Commentary

Partnerships for global health security: WHO Health Emergencies Programme and the Republic of Korea

OPEN ACCESS

Received: May 14, 2019

Accepted: May 14, 2019

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Conflict of Interest

No potential conflict of interest relevant to this article was reported.

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Editor's note: Dr. Michael J. Ryan is serving as the Executive Director of WHO Health Emergencies Programme (Geneva, Switzerland).

GLOBAL PUBLIC HEALTH THREATS IN THE 21ST CENTURY

Today's highly mobile, interdependent and interconnected world provides myriad opportunities for the rapid spread of diseases. Epidemic-prone diseases such as cholera, epidemic meningococcal diseases and yellow fever made an alarming come back and call for renewed efforts in surveillance, prevention, and control. Emerging viral diseases such as avian influenza in humans, Ebola and Marburg haemorrhagic fevers, Nipah virus, Severe Acute Respiratory Syndrome, and West Nile fever have triggered major international concern, raised new scientific challenges, caused major human suffering and enormous economic damage. The food chain has undergone considerable and rapid changes over the past 50 years, becoming highly sophisticated and international. Although the safety of food has dramatically improved overall, progress is uneven and food-borne outbreaks remain common in many countries.

The spread of scientific capacity and advances in technology mean that more institutions are performing clinical and research studies on infectious agents, increasing the risks of accidental release or diversion unless adequate biosafety and biosecurity standards are in place.

Meanwhile conflict, extreme weather events, natural disaster, population growth and massive population movements are amplifying the emergence and resurgence of infectious diseases.

In addition, as populations continue to grow, humans encroach on areas of biodiversity, and climate change affects vector patterns, hence the patterns of disease transmission are changing dramatically. All of these are changing the context in which we operate. Today an estimated 1.4 billion people live in fragile, conflict-affected, and vulnerable settings. Of these people, 80% are affected by health emergencies and 70% of cases due to epidemic-prone diseases are occurring in conflict-affected settings. Meanwhile, a record number of people around the world—more than 69 million—have been forcibly displaced, many of whom are cut off from accessing basic health services.

In the face of these changes, patterns of disease transmission are evolving rapidly, crossing frontiers and affecting new populations. Outbreaks of deadly diseases in urban and peri-urban areas are becoming the new norm: yellow fever in Angola and Brazil, Middle East Respiratory Syndrome (MERS) in Kuwait and the Republic of Korea, plague in Madagascar, or cholera in Yemen. The outbreak of Ebola virus disease in the Democratic Republic of the Congo (DRC) highlights the difficulty of operating amongst the interlinked challenges of a highly mobile population, a struggling health system, and a protracted conflict.

All of this means that the World Health Organization's (WHO) role as a convener and lead coordinator to ensure a swift response and international cooperation is more critical than ever.

THE NEED FOR COLLECTIVE RESPONSE

The WHO's vision for global health security is a more secure world that is on the alert and ready to respond collectively to the threat of epidemics and other public health emergencies that represent an acute threat to public health security, an unbroken line of defence using highly trained personnel and making effective use of up-to-date technologies.

For this vision to become a reality we need to work in partnership with all stakeholders in the global community, we need trust and transparency that are based on 2 essential components:

- 1) Strong national public health systems able to maintain active surveillance of diseases and public health events, able to rapidly investigate reports, assess public health risk, share information, and implement public health control measures.
- 2) An effective global system that supports disease control programmes to contain specific public health threats, is able to continuously assess the global picture of public health risks (global risk assessment), and is prepared to rapidly respond to unexpected internationally spreading events.

Our mandate at the WHO Health Emergencies Programme is to protect the vulnerable by helping countries to better prepare, prevent, detect and respond to the many health risks we face today. That means bringing together partners, setting standards and strategies for global risk management, coordinating and running a global alarm system, providing rapid real time verification of events, helping countries build strong public health systems, providing technical guidance and support, sharing information, and conducting operational and logistical missions.

THE WHO HEALTH EMERGENCIES PROGRAMME

Although much progress has been made in countries in recent years to strengthen national preparedness, prevention as well as detection and response capacities, significant gaps remain in the capacity of many countries to manage all-hazards health emergencies and disaster risk.

Weak health systems and protracted conflict mean that many countries simply cannot deliver basic health, nutrition and social services. It is in these vulnerable settings where most deaths among children under five occur, as well as the highest rates of maternal mortality, unintended pregnancy, sexual and gender-based violence, malnutrition, mental disorders, under-immunization, and infectious disease outbreaks.

The WHO's work in health emergencies is based on 2 pillars, 2 equal sides of the coin:

- 1) Helping countries build strong national public health capacities, so they can rapidly identify and investigate public health events, share information and implement public health control measures. The International Health Regulations (2005) (IHR 2005) provides the foundation and framework for capacity building, and supports WHO's country focus on universal health coverage, ensuring that vulnerable populations have access to essential health services and medicines.
- 2) Maintaining a global risk management and alert system to continuously assess global contexts of public health risks and coordinate a rapid response to unexpected, internationally spreading events.

These 2 pillars work in parallel. While the long-term, critical work of strengthening national public health capacities is on-going, when an emergency strikes, anywhere in the world within 48 hours, WHO mobilizes health responders, cash and supplies in the field. Within the first week, the organization sets up and activates regional and global field mechanisms; works with the ministry of health to refine knowledge and needs; develops a fully costed and budgeted action plan with the initial priorities identified; identifies strategies on infection, for prevention and control, for the laboratory, and to protect health workers; assesses the state of preparedness in the region and in surrounding countries; plans for further surges in human resources and supplies depending on the needs assessment, including looking into potential medical countermeasures, such as, using for the first time on a large scale investigational vaccines and therapeutics for the Ebola outbreak in DRC; and activates partnerships and financing mechanisms.

And even when supporting an emergency response in one country, WHO continues to closely monitor and assess on-going and new outbreaks not only in the affected country, but also in all other countries around the world that are experiencing health events. In 2018, WHO detected, monitored and carried out risk assessments and field investigations of more than 170 health events each month, while providing full support to the two Ebola outbreaks in DRC beginning 8 May, the cholera outbreak in Yemen (since 2017) and the cholera outbreak in Zimbabwe in September 2018. In 2019, as the Ebola outbreak in North Kivu in DRC continues, WHO is providing full support to the response to Tropical Cyclone Idai in Mozambique.

The WHO has set up the Contingency Fund for Emergencies (CFE), which allows it to respond rapidly to disease outbreaks and health emergencies—often within 24 hours. This saves lives and helps prevent unnecessary suffering. Furthermore, a quick response dramatically reduces the costs of controlling outbreaks and emergencies, as well as wider social and economic impacts. The CFE is not earmarked; this gives WHO the crucial flexibility it needs to act quickly in response to disease outbreaks, natural disasters, and humanitarian emergencies.

THE IMPORTANCE OF GLOBAL PARTNERSHIPS FOR HEALTH SECURITY AND THE CONTRIBUTION OF THE REPUBLIC OF KOREA

The Republic of Korea has a long history of supporting global health security and emergency response operations. Dr. JW Lee, WHO Director-General from 2003 to 2006, understood

the critical need for international cooperation during public health emergencies, for trust, transparency and information sharing among all stakeholders in the global community. We owe the first emergency operations centre, the Strategic Health Operations Centre (SHOC), to Dr. Lee. Years later, the SHOC is at the heart of the Emergency Public Health Operations Centres Network, which includes more than 140 members institutions in 80 countries around the world.

Today the Republic of Korea continues to demonstrate its commitment to global health, global health security and humanitarian response by supporting the emergency response programmes and funding mechanisms, such as, the Global Outbreak Alert and Response Network, the Emergency Medical Teams Initiative, and CFE, and setting up a secondment process to the WHO so that the organization can benefit from the Republic of Korea's expertise in global health and humanitarian aid. Its support to these programmes and initiatives through the Korea International Cooperation Agency is critically important.

And in addition to providing vital support to these programmes, the Republic of Korea is leading by example. When a case of MERS was confirmed in a 61-year-old Korean man who had recently returned from a business trip to Kuwait, the Korean Ministry of Health took immediate action.

Following the MERS outbreak in 2015 that infected 186, killed 39 people and affected more than 70 healthcare facilities, the Republic of Korea had made significant improvements in its health system, so that outbreaks such as MERS could be quickly identified and contained. Following recommendations from WHO based on technical missions to the Republic of Korea in 2015 during the outbreak, and from the Joint External Evaluation carried out in 2017 which identified priority areas for systems strengthening, the Republic of Korea improved its health worker training, disease surveillance, infection prevention and control procedures, laboratory systems, and interagency communications. When the new case arrived in 2018, Korea was able to respond promptly and keep the disease from spreading globally.

I can only praise the Government of Korea for learning from its experiences, leading by example and showing the global community the importance of investing in national health systems strengthening. And on behalf of WHO, I would like to express my thanks and my appreciation of the Republic of Korea's commitment to not only developing countries' health security capacities, but also to strengthening its own domestic capabilities by dispatching Korean experts to assist with project implementation and monitoring in countries. Again, leading by example and demonstrating to the global community how much we can accomplish by working together to improve the health and well-being of vulnerable populations all over the world.

Through the Korean International Cooperation Agency and the Korean Foundation for International Healthcare, the Government of Korea is effectively supporting global health security by helping countries strengthen their capacities for outbreak prevention, detection and response.

The Republic of Korea and WHO share the same mission: keeping the world safe and ensuring quality healthcare and essential health services to the vulnerable. At WHO, we look forward to continuing to work together with the Republic of Korea to deliver on our ambitious but critical mission to improve the health of people all over the world.