



Much has been achieved over the past decade in implementing the Asia Pacific Strategy for Emerging Diseases, but challenges remain in this rapidly changing Region.

Health Security and Emergencies

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The Western Pacific Region continues to face health security threats caused by emerging infectious diseases, natural hazards and unsafe food. Health emergencies are inevitable, as evidenced by recent outbreaks of avian influenza A(H7N9), Ebola virus disease, Middle East respiratory syndrome (MERS), dengue, Zika virus disease and yellow fever.

Introduction

Learning from the past

The Western Pacific Region continues to face health security threats caused by emerging infectious diseases, natural hazards and unsafe food. Health emergencies are inevitable, as evidenced by recent outbreaks of avian influenza A(H7N9), Ebola virus disease, Middle East respiratory syndrome (MERS), dengue, Zika virus disease and yellow fever.

We have also seen disasters caused by natural hazards, including Cyclone Winston in Fiji, typhoons in the Philippines, and droughts in Papua New Guinea and the Pacific. Managing these outbreaks and emergencies provided tremendous opportunities for continuous learning and improvement as we respond to emergencies.

Our experience has taught us that health security threats will continue, and they will occur in very unpredictable ways that could challenge even the most advanced health system. As a hotspot for emerging diseases and health emergencies, the Western Pacific is even more vulnerable. As the world becomes more interconnected, diseases can spread more easily and vulnerability has become more universal.

Putting in place a generic and flexible system to manage all hazards has been a worthwhile investment for health emergency preparedness. Recent events have reconfirmed the importance of strengthening the core capacities for health security as mandated under the International Health Regulations, or IHR (2005).



Emerging infectious diseases do not respect borders, and vulnerability to these diseases is universal in an interconnected world.

Strengthening health security on multiple fronts

The *Asia Pacific Strategy for Emerging Diseases* (APSED) has been the common framework for action used by Member States for IHR implementation over the past decade, resulting in significant achievements. Nineteen out of 27 States Parties have reported attainment of the core capacities mandated under IHR (2005). Event-based surveillance (EBS) has been established in 85% of Member

States. The public health laboratory system has capacities for rapid, safe and accurate diagnosis through improved proficiency in external quality assessments for chikungunya, dengue and influenza. Many Member States have established field epidemiology training programmes tailored to their country context, which means they can train field epidemiologists locally, rather than send them abroad. Several emergency operations centres within ministries of health have been established for preparedness planning

and operational response to public health events and emergencies. At the regional level, the surveillance and risk assessment system has been assessing more than 200 reports per year.

Food safety risks have grown more complex. Globalization of the food chain, climate change, innovations in food technology, urbanization and antimicrobial resistance are issues for consideration in managing food safety risks. Progress was made in implementing the *Western Pacific Regional Food Safety Strategy 2011–2015*. Several countries enhanced the use of risk-based approaches to strengthening national food safety systems. In the Pacific, the *Operational guide for the recall of imported food* was launched to guide the development of food recall systems and the use of the International Food Safety Authorities Network (INFOSAN) as a mechanism for rapid exchange of information among countries.

The Western Pacific Region remains highly susceptible to disasters. Countries were supported in adapting to the effects of climate change and in strengthening disaster risk management capacity. Vanuatu updated its *National Health Plan for Climate Change Adaptation and Disaster Risk Management (2016–2020)*, and Solomon Islands conducted a hazards assessment of its National Referral Hospital. Health service delivery assessments were conducted using the Health Resources Availability Mapping System (HeRAMS) in Fiji, Papua New Guinea and the Philippines. Hospital Safety Index assessments were conducted in Cambodia, the Marshall Islands, the Federated States of Micronesia and Palau.

Looking towards the future and adapting to a new context

The Western Pacific Region now faces a new context. Overall, our Member States have gained better socioeconomic status and improved capacity in managing health security threats as compared to a decade ago. Meanwhile, our Region is confronting more complex health threats caused by various factors such as urbanization, migration, new technologies and climate change. Diseases that used to be obscure are re-emerging, natural disasters are more unpredictable and new threats are more challenging.

There are also new global and regional initiatives that provide both opportunity and challenges to advance health security. These initiatives include the Sustainable Development Goals, universal health coverage, the *Sendai Framework for Disaster Risk Reduction 2015–2030*, the *Global Health Security Agenda*, IHR Review Committee recommendations and the post-2016 IHR monitoring and evaluation framework,

including the Joint External Evaluation Tool. Based on the lessons from Ebola, reform of WHO's work in health emergency management and the establishment of a new Health Emergencies Programme will enable WHO to expand beyond its technical and normative roles to become an operational agency.

The changing regional landscape and the new global initiatives necessitate an updated common framework for action that is relevant, flexible and based on the evolving needs of the Member States. Based on the bottom-up consultations, the draft *Asia Pacific Strategy for Emerging Diseases and Public Health Emergencies (APSED III)* has been developed to further strengthen the core systems for emergency preparedness and response and increase regional connectivity. Recognizing the different levels of preparedness of Member States and the changing global context, APSED III provides a flexible platform to implement strategic actions for health security and to connect with other initiatives in the new context. ■



Increased travel and trade expose the Region to health security threats that may originate in other parts of the world.

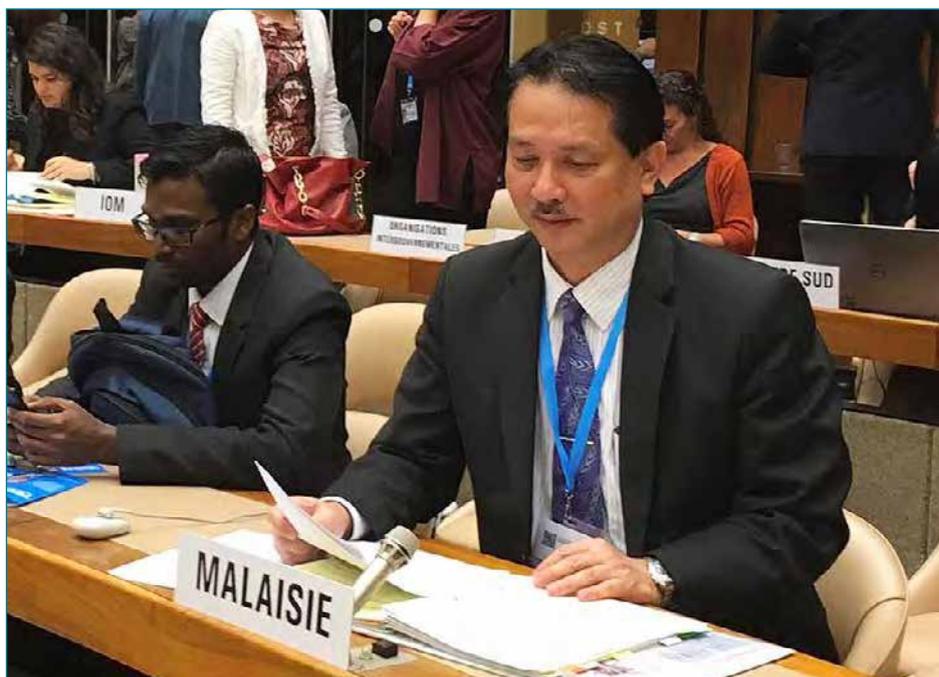
1. Ebola: deadly pathogens exploit our vulnerabilities to health security

The unparalleled Ebola virus disease outbreak in West Africa was a grim reminder that the world is ill-prepared to respond to any severe, sustained and threatening public health emergency. Given the interconnected and interdependent nature of 21st century societies, the entire world is put at risk when a deadly and dreaded virus strikes a country with a weak health system that is unable to cope.

The Ebola response was highly complex. It required large-scale continuous efforts by national governments, with the cooperation of both health and non-health sectors. At the international level, it triggered a massive multi-agency, multi-country response that mobilized thousands of international experts.

Ebola highlighted the importance of community engagement in public health. Cultural traditions in West Africa that include close contact with corpses, which can be highly infectious, helped the virus spread. Ebola taught us that community engagement and cooperation are vital to ensure local populations are fully committed to the response to public health emergencies.

Ebola changed the health security landscape. Various global and regional initiatives have been put in place to provide opportunities to advance health security, including the IHR Review Committee recommendations and the post-2016 IHR monitoring and evaluation framework,



Dr Noor Hisham Abdullah, Director General of Health Malaysia, presented the views of Western Pacific Member States on health emergencies at the Health Assembly in Geneva, in May 2016.

including the Joint External Evaluation Tool.

Within WHO, Ebola prompted major reform of the Organization's emergency work. A new Health Emergencies Programme was established to oversee and implement WHO's work in emergency risk management. The programme design was reviewed and endorsed during the Sixty-ninth World Health Assembly in May 2016.

Ebola virus infected more than 28 000 people, leaving 11 000 dead. But more than the number of cases and deaths, Ebola drives home a clear message – there is a great need to invest in health security in between emergencies in order to withstand future shocks, whether they come from runaway viruses, natural hazards or unknown threats. Such preparedness efforts entail coordination and a commitment to work together. ■

2. Asia Pacific Strategy for Emerging Diseases: 10 years on

APSED was first endorsed in 2005 by the fifty-sixth session of the WHO Regional Committee for the Western Pacific. It provides a common, stepwise approach for Member States to build generic capacities for preparedness, alert and response to achieve the IHR (2005) core capacity requirements.

Since 2005, APSED has been put to the test in managing several outbreaks and emergencies, such as pandemic influenza H1N1, avian influenza A (H7N9), dengue, MERS, Ebola virus disease, Zika virus disease and associated clusters of microcephaly and Guillain-Barré syndrome. As APSED (2010) comes to an end and new global developments arise, such as the IHR Review Committee recommendations and reform work in emergencies, it is time to reflect on achievements and challenges and look to the future. A joint

evaluation by Member States and WHO in 2015 showed considerable progress under APSED: 85% of Member States established event-based surveillance; 92% have a rapid response team and risk communication plans for emergencies; and 95% of national reference laboratories have participated in external quality assessments. Since 2005, six Member States have established field epidemiology training programmes.

The APSED approach has proved useful because of its principles for implementation. These include placing countries at the centre, the generic nature of APSED, employing a step-by-step approach, flexibility to adapt to changing contexts, collective partnerships, and testing system functionality and performance improvement.

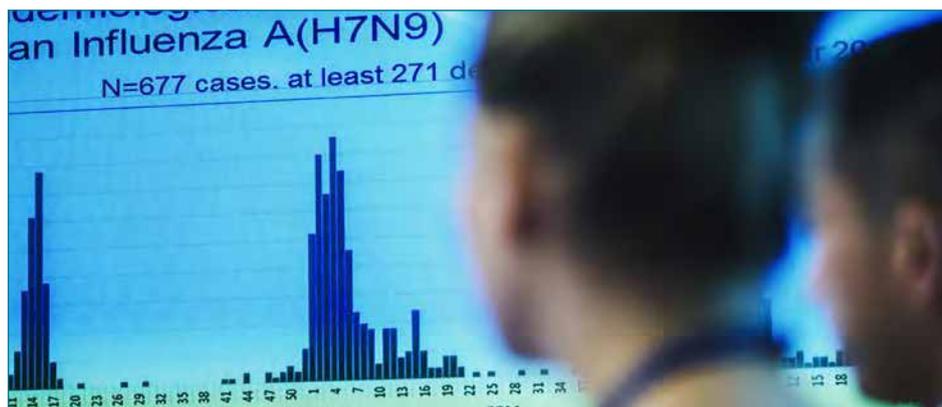
WHO, Member States and partners have developed an updated draft APSED, which now stands for *Asia Pacific Strat-*

egy for Emerging Diseases and Public Health Emergencies (APSED III), to better reflect its coverage. APSED is connected to other regional and global initiatives and is focused on strengthening core public health components. At the same time, the updated strategy offers flexibility for individual country implementation and adaptation to the evolving public health landscape.

The process for developing APSED III began in February 2015 with the APSED evaluation that affirmed significant achievements over the past 10 years. The evaluation findings also indicated the continued relevance of APSED to develop country capacities to deal with a variety of health security risks using a generic approach.

APSED III is based upon extensive consultations since the APSED Technical Advisory Group meeting in July 2015 and the use of a bottom-up approach. Central to this process were consultations with Member States, technical experts, partners and a high-level meeting. All provided inputs into the updated strategy, taking into account experience, lessons learnt from real events, and the latest developments globally and in the Region related to, for example, economic development, technological advances and new health initiatives.

APSED III will be considered for endorsement by the sixty-seventh session of the Regional Committee for the Western Pacific in October 2016. ■



Since 2005, the Asia Pacific Strategy for Emerging Diseases has guided efforts to manage outbreaks, such as avian influenza A(H7N9), MERS and Ebola.

3. Emergency Operations Centre: central hub for preparedness and response



The Emergency Operations Centre at the Regional Office enhances intelligence and risk assessments that underpin decision-making, preparedness and coordinated responses among countries and areas.

The Emergency Operations Centre (EOC) at the WHO Regional Office for the Western Pacific is the mechanism that links all levels of WHO and stakeholders for preparedness planning and operational response to outbreaks and emergencies.

The EOC has served as the centre of surveillance, preparedness and coordination for emergency response. The EOC has become the centre for managing many public health events, including avian influenza A(H7N9) in China, dengue in the Lao People's Democratic Republic, Typhoon Haiyan in the Philippines, Cyclone Pam in Vanuatu, MERS in the Republic of Korea and Ebola virus disease.

More recently, the EOC has been in full operation for responses to the Zika virus and the observed increases in neurological disorders and neonatal malformations, as well as the aftermath of Cyclone Winston in Fiji.

The regional event-based surveillance system screens 50–200 reports every day. The system has been crucial in detecting public health events at the regional level to inform risk assessments and enable rapid response efforts. Strengthening this system and promoting the use of multiple sources of information are important to enhance understanding of local contexts and capacities to assess and respond to events.

The EOC is the centre of intelligence and risk assessment for decision-making. The Division of Health Security and Emergencies team operates from the EOC on a daily basis, collecting, prioritizing, monitoring and analysing multiple sources of information to conduct risk assessments that inform timely decision-making and response. By using multiple sources of information, the confidence and robustness of risk assessments in public health emergencies have been improved.

The EOC is an essential component of effective event management that through the application of incident-management system (IMS) principles minimizes health, social, economic and environmental impacts.

The EOC serves as the centre to connect people. For the Zika response, the EOC facilitated bringing together different experts to deal with Zika virus disease and the observed increases in neurological disorders and neonatal malformations.

The establishment of EOCs within the ministries of health of Member States continues to be a priority under the updated version of APSED and in the context of the new WHO Health Emergencies Programme. The centres fulfil an important function by enhancing the Region's capacity for collaboration and coordination among countries. ■

4. Managing a foodborne disease outbreak in Cambodia

The Western Pacific Region continues to experience outbreaks of foodborne diseases. Food safety is a multisectoral challenge, and the prevention of and response to food safety incidents and emergencies require collaboration and coordination across sectors.

Cambodia has taken important steps to improve multisectoral coordination. In 2015, the Government launched intersectoral standard operating procedures (SOPs) for foodborne disease investigation. The SOPs serve as a common reference tool for foodborne disease outbreak investigation and response. They identify stakeholders and define their roles and responsibilities within the context of a foodborne disease outbreak. The SOPs also describe the communication lines within and between ministries and authorities.

The SOPs cover all aspects of foodborne disease outbreaks, risk assessments, and investigation and response relating to foodborne hazards. These include disease-causing agents that have the potential to cause foodborne diseases such as salmonella or methanol poisoning.

In August and September 2015, training sessions were conducted on the SOPs. The benefits were immediate: the SOPs were used to guide an investigation two months later and respond to clusters of suspected methanol poisoning linked with the consumption of locally produced alcohol in Cambodia. The response involved various departments and directorates under the

ministries of health, agriculture, forestry and fisheries, and commerce, as well as the governors of affected provinces. The actions conducted included an investigation to confirm the disease-causing agent, laboratory testing, the inspection of food premises, product recall and risk communication. The SOPs helped facilitate a prompt and effective response by avoiding overlaps and gaps in actions of various stakeholders.

Prevention, preparedness, response and recovery from foodborne disease outbreaks are key priorities for WHO. The Organization will continue to support Member States to develop food safety guidance and to use lessons learnt to facilitate multisectoral action to prevent, prepare for and respond to foodborne disease outbreaks. ■



An outbreak investigation team interviews the owner of a local wine shop in Snoul district, Kratie province, Cambodia, December 2015.

5. Focusing on hotspots in the response to Typhoon Koppu

In October 2015, Typhoon Koppu hit the Philippines at peak strength, with sustained winds of 240 kph – a Category 3 typhoon – causing widespread devastation, with flash floods and landslides across 14 provinces on the northern part of the main island of Luzon. In the wake of the typhoon, food security, malnutrition and other health problems affected more than 3.1 million people.

Adopting an innovative approach, priority activities were implemented in selected “hotspots” in the most-affected municipalities. This focused approach differed from that employed in previous large-scale disasters. Resources were concentrated on the most vulnerable groups: about 220 000 of the one million people affected in four priority provinces. Activities included mobile medical teams, screening and treatment for acute malnutrition among children younger than 5 years of age, and the establishment of surveillance and early warning systems for epidemic-prone diseases.

WHO and the Department of Health, in coordination with provincial health authorities, jointly assessed the damage caused by the flooding, the prevalence of malnutrition and level of access to health-care services. Municipalities were selected based on the direct impact of the typhoon – for example, most-affected populations and cost of agricultural losses – and local health system vulnerabilities, such as the number of functioning health facilities



A nurse performs a screening to detect acute malnutrition in La Paz, Tarlac, during the response to Typhoon Koppu in the Philippines.

and health workers per 10 000 people. Pre-event vulnerabilities, such as poverty and certain communicable disease rates, indicate the coping capacity of affected communities.

The response model of identifying hotspots calls for documenting pre-event vulnerabilities of at-risk populations and local health systems, as part of developing a preparedness agenda. ■

6. Zika: collaborative work across disciplines

On 1 February 2016, WHO Director-General Margaret Chan declared a Public Health Emergency of International Concern in response to the Zika virus and observed increases in neurological disorders and neonatal malformations.

The decision was based on advice from the IHR Emergency Committee upon reviewing reported clusters of microcephaly and Guillain-Barré syndrome following outbreaks of Zika virus disease in Brazil since late 2014, and in French Polynesia between 2013 and 2014.

As of 13 July 2016, Zika virus transmission has been documented in 62 countries and areas worldwide, including 18 countries and areas in the Western Pacific Region. There are also reports of sexual transmission. Based on research, there is now scientific consensus that Zika virus is a cause of microcephaly and Guillain-Barré syndrome.

The Division of Health Security and Emergencies and the Division of Pacific Technical Support are working closely in strengthening the regional response, especially in addressing a number of Zika virus disease outbreaks in the Pacific.

Technical guidance is being provided by the Malaria, other Vectorborne and Parasitic Diseases team as well by the Health Systems, the Expanded Programme on Immunization, and the Reproductive, Maternal, Newborn, Child and Adolescent Health teams in the Regional Office.

Epidemiologists, entomologists and risk communication specialists have been deployed to support the response in eight countries and areas. Laboratory equipment and vector-control supplies have been provided to six Pacific island countries and areas to support national responses.

One of the biggest challenges throughout the response has been communicating uncertainty, especially in situations with a heightened perception of risk and weak levels of scientific evidence. Efforts have been directed towards maintaining trust by explaining what is not known, as much

as what is known and what is being done to further understanding. Health authorities have acknowledged uncertainty about the likely duration of the outbreak and are preparing the public for the likelihood of a prolonged crisis.

WHO will continue to support the strengthening of health systems to identify and manage cases of Zika virus disease and their potential complications, as well as vector-control activities aimed at individuals and communities to reduce the density of the mosquitoes that carry the virus in hopes of halting its spread. ■



A pregnant woman discusses concerns about Zika virus disease during a prenatal care visit at Vaiola Hospital in Tonga.