



Health Security and Emergencies

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A decade of investment in health security has better prepared the Western Pacific Region for health emergencies. However, more work must be done before the next pandemic.

Introduction

Pandemics can claim millions of lives, disrupt societies and devastate economies. In 1918, an influenza pandemic killed an estimated 100 million people. Severe acute respiratory syndrome (SARS) led to US\$ 40 billion in economic losses during 2003. The 2009 influenza A(H1N1) pandemic spread to more than 210 countries and areas in just one year.

Over the past decade, considerable investments have been made in outbreak and emer-

gency preparedness. Member States have advanced implementation of the International Health Regulations, or IHR (2005), and helped make the Western Pacific Region safer for its nearly 1.9 billion people.

Much has changed, but health security threats continue. Member States know a lot of work still needs to be done to prepare for the next pandemic. Meanwhile, countries face other challenges, such as natural dis-

asters, instability and turmoil. The United Nations Secretary-General recently issued a worldwide “red alert”, citing human rights violations, climate change, risk of nuclear war, rising nationalism and xenophobia. Even basic issues, such as ensuring the safety of food, have become more complex in today’s increasingly interconnected world.

The WHO Health Emergencies Programme (WHE) was created in 2016 to help countries

meet these challenges. Now in its second year of operation, the global programme harnesses the expertise and resources of the three levels of the Organization – country offices, regional offices and headquarters – to support Member States in strengthening emergency preparedness, prevention, detection, response and recovery. In the Western Pacific Region, WHE is embedded in the Division of Health Security and Emergencies, alongside the Organization's work on food safety.

Between July 2017 and June 2018, regional surveillance systems detected and assessed 1621 signals of potential emergency health threats in the Western Pacific. Eighty-eight acute public health emergencies were identified, and 24 were outbreaks and emergencies requiring WHO's response. The outbreaks detected and assessed include listeriosis in Australia, the first human cases of avian influenza A(H7N4) in China, meningococcal disease in Fiji, vaccine-derived poliovirus in Papua New Guinea, measles in the Philippines, norovirus in the Republic of Korea and dengue in Samoa, to name a few.

During the same year, the Region faced three disasters designated Grade 1 emergencies under WHO's *Emergency Response Framework*, meaning that they required significant deployments of WHO staff and resources to support countries' response. These emergencies included the Marawi conflict in the Philippines, Tropical Cyclone Gita in the Pacific and a 7.5-magnitude earthquake in Papua New Guinea.

The Division's work begins long before disaster strikes. Through the *Asia Pacific Strategy for Emerging Diseases and Public Health Emergencies* (APSED III) and the *Western Pacific Regional Framework for Action for*

Disaster Risk Management for Health, the Division works with countries, WHO country offices and partners to prepare for emergencies and help advance the capacities required under IHR (2005), as part of WHE.

WHO continues to support APSED implementation at the country level. During the reporting period, Cambodia, the Lao People's Democratic Republic, Mongolia and Viet Nam updated or advanced their national action



Under APSED III, countries continue to build the core capacities required to detect and respond to outbreaks and emergencies.

plans for health security. More and more Member States have established functional emergency operations centres and started using incident management systems. Some countries, such as Viet Nam, have established subnational emergency operations centres.

Surveillance and risk assessment capacities have been bolstered to guide decision-making. The laboratory specimen shipment network for Pacific island countries was strengthened. Guided by APSED III, annual reviews, simulation exercises, Joint External Evaluations and after-action reviews were conducted. A total of eight countries have now carried out Joint External Evaluations of their IHR capacities: Australia, Cambodia, Japan, the Lao People's Democratic Republic, Mongolia, the Republic of Korea, Singapore and Viet Nam.

WHE continued to work with partner networks at the regional and global levels, including the Global Outbreak Alert and Response Network (GOARN), the Global Health Cluster and emergency medical teams. The number of WHO-certified international emergency medical teams in the Region has now reached six: one from Australia, three from China, one from Japan and one from New Zealand.

Partnerships were also strengthened through events such as the Partners' Forum at the annual regional meeting of the Technical Advisory Group on APSED III. The Technical Advisory Group continues to serve as a regional mechanism to monitor progress and promote partnerships for health security. Likewise, the Seventh Asia Pacific Workshop on Multisectoral Collaboration for the Prevention and Control of Zoonoses fostered closer ties between colleagues working in animal and human health sectors.



A grandmother displaced by the conflict in Marawi, Philippines, visits a mobile clinic deployed by WHO and partners.

Despite these positive developments, the Region is still not ready for the next pandemic. The Division of Health Security and Emergencies continues to work with Member States

and partners to fulfil our mission of making the Western Pacific Region a place where “everyone is healthy and safe in outbreaks and emergencies”. ■

1. Strengthening communication during public health events

Timely and transparent communication between countries and WHO is critical during public health events, guiding collective action against the spread of diseases and other health hazards.

National IHR Focal Points (NFPs) play a key role in information-sharing and risk assessment during public health events. The WHO Regional Office for the Western Pacific therefore conducts an annual simulation exercise to test and strengthen the functioning of NFPs and WHO IHR contact points. Known as the IHR Exercise Crystal, the simulation has been held almost every year since 2008. (Resources were directed to the global response to the influenza A(H1N1) pandemic in 2009.)

The number of participants reached an all-time high in December 2017, with 30 countries and areas taking part. Countries demonstrated increased understanding and comfort regarding IHR communication. In 2011, for example, only five countries and areas notified WHO of the simulated public health event within the expected time frame. That figure rose to 26 in 2017.

The value of regular IHR communication exercises has been recognized by annual reviews of the implementation of APSED III.

Participants also extolled the benefits of the exercise: “This was a really good exercise that we learnt a lot from, including how to access the WHO electronic systems, and it forced us to work through and consider



To improve country preparedness, the WHO Regional Office for the Western Pacific has hosted the IHR Exercise Crystal almost every year since 2008. The number of participants reached an all-time high in 2017.

the application of the IHR,” said a 2017 participant.

Another remarked that the simulation generated “the feeling of concern and urgency that would be occurring were it a real-life scenario”. Others suggested it was a “good opportunity to train new and inexperienced staff in [IHR] communications”.

The IHR Exercise Crystal is an invaluable investment in health security to prepare for real-life emergencies. The exercise requires

minimal resources but can significantly strengthen health security systems.

As a key element of monitoring and evaluation under the APSED III framework, the exercise has been invaluable in identifying issues for continuous learning and improvement. Perhaps most importantly, it strengthens trust between NFPs and WHO, which bolsters effective IHR communication during actual emergencies. ■

2. Optimizing decision-making during outbreaks

Member States must act decisively to save lives and protect health during outbreaks and other public health emergencies. But decision-making can be difficult when facing a rapidly evolving situation with limited or conflicting information.

The use of multiple sources of information enhances risk assessment and confidence

in decisions, and plays a crucial role in informing shifts in response strategy.

During influenza pandemics, countries face stiff pressure to take rapid action. In deciding how to minimize public health impact, they often contend with huge gaps in information, especially when pandemics are caused by new virus strains. Nevertheless,

a decision must be made at some point to shift from rapid containment to mitigation strategies. The response must also be adjusted over time based on transmissibility, severity and impact of the strain, which are often unknown early in the pandemic.

WHO works with Member States to identify data sources to inform decision-making during influenza pandemics. Sources include: weekly counts of influenza-like cases; confirmed influenza cases; cumulative deaths among hospitalized cases; and absenteeism from school and work. Multiple sources of information lead to better decisions on control efforts.

WHO has advocated multiple sources of information to strengthen risk assessment and decision-making. Now the Organization is going one step further with the development of practical guidance for Member States.

Drafted in consultation with Member States and partners, and incorporating lessons learnt from outbreaks and emergencies, the guidance will help countries incorporate both qualitative and quantitative information from a range of sources to assess risk and guide decision-making. The guidance also urges Member States to involve stakeholders beyond health in the process. ■



The use of multiple sources of information enhances risk assessment and increases confidence in decision-making.

3. Ensuring WHO is ready



WHO visits communities affected by a 7.5 magnitude earthquake in Papua New Guinea.



WHO discusses the earthquake response with Papua New Guinea's Secretary of Health, Pascoe Kase.

WHO country office staff are on the front line of emergency response, standing shoulder to shoulder with Member States to protect health and save lives. With help from the newly revised *Emergency Response Framework*, WHE is working to support country office readiness.

In March, 14 heads of WHO offices from around the Region participated in an exercise to test their response to a fictional outbreak. The week before the simulation, the WHO Representative Office in Cambodia

underwent intensive emergency training to increase their understanding of the *Emergency Response Framework* and the incident management system. The same training is now being rolled out in other country offices.

WHO country offices are also supported with rosters of deployable experts, a stockpile of emergency supplies and a new online toolkit with key emergency resources.

Country offices can also access the Contingency Fund for Emergencies to facilitate immediate response without waiting for funds to be raised. During the reporting period, the Fund kick-started responses to Tropical Cyclone Donna in Vanuatu, the Marawi conflict in the Philippines, Tropical Cyclone Gita in the Pacific and the earthquake in Papua New Guinea.

At the Regional Office, a dedicated Incident Management Support Team bringing together WHO staff from across the Division of Health Security and Emergencies and beyond is on standby to support any country office and Member State within hours of an emergency taking place. Regional Office staff also participated in a simulation exercise in January, working through the response to a fictional disaster.

Through these critical readiness measures, WHO is increasing the speed and effectiveness of emergency response to better serve Member States and the people of the Region in times of crises. ■

4. Preparing for the next pandemic



A swab is taken from a young Cambodian patient for influenza testing. The Western Pacific Region is a hotspot for the emergence of novel subtypes of influenza with pandemic potential.

The Western Pacific Region is considered an epicentre for the emergence of novel influenza subtypes with pandemic potential. Over the past decade, multiple new avian influenza A(HxNy) virus strains that have the ability to cause illness in humans have been detected in the Region, including A(H5N1), A(H7N9), A(H5N6) and, most recently, A(H7N4).

WHE continues to support countries to review national pandemic influenza pre-

paredness plans and update approaches based on the evolving context. A two-tiered approach, as proposed by APSED III, has provided the foundation for planning discussion: in reviewing, testing and updating pandemic response plans, countries also assessed the availability of structures and resources to allow response plans to be implemented effectively.

At the end of April, Cambodia, the Lao People's Democratic Republic and Viet Nam

came together to revisit preparedness based on lessons learnt from past events and anticipate future threats.

One of the critical lessons from the influenza A(H1N1) pandemic of 2009 was that many countries had prepared for a pandemic of high mortality. Their preparations were not necessarily suited for a milder event. Now countries are adopting a more flexible approach that can be scaled up or down based on the clinical severity of the infection. This approach requires countries to develop plans that can be adjusted based on national risk assessments. To help countries gauge the severity of an influenza pandemic and tailor their response, WHO recently released the Pandemic Influenza Severity Assessment (PISA) tool.

Following the framework for action outlined in APSED III, Member States also continued to strengthen generic health security capacities. These capacities will serve them through all kinds of outbreaks and public health events, including the next pandemic. For example, many Member States have established emergency operation centres for command and coordination during emergencies. They have also continued to develop capacities in epidemiology, risk assessment and risk communication.

Pandemic influenza threats will continue to be a top priority for WHE. Efforts will be redoubled to ensure the Region is well prepared for the next influenza pandemic. ■

5. Strengthening food safety

In November 2018, Papua New Guinea will host the Asia-Pacific Economic Cooperation (APEC) Summit – a unique opportunity for the country to showcase its food, people and culture to the world.

However, if appropriate controls are not in place, large numbers of people can be exposed to unsafe food. Food safety risk management plays a key role in the prevention and control of foodborne diseases at such gatherings.

A national food safety system is the foundation for the planning and implementation of all food safety control measures. In Papua New Guinea, the Government is focusing on strengthening the system to prevent food safety incidents and emergencies, not only for the APEC Summit, but also beyond.

Guiding this process is the *Regional Framework for Action on Food Safety in the Western Pacific*, endorsed at the October 2017 session of the Regional Committee. It builds on the lessons learnt from the *Western Pacific Regional Food Safety Strategy 2011–2015* and provides guidance on strategic action and a stepwise approach to strengthen food safety systems in the Region. Coordination across sectors and collaboration with the food industry and consumer groups is an integral part of the implementation of the framework.

Under the leadership of Papua New Guinea's National Department of Health, strategic priorities for strengthening the national food safety system have been identified and are being implemented in

preparation for the APEC Summit. These priorities include training of food handlers on safe practices and adherence to the WHO *Five Keys to Safer Food*: keep clean; separate raw and cooked; cook thoroughly; keep food at safe temperatures; and use safe water and raw materials. Food inspectors are being trained, and information is being prepared for dissemination to meeting participants on how to protect themselves

from foodborne diseases. The country is also preparing for potential deliberate food contamination and outbreaks of foodborne illness, as part of public health emergency preparedness for mass gatherings.

With WHO support, the National Department of Health is making food safer for visitors at the APEC Summit and for the people of Papua New Guinea. ■



Papua New Guinea is preparing to host the Asia-Pacific Economic Cooperation Summit. As part of preparations, the national food safety system is being strengthened to ensure food is safe for visitors.