization of M&E requirements and integrating workplans among existing in-country platforms and different partners working on APSED focus areas have been identified as a major area of challenge. It has been reported that a lack of financial resources creates reliance on certain donors with various methods of M&E and specific reporting requirements.

- ▶ Interdepartmental or multisectoral collaboration with a clear delineation of roles and responsibilities may be hindered by a “silo system” or project approach driven by certain donor projects.
- ▶ A lack of funding and uncertainty about the future availability of funding may prevent countries from adopting a medium- to long-term view on work planning. Some countries were unable to provide a five-year workplan in line with the APSED approach.
- ▶ A lack of information in the national workplans on the estimated costs for countries to meet their obligations in the development and maintenance of IHR core capacities hinders the high-level advocacy necessary for raising funds. Timely and effective identification and provision of country-specific technical and financial support are only possible through improved collaboration between countries, WHO and international development partners.
- ▶ The limited use and delayed submission of the IHR Questionnaire by Member States as a self-assessment tool to monitor progress in the implementation of IHR core capacities undermine the efforts to accurately identify and analyse the existing capacities and gaps at the country and regional levels.



WHO

**A WHO-supported training exercise in Cambodia.**

## NEXT STEPS

- ▶ Countries in the Western Pacific Region are encouraged to continue their efforts in establishing integrated national and regional planning and review processes.
- ▶ Effective implementation of national workplans and a well-practised national and regional planning and review process must be ensured to provide opportunities for identifying technical and funding gaps, high-level advocacy and greater collaboration within and among countries.
- ▶ The Pacific islands countries will be incorporating M&E into their subregional APSED framework while utilizing the practical guide by the Regional Office as a reference.
- ▶ Annual reporting process in the Western Pacific Region will be enhanced by setting a regional target date for Member States to complete the IHR Questionnaire for timely analysis and a wider dissemination of regional aggregated data, and by collating the highlights of country-level achievements, major challenges and lessons learnt through a series of case studies.
- ▶ Utilization of the IHR Questionnaire and APSED (2010) Performance Indicators will be advocated particularly for those countries that do not have their own assessment frameworks for measuring their progress toward fulfilling IHR core capacity requirements. WHO will clarify its monitoring framework and relevant reporting requirements for different groups of countries depending on whether or not they have applied for a deadline extension.
- ▶ WHO will expedite the process of developing a framework for estimating the costs of IHR implementation to guide advocacy for raising funds required for county-specific interventions.

## MAINSTREAMING GENDER

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### OVERVIEW

Recognizing the complex nature of emerging diseases, gender is emphasized as a special consideration in APSED (2010) and it is treated as a cross-cutting theme that affects each of the core focus areas. As gender is one of the most basic sociocultural norms, it may affect not only the risk of exposure to infectious diseases, but also health-care-seeking behaviour and access to health care. From a surveillance perspective, as gender roles and norms are often age dependent, it is important to carry out gender-sensitive descriptive epidemiology analyses by disaggregating reported surveillance data by sex and age. Dengue in the Western Pacific Region, for example, has been found to affect males—in particular, young adolescent and adult males—the most, when the reported surveillance data are disaggregated by sex and age. Disaggregating reported surveillance data by sex and age is now routinely encouraged by DSE at the Regional Office as it helps detect potential gender-associated patterns from the surveillance data, which can in turn improve public health interventions. Such observations from the reported surveillance data should be interpreted with caution, however, as surveillance data reflect only those cases that seek health care, and any difference between the genders in health-care accessibility or health-care-seeking behaviour would directly affect the surveillance data.

Under APSED (2010), countries are thus encouraged to take a gender-sensitive approach in their surveillance activities and to use the findings to guide evidence-based public health interventions. It has been highlighted by many countries in the Region that during the reporting period, both at the regional and country levels, gender aspects have been incorporated into their surveillance systems.

### KEY ACHIEVEMENTS

- ▶ In the majority of Member States, a more gender-sensitive data summary and presentation format has been incorporated into surveillance systems for priority emerging diseases (e.g., sex- and age-disaggregated data summaries).
- ▶ A few Member States carried out gender-sensitive assessments of their surveillance data, identifying differentials between males and females in both the risk of disease and health-care-seeking behaviour (e.g., the Lao People's Democratic Republic and Mongolia) with technical support of the Regional Office.
- ▶ In 2011, historical dengue surveillance data from the Region was analysed, disaggregated by sex and age, indicating both the apparent higher risk of dengue among young adult males and also



WHO

Under APSED, countries are encouraged to take a gender-sensitive approach to surveillance activities.

the importance of analysing data in such a disaggregated fashion (published in WPSAR in 2011).

- ▶ In late 2011 the Regional Office published an analytical framework, Taking Sex and Gender into Account in Emerging Infectious Disease Programmes.
- ▶ A journal article based on the importance of a gender-sensitive approach to surveillance, using leptospirosis as a case study, has been published in WPSAR, and gender and surveillance reports from the Lao People's Democratic Republic and Mongolia are scheduled for publication in WPSAR by the end of 2012.

## SUMMARY OF ACTIVITIES

The majority of countries in the Region collect gender data on outbreak events and report it on a routine basis in their annual reports (e.g., Cambodia, the Lao People's Democratic Republic and the Philippines). For example in Cambodia, surveillance data on all suspect samples for avian influenza H5N1 cases (irrespective of outcome) include sex and age information, along with other demographic information. This allows public health professionals to keep up with the evolving pattern of avian influenza H5N1 and to detect any abnormal changes in the usual demographic of the affected cases. In the Philippines, gender is also incorporated into the programmes related to emerging disease and public health emergency management.

## CASE STUDY 8: INTEGRATING GENDER INTO DISEASE SURVEILLANCE



**Interviewing villagers to understand the role of gender in the dengue epidemic, Lao People's Democratic Republic.**

WHO

In 2010 a dengue epidemic struck the Lao People's Democratic Republic. It was difficult to understand the disease pattern because data by sex and age were not readily available. Thus, the Emerging Disease Surveillance and Response (ESR) unit at the WHO Regional Office sent a team to work with the WHO Lao Country Office to collect data and assess the situation, leading to crucial findings on gender that provide lessons for better-informed public health responses. The WHO team went into the field in Savannakhet province to explore these possibilities.

Dengue patterns in the Lao People's Democratic Republic were found to be very similar to the other dengue-burdened countries in the Western Pacific Region: most affected were males, in particular adolescent boys and young men. The team considered two possible reasons to explain the difference in cases reported among males and females: one, that boys and men tend to spend more time outdoors with more exposure to mosquitoes; and two, that men may have better access to health services because they often control how money is spent.

Interviews with villagers, school teachers and health-care workers revealed that adolescent boys and young men spend long hours outdoors. When they get sick, they tend to "tough it out" and not go to hospitals, or self-treat at pharmacies. However, young women, especially those of child-bearing age, were more health conscious and much more likely to seek health care, even for mild conditions.

These gender differences were consistent with data on health-seeking behaviour patterns: many more young women than young men sought care as outpatients for various infectious diseases.

But the patterns for dengue were different. Even though adolescent boys and young men generally sought less health care, they comprised the majority of dengue patients. The team's findings provided crucial evidence that while dengue is everyone's concern, adolescent boys and young men, in particular, may be truly at higher risk.

The investigative work on gender, however, is far from complete. ESR continues to incorporate a gender perspective into its work, carefully interpreting surveillance data, conducting in-depth field investigations, and providing feedback to public health workers and affected communities.



A gender-sensitive approach for surveillance has been actively applied at the regional level, in collaboration with WHO country offices. In September 2010, a regional workshop on mainstreaming gender into DSE work was conducted at the Regional Office, with participation by country office ESR staff and gender experts. Based on that workshop, in 2011, the report, *Taking Sex and Gender into Account in Emerging Infectious Disease Programmes: An Analytical Framework*, was developed. This framework defines specific action points, such as the recommendation that indicator-based surveillance data be disaggregated by sex and age whenever possible. The Regional Office has followed up on such recommendations, and in 2011 published *Male-Female Differences in the Number of Reported Incident Dengue Fever Cases in Six Asian Countries* in WPSAR. Furthermore, for the second annual regional dengue situation report, where the latest regional dengue data are reported, information on sex- and age-disaggregated data from the dengue-endemic Member States will be incorporated.

Additionally, in 2011 the Regional Office carried out a gender analysis using leptospirosis as an example to illustrate the importance of interpreting surveillance data with a more gender-sensitive perspective, considering the various biological and social factors behind the reported numbers. This analysis showed that the male excess observed in leptospirosis surveillance data may be due to gender differentials in occupational/recreational exposures, sex differentials in the severity of clinical outcome post-infection, and/or to the gender differential in health-care access or health-care-seeking behaviour. The result of this analysis has been published in WPSAR.

In response to requests by Member States, a series of technical missions focusing on the gender aspects of surveillance data was carried out. Two gender missions to the Lao People's Democratic Republic were organized, one in November 2011 and a follow-up mission in February–March 2012. Through these missions, national and provincial dengue data were summarized in a sex- and age-disaggregated manner, which indicated the excess of adolescent and adult male cases in the country (See Case Study 7).

Technical support from the Regional Office was also provided to Mongolia in March 2012, focusing on gender and surveillance. During the mission, the national indicator-based infectious disease surveillance data for important zoonotic diseases (e.g., tick-borne encephalitis) were summarized in a disaggregated manner by both sex and age. Indeed, after disaggregation, important patterns were observed: with tick-borne encephalitis, there was an excess of male cases across all age groups; with tick-borne Lyme disease, there was an excess of female cases across all age groups. There was discussion by national public health workers on the possible reasons for the observed distributions. While tick-borne encephalitis and Lyme disease are transmitted by the same tick, it is known that the former is more severe; hence, the observed distribution was likely to be affected by gender



Gender differentials in health-seeking behaviour improves the interpretation of surveillance data.

differentials in health-care-seeking behaviour. Indeed, when analysed by time from onset to hospital visit, it was found that for the more severe tick-borne encephalitis, the median time from onset to hospital visit was the same for males and females, while for milder Lyme disease, the median time was significantly longer for males.

Moreover, such data agreed with the observed patient data from the local district hospital, where the majority of outpatients were women and men were reported to seek health care less, later and adhere to treatment less than women. Therefore, it was interpreted that there may be an underestimation of male cases for non-severe conditions in Mongolia, and that the observed sex distribution from the reported surveillance data needs to be interpreted with caution, taking such contextual health-care-seeking behaviour of the population into account.

## MAJOR CHALLENGES

- ▶ A few Member States reported that due to the nature in which surveillance data are reported and summarized in their national surveillance system it is difficult at times to disaggregate surveillance data by sex and age. However, from the pilot studies in the Lao People's Democratic Republic and Mongolia, it has been found that the raw surveillance data are often available at the national level, and

surveillance data can thus be easily summarized in a disaggregated manner; as such work does not require implementing a new system and only needs to be done periodically (e.g., annually), it is not a high-burden activity, and the Regional Office can continue to provide technical assistance.

- ▶ Some Member States may need assistance with the non-traditional approach of incorporating gender-sensitive approaches to surveillance work, such as gender differentials in access to health care or health-seeking behaviour. However, through pilot studies supported by the Regional Office and by the WHO country offices in the Lao People's Democratic Republic and Mongolia, the lessons learnt and the specific approaches utilized can be shared widely through WPSAR.

### **NEXT STEPS**

- ▶ To further the information-sharing on the recent lessons learnt from the pilot studies in the Lao People's Democratic Republic and Mongolia. The findings, along with the effective and simple approaches utilized for a gender-sensitive approach to surveillance, should be shared through WPSAR for wide distribution.
- ▶ While gender is a challenging and evolving area, emerging infectious disease programmes will continue to incorporate a gender perspective into their work. Gender serves as an important reminder for all of us in public health practice to interpret surveillance data thoughtfully and to remain familiar with the context of those reported numbers. Public health responses that follow such careful interpretation could enhance the efficiency and effectiveness of our actions.



Primary school students Solomon Islands. The enormous distances between Pacific island countries make logistics and communications difficult.

# CHAPTER 2

## PACIFIC ISLAND COUNTRIES AND AREAS

### THE PACIFIC CONTEXT

The Pacific covers 165 million km<sup>2</sup> (almost one-third of the earth) yet is home to only 10 million people, 6.5 million of whom reside in Papua New Guinea. The other 3.5 million Pacific Islanders are dispersed over the many hundreds of islands and atolls that make up the other 20 Pacific island countries and areas. Thirteen Pacific island countries (PICs) are State Parties to IHR (2005) and seven are administrative areas for which IHR responsibilities are deferred to their supporting (metropolitan) country. The populations of many PICs are very small: seven PICs have populations less than 25 000 people and three have less than 10 000 people. The most populous PIC is Fiji with a population of 880 000. The majority of PICs are lower-middle-income developing countries.

The vast size of the Pacific and the enormous distances between PICs—and even between the islands of a given Pacific country—make logistics and communications difficult. For example, 3300 km separate the western and eastern islands of Kiribati. Travel between these island chains requires an international flight via Fiji, often with a multiple-day stopover. Travel to the three small atolls that comprise Tokelau can only be made by sea from Samoa, and the boat takes 10–21 days for a round trip. Many PICs have similar transportation and logistical challenges.

Small population size, limited human and financial resources, and geographic isolation make emerging disease surveillance and response challenging. The Pacific, however, has developed unique networks to address some of these challenges. PICs draw on the many regionally based public health resources, such as the Pacific Public Health Surveillance Network's (PPHSN) Pacific-wide Syndromic Surveillance System, in addition to bilateral agreements with Pacific Rim countries, such as Australia, New Zealand and the United States of America, that help address public health challenges. PPHSN, a joint platform spearheaded by WHO and the Secretariat of the Pacific Community (SPC), has established multiple networks including LabNET to strengthen laboratories and to facilitate the shipping of specimens from PICs to reference laboratories, as well as, communication networks, such as PacNET, to link the Pacific public health and communicable disease communities.

## OVERALL PROGRESS

Five years ago, only a few PICs, such as French Polynesia, Guam, New Caledonia, Niue and Tuvalu, had functional early warning surveillance systems for emerging diseases or other public health emergencies. During the 2009 influenza pandemic, a Pacific regional surveillance system was implemented by WHO in collaboration with all PICs and SPC. It consisted of reporting syndromic influenza-like illness cases and laboratory-confirmed influenza. In 2009, Pacific Ministers of Health requested WHO and SPC to further develop a standardized, simplified syndromic surveillance system. After extensive negotiations and discussions with PICs, a consensus was reached to report four core syndromes: acute fever and rash; diarrhoea; influenza-like illness (ILI); and prolonged fever—all using standard case definitions. The syndromes were selected to cover major outbreak-prone infectious diseases that are important for the Pacific and which can be recognized with reasonable sensitivity and specificity by using a limited number of easy-to-assess signs and symptoms. Indicator reporting occurs on a weekly basis, while event reporting is continuous.

The WHO Division of Pacific Technical Support collates the weekly PIC reports and shares an IBS-based surveillance summary, with an overview of current EBS events, every week to all PICs and all members of PacNet (See Figure 4). A *Pacific Outbreak Manual*, with detailed outbreak assessments and response/control information, was developed in 2010 to accompany the launching of the Syndromic Surveillance System. The system was launched in mid-2010 and by the end of the first year 20 PICs were reporting regularly. An external evaluation of the system in June 2011 concluded that “there is overwhelming agreement that the system is effectively acting as an early warning system” and “the participating PICs include a number of low-income countries suggesting that there may be application of a similar syndromic surveillance system in developing countries in other parts of the world that are struggling to meet their IHR requirements”. By June 2012, 23 PICs (including New Zealand, Papua New Guinea and Pitcairn Island) were regularly reporting. In Papua New Guinea, in order to improve the timeliness and completeness of the surveillance system, a mobile phone surveillance project has been piloted in 10 sites over three provinces, with regular weekly reporting to the WHO Division of Pacific Technical Support in Fiji.

A recent review of the past 12 months documented that 64 outbreaks had been identified or reported through the indicator- or event-based components of the system. WHO provided technical and/or material support to the respective PIC for all 64 outbreaks. For many PICs, this is the first time they have had a timely and functional surveillance system.

Figure 4: Pacific Syndromic Surveillance System

Pacific Syndrome Surveillance - weekly report

Year: 2012

Week: 25

ending on 24 June 2012

Country	Date of report	Number of sites reporting	Acute fever and rash	Diarrhoea	Influenza-like illness	Prolonged fever
American Samoa	27 June 2012	1	0	15	53	0
Cook Islands	27 June 2012	12	0	12	1	0
Federated States of Micronesia	27 June 2012	3	0	<u>26</u>	9	2
Fiji	28 June 2012	6	5	81	539	23
French Polynesia	28 June 2012	15		50	29	
Guam	25 June 2012	1		5	10	82
Kiribati	27 June 2012	2	2	184	447	
Marshall Islands						0
Nauru	26 June 2012	1	<u>5</u>	52	0	60
New Caledonia	27 June 2012	1		6	4	
New Zealand	28 June 2012	104			118	0
Niue	27 June 2012	1	0	2	19	2
Northern Mariana Islands	27 June 2012	2	1	2	<u>41</u>	1
Palau	26 June 2012	1	0	12	3	
Papua New Guinea						0
Pitcairn Islands	28 June 2012	1	0	0	0	9
Samoa	26 June 2012	3	0	88	432	20
Solomon Islands	28 June 2012	4	<u>32</u>	24	119	0
Tokelau	27 June 2012	3	0	2	4	0
Tonga	28 June 2012	1	1	9	28	0
Tuvalu	27 June 2012	1	0	4	3	0
Vanuatu	27 June 2012	2	1	30	112	2
Wallis & Futuna	26 June 2012	4	0	5	22	1

Countries are asked to e-mail their weekly reports to surveillance@wpro.who.int

A red underlined entry indicates that the number of cases is above the threshold of 90% of historical values.

Under the auspices of PPHSN, several countries have implemented national EpiNet Teams, or equivalents, to investigate and respond to emerging diseases and other public health emergencies. Fiji, in particular, has a very active National Outbreak Task Force that was implemented following floods in January 2012. This team, which includes MoH, WHO and other partner organizations and agencies, coordinates and oversees the collection and analysis of surveillance data, directs the outbreak response, coordinates the outbreak reporting, makes recommendations to the Permanent Secretary of Health, and monitors and evaluates the impact of interventions. In the absence of an outbreak, the task force continues to meet to enhance preparation for future outbreaks. The task force reports directly to the Permanent Secretary of Health, thereby assuring high-level involvement and support.

Ten in-country technical support and/or FET training workshops have been held in the Pacific over the past year, and a Pacific FET programme feasibility study is proposed for the second half of 2012. For example, in Papua New Guinea, FETP training for seven key staff was conducted through the FETP in India. Papua New Guinea is currently developing an in-country FET short course, with plans to expand the length and scope of the course in the future.



WHO

Risk communication during a cholera outbreak in Papua New Guinea.

Fiji, with the support of partners, has continued to consolidate, strengthen and expand the testing of outbreak-prone diseases. In 2010, polymerase chain reaction (PCR) for influenza was established, and in 2012 leptospirosis PCR capacity was added. Dengue multiplex PCR will commence in the second half of 2012. This is in addition to enzyme-linked immunosorbent assay (ELISA) testing for a range of diseases including measles, rubella, leptospirosis, dengue and others. Several PICs rely on the Fiji Centre for Disease Control laboratory for reference laboratory testing. With support from WHO, the Federated States of Micronesia has recently established PCR capacity for influenza detection.

Other activities related to infection prevention and control (IPC) and risk communications have been carried out in a few countries. In Papua New Guinea, a national IPC Committee has recently been established.

## MAJOR CHALLENGES

- ▶ PICs face unique national and local capacity-development challenges due to multiple factors, including small population size, geographical isolation, and limited infrastructure and resources. Specific considerations and a tailored approach are needed to meet IHR core capacity requirements in the Pacific. This includes taking into account the use of Pacific subregional resources to ensure that national core capacities required under IHR (2005) are in place and ensuring that the current global IHR core capacity monitoring tool is being applied in the Pacific setting.
- ▶ Graded response activities are poorly linked to indicator- or event-based surveillance signals. Few PICs have a well-developed risk assessment capacity and, similarly, few PICs have clear guidelines to delineate specific response roles and activities.



- ▶ There is a lack of trained/experienced staff with field epidemiology and outbreak investigation skills in PICs.
- ▶ General human resources are a challenge. With the very small populations of most PICs, the lack of dedicated public health human resources is common. When only a few staff members are responsible for a variety of public health areas, it can be difficult obtaining the traction necessary to address complex issues such as IHR and APSED.
- ▶ Accurate and prompt laboratory diagnostic testing is a challenge. Resources are often not available for advanced diagnostic testing; and even if available there are not sufficient samples to maintain the required standards and certifications. Referral to international reference laboratories is expensive and time consuming. Frequently there is confusion about the appropriate reference laboratory for particular testing.

## NEXT STEPS

Many national capacities can be strengthened and enhanced at the subregional Pacific level through collective effort and resource sharing by PICs, including the strengthening of the Pacific-wide Syndromic Surveillance System, the enhancement of Pacific laboratory networks, and ensuring countries can access existing regional and international resources in managing rare public health events and emergencies, such as radiation emergencies. At a meeting in Nadi, Fiji, in June 2012, the draft *Pacific Guidelines for Emerging Diseases* was shared for comments and feedback with 17 PICs in attendance. The framework was well received and will assure common priority objectives and activities for the regional public health agencies, and will provide guidance for the PICs. Finalization of the framework is under way. The key APSED objectives and priorities for the Pacific for 2012–2013 are:

- ▶ Surveillance: Augment early-warning detection capability by increasing the coverage and quality of reporting through syndromic surveillance.
- ▶ Response: Improve in-country response capacity, including an appropriately graded response, based on risk assessment considerations. Work with individual PICs to develop and implement response SOPs.
- ▶ Laboratory services: Ensure rapid and accurate detection of outbreak-prone and emerging diseases by reinforcing in-country or subregional laboratory capacity, as appropriate, and strengthen current LabNET capacity.
- ▶ Workforce skills development: Ensure competent laboratory technicians and surveillance and response officers through workforce needs assessment and targeted national and international training, as appropriate. Initiate a feasibility study for development of FET training in the Pacific.



# CHAPTER 3

## OUTLOOK FOR THE FUTURE

In recent years a firm foundation for managing emerging diseases and public health emergencies has been laid out. The *Asia Pacific Strategy for Emerging Diseases* (APSED) has become a widely used tool, guiding national and regional efforts. An increasing number of Member States are using APSED to direct efforts to build strong public health systems to counter the threats of emerging diseases and other public health emergencies. This established foundation also includes critical partners who have aligned their support with the direction set out in APSED (2010), thus leading to a coordinated, effective and efficient approach to safeguarding health in the Western Pacific Region.

The first one-and-a-half years of APSED (2010) was largely devoted to planning. Now most countries have established national planning and review processes integrated with the regional process and have succeeded in developing national workplans by adapting APSED (2010) across eight focus areas. The focus of the following years will be on successful implementation of the national plans.

In the Western Pacific Region, 14 countries did not meet the 15 June 2012 deadline for IHR (2005) core surveillance and response capacity requirements and have requested an extension. This is largely attributed to relatively low baseline capacities in resource-limited countries, relatively high requirements set in the IHR monitoring framework and indicators, and inadequate allocation of national financial and technical resources. Maintaining commitment, implementing the national plans, building on the existing achievements and following the established road map remain critical issues. The second meeting of the APSED technical advisory group (TAG) in July 2012 reviewed progress and made recommendations, reaffirming the scope and providing a focus for implementation in the coming years (See Annex 2).

Building capacities to meet IHR (2005) requirements using APSED (2010) as a tool demands sustainable financial investments from national governments and international partners, as well as sound technical support. Many countries continue to operate using very limited resources. These limitations are preventing Member States from reaching their full potential with respect to implementing APSED to meet IHR core surveillance and

response capacity requirements. All Member States remain committed to developing self-sufficient health systems; however, continued support from donors remains crucial in the short term.

A strategic approach for mobilizing adequate and sustainable financial resources to implement APSED at both the country and regional levels is essential. In this regard, the much-discussed focus on public–private partnerships to fill existing funding gaps has so far failed to gain support in most resource-limited countries that had difficulty in meeting the 2012 IHR deadline. The outlook for collaboration with the private sector remains promising and should be further explored. However, making a case for sustained national government investment in IHR capacity-building and convincing governments about the importance of the health security mandate appear to offer higher chances of long-term success. The overall improvement of the socioeconomic situation in the Region and increased national investments in health offer unique opportunities for making the case for national investment and accelerating implementation of core IHR capacities through APSED (2010).



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**Chinese medical personnel check for H1N1 virus.**

# ANNEX 1

## Status Report on Implementation of IHR Core Capacities Western Pacific Region Information as of 1 August 2012

Country (n=27)	IHR Extension		Submission of IHR Questionnaires		
	Requested and granted extension	No extension required	2010 (n=21, 78%)	2011 (n=19, 70%)	2012
Australia		•	•	•	•
Brunei Darussalam	•		•	•	•
Cambodia	•		•	•	•
China	•		•	•	•
Cook Islands		•			•
Fiji	•		•		•
Japan		•	•	•	•
Kiribati	•		•	•	•
Lao People's Democratic Republic	•		•	•	•
Malaysia		•	•	•	•
Marshall Islands		•	•	•	
Micronesia (Federated States of)	•		•	•	•
Mongolia	•		•	•	•
Nauru		•	•		
New Zealand		•	•	•	•
Niue	•				
Palau		•	•	•	•
Papua New Guinea	•			•	•
Philippines		•	•	•	•
Republic of Korea		•	•		•
Samoa	•			•	
Singapore		•	•	•	
Solomon Islands	•				
Tonga		•	•	•	
Tuvalu		•			•
Vanuatu	•		•		
Viet Nam	•		•	•	•
<b>TOTAL</b>	<b>14</b>	<b>13</b>	<b>21</b>	<b>19</b>	<b>19</b>

# ANNEX 2

## **Second Meeting of the Technical Advisory Group on the Asia Pacific Strategy for Emerging Diseases (2010) 10–12 July 2012, Manila, Philippines**

### **Conclusions and Recommendations**

#### **General conclusions**

- ▶ IHR (2005) has been in force for more than five years, since 15 June 2007, aiming to ensure that national, regional and international capacities and systems are in place for managing public health events and emergencies in a collective and effective manner. IHR (2005) set out the obligations for Member States to meet IHR core capacity requirements by 15 June 2012, with a mechanism in place for an extension for countries that needed more time to meet the deadline.
- ▶ In the Western Pacific Region over the past five years, encouraging progress has been made in meeting IHR core capacity requirements through the collective implementation of the *Asia Pacific Strategy for Emerging Diseases (APSED)*. This is supported by findings of the data collected from the IHR monitoring tool, and this progress report provides detailed information.
- ▶ It is vital that APSED continues to be implemented in a manner that prioritizes effective resource allocation and respects and builds on existing systems, structures and relationships within Member States and the Region.
- ▶ Despite the commendable achievements, significant challenges remain. As of June 2012, more than one-half of countries in the Region (14 of 27) have requested two-year extensions to meet the IHR core capacity requirements. The main factors in not meeting the initial deadline include the low baseline capacities in a number of resource-limited countries and inadequate financial and technical resource allocation for national core capacity development.
- ▶ Requests for two-year extensions indicate that additional time, plus technical and financial resources, and political commitment are

required to meet IHR core capacity requirements. Participants are fully aware that further extensions to the next deadline can only be granted in exceptional situations by WHO in 2014, taking into account the advice of the IHR Review Committee.

- ▶ All countries that requested an extension have now developed or updated their national workplan for emerging diseases and public health emergencies. This presents continuing government commitments to meet IHR core capacity requirements. APSED (2010) has been used as a tool to develop these national plans, aiming to prioritize activities, facilitate stakeholder planning and collaboration, coordinate support from donors and partners, and enable lesson sharing among countries.
- ▶ Effective implementation of national workplans is the key to successful achievement of IHR core capacities and requires prioritization, identification of funding gaps, sustainable technical and financial investment from domestic and external sources, high-level advocacy, lesson sharing about successes and challenges and greater collaboration within and among countries.
- ▶ Pacific island countries and areas face unique national and local capacity-development challenges due to a number of factors, including small population size, geographical isolation, and limited infrastructure and resources. Specific consideration and a tailored approach are needed to meet IHR core capacity requirements in the Pacific.

### **General recommendations**

- ▶ Member States that have sought extensions should make every effort to implement their national workplans through increased allocation of national resources and maximizing the use of external technical and financial resources.
- ▶ Countries that have not requested an extension should continue their efforts to sustain and/or strengthen IHR core capacities and provide support to those countries that most need external assistance.
- ▶ Prioritization of national action is essential. The priority technical areas for further capacity strengthening in 2011–2015 include: monitoring and evaluation; event- and indicator-based surveillance; risk assessment; public health laboratory capacity; national public health emergency preparedness; and health emergency communications. Efforts should be made to strengthen operational links and intersectoral collaboration among technical programmes and ministries in IHR implementation.
- ▶ WHO, donors and partners should continue to provide technical and financial assistance to support implementation of national and regional workplans, as well as technical assistance to enhance monitoring efforts and promote stakeholder coordination. A comprehensive evaluation of

APSED should be conducted that includes and involves countries in the Region after completion of APSED (2010).

- ▶ A multi-faceted advocacy campaign needs to be developed to mobilize long-term sustained funding from existing and new sources for building and maintaining core capacities.
- ▶ A subregional Pacific approach should be used to ensure that national core capacities required under IHR (2005) are in place, including application of the global IHR core capacity monitoring tool in the Pacific setting and the strengthening of the Pacific-wide Syndromic Surveillance System. Pacific representation at future TAG meetings is recommended.
- ▶ WHO should continue to work closely with FAO and OIE to maintain and enhance coordination between human and animal health for zoonoses prevention and control and facilitate early detection of emerging infectious diseases at the animal–human interface.

### **Priority activities for the coming year (July 2012–June 2013)**

1. Member States should enhance and sustain their monitoring and evaluation capacity through further establishing and maintaining integrated national and regional planning and review processes, including:
  - conducting regular country-level stakeholder planning and review meetings to review implementation of national workplans and document results against workplan milestones, review lessons learnt and monitor progress using the IHR monitoring tools and APSED performance indicators;
  - providing annual country progress updates that highlight national status towards meeting the IHR core capacity requirements, major challenges, solutions and lessons learnt;
  - reviewing and sharing lessons learnt from past public health events at both the country and regional levels at future APSED meetings to identify common issues; and
  - participating in the annual regional TAG meetings which serve as regional stakeholder meetings for IHR implementation to review regional progress, identify critical issues and recommend priority activities.
2. WHO should convene the next TAG meeting (or its equivalent) as a biregional meeting to facilitate biregional progress monitoring, technical advice on priority actions and resource mobilization.
3. WHO should clarify its role in monitoring and evaluation at the regional level, including formalized capacity-building of monitoring and evaluation at the national level.



4. Member States should enhance their surveillance, risk assessment and response systems through:
  - participation in the development of a standardized approach for indicator-based surveillance in the Region which aims to enhance and harmonize case identification, laboratory confirmation and reporting of priority infectious diseases such as HFMD, dengue and influenza;
  - establishment of a systematic and continuing process for detecting, assessing risk and responding to actual or potential acute public health events;
  - participation in the development of the concept of Field Epidemiology Training (FET) Plus as a mechanism to utilize FET to strengthen capacity within public health systems; and
  - implementation of an integrated public health laboratory network by establishing national laboratory steering committees (where possible), strengthening quality assurance and biosafety, and establishing an efficient specimen referral system from the subnational to national and international levels, as required. Collaboration and linkage with technical partners among the laboratories should be considered to support its development, particularly in the resource poor countries, and using existing systems where available.
5. WHO should facilitate development of regional guidance on upgrading indicator-based surveillance and should also develop the concept for FET Plus. WHO should provide technical support to countries in enhancing their national risk assessment capacity, public health laboratory network and FET.
6. WHO should continue to enhance information-sharing on regional surveillance and response through WPSAR, and preparedness and response through the Global Outbreak Alert and Response Network (GOARN).
7. Member States should enhance public health emergency operations capacity through establishing or strengthening their emergency operations centres (EOC), associated with an incident management system (IMS) and supported by a response logistics system, within the MoH. The EOC should be used to support all public health operations.
8. WHO should work to finalize and facilitate the implementation of a practical guide for establishing an EOC and an associated IMS (with a specific focus on response logistics) in ministries of health. Where required, WHO should also provide in-country technical support to enhance public health emergency response operations; such technical support may include conducting and evaluating public health emergency exercises.

9. WHO and the IHR National Focal Points should advocate for and facilitate:

- better use of the event information site (EIS) for public health purposes; and
- improved preparedness at designated points of entry.

10. Health emergency communications should be viewed as a high priority for establishing a functional risk communications system within the MoH:

- Member States should establish or enhance a functional health emergency communications structure or mechanism, coordinated by an appropriate focal point. The focal point should coordinate the development and testing of SOPs and guidelines for health emergency communications and should ensure implementation of the SOPs during public health events.
- WHO should facilitate the development of the health emergency communications framework or practical guide and assist Member States in the development of their operational systems and SOPs and in the conduct of health emergency communications exercises.

11. WHO should consider developing guidance for Member States on best practice criteria for internal self-assessments against the IHR core capacities.



AFP

Chinese pupils wearing masks.

# ANNEX 3

## **Main APSED Partners**

Asia-Europe Foundation  
Asian Development Bank  
Association of Southeast Asian Nations  
Australian Agency for International Development  
Canadian International Development Agency  
European Commission  
Food and Agriculture Organization of the United Nations  
Japan International Cooperation Agency  
Japan International Cooperation System  
Mekong Basin Disease Surveillance Coordinating Office  
Ministry of Foreign Affairs – Official Development Assistance, Japan  
National Institute of Infectious Diseases, Japan  
National Red Cross and Red Crescent Societies  
International Federation of Red Cross and Red Crescent Societies  
Institut Pasteur, Paris, France  
Public Health Agency of Canada  
Regional Emerging Diseases Intervention Centre  
Secretariat of the Pacific Community  
United Nations Children's Fund  
United States Agency for International Development  
United States Centers for Disease Control and Prevention  
World Bank  
World Organisation for Animal Health



**World Health  
Organization**  
Western Pacific Region

WHO Western Pacific Region  
PUBLICATION



ISBN-13

978 92 9061 544 1