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Zika and Health Security in Southeast Asia

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Synopsis

As Southeast Asia continues to see reports of new Zika outbreaks, this latest case of public health threat underscores the importance of continued vigilance to new emerging diseases, as well as deepening regional cooperation in ensuring health security for states and societies in ASEAN and beyond.

Commentary

SINCE THE World Health Organisation (WHO) declared Zika - a hitherto little-known virus - as a Public Health Emergency of International Concern (PHEIC) in February 2016, Zika cases have spread in over 70 countries and territories. Brazil recorded the highest number of cases: 78000 confirmed infections. Southeast Asia has not been spared.

Singapore has already reported 383 cases, including 8 pregnant women, while cases have also been reported in Philippines and Thailand. The Zika outbreak once again highlights the need for continued disease surveillance and control in the region, while underscoring the importance of having a clear and comprehensive public health strategy in dealing with the threat of emerging diseases to health security.

Impact of Zika

Illness due to the Zika virus is relatively mild in most cases. But it is of serious concern to pregnant women: in about 1% of Zika-affected pregnancies, the infants are born with microcephaly (unusually small heads). Microcephaly is typically accompanied by neurological damage, resulting in lifelong health burden. In rare cases, the infection leads to Guillain-Barré syndrome, a severe neurological

condition that can require long periods of hospitalisation. Furthermore, uncertainty about sexual transmission complicates family planning for couples, foreshadowing potential demographic problems for a country.

The short-term macroeconomic impact of Zika on South East Asia is likely to be minimal. In February, the World Bank estimated the short-term economic costs of Zika in Latin America and Caribbean to be 0.06% of GDP. But the bank cautioned that long-term costs could be much higher if the link between Zika and microcephaly is established; the current scientific consensus is that microcephaly is a consequence of Zika infection.

The long-term health burden will also increase if the disease becomes endemic in Southeast Asia, a distinct possibility since the *Aedes* mosquito is widespread in the region. Travel and tourism will be affected: several countries (for e.g. United States, Taiwan, Australia, and China) have issued Zika-related travel alerts. The Ministry of Education in Malaysia has postponed all school trips to Singapore and Philippines.

Given the region's recent history of SARS and H5N1, emerging diseases like Zika virus infections pose a threat to health security in the region. This serves as another reminder to focus on the urgent task of strengthening the capacity of public health systems in ASEAN.

Boosting Efforts in Regional Capacity Building

Long-term development trends in the region, like resource exploitation of natural environments and rapid urbanisation, facilitate the emergence and spread of infectious diseases. In themselves, economic growth and urbanisation result in better access to healthcare facilities. But due to higher population density and greater connectivity of urban centres, any outbreak is likely to spread fast and further. Thus, aggressive containment – a hallmark measure undertaken by cities like Singapore and Hong Kong during previous outbreaks – is likely to be less effective in the future.

A proactive approach is required. The policy focus ought to be on building disease surveillance and control capacity at both national and regional levels. This will involve, among others, building and maintaining laboratory facilities, hospital preparedness capacity, manufacturing capacity for vaccines and drugs, and institutional capacity for risk assessment and communication.

In the past decade, countries in the region have made progress towards building core capacity to fulfill the International Health Regulations (IHR) requirements. As parties to the IHR agreement, ASEAN countries are required to 'build their capacities to detect, assess and report public health events.' But more resources are required; the ongoing Zika outbreak has exposed the limited capacities of several ASEAN states. For one, health officials in Indonesia and Philippines admitted to a lack of sufficient testing kits for Zika.

ASEAN members need to go beyond capacity building at the national level. For a number of reasons, capacity building at the regional level is equally critical for tackling emerging diseases. Firstly, health system capacity varies highly across the region. Weaker health systems cannot easily cope with obscure infections like Zika

because the knowledge base regarding the disease is relatively thin and best practices are not well established. Secondly, given the uncertainty surrounding emerging microbes and their transmission, transparent and dynamic mechanisms of data collection and sharing are needed at the regional level.

While there are ongoing efforts at the regional level to pool expertise and facilitate information sharing, perhaps the setting up of a regional centre for disease control, an idea that has been mooted at various times in the past, should now be pursued with greater urgency. In the near-term, regional mechanisms like the ASEAN Technical Working Group on Pandemic Preparedness and Response need to be further strengthened. Given the importance of risk assessment and communication, the institutional capacity of ASEAN Risk Communication Resource Centre (RCRC) should also be enhanced.

Cooperation beyond ASEAN

Capacity building will also require cooperation with other stakeholders. The scientific community in ASEAN plus Three (APT), which includes China, Japan, and South Korea, is an invaluable source of research expertise. This could be harnessed towards the development of rapid and cheap diagnostics for emerging diseases. There is precedent for such collaboration within the APT community: epidemiology training capacity in the region has been enhanced through the establishment of the APT Field Epidemiology Training Network (FETN).

In cooperation with other organisations, ASEAN should also take steps to invest in vaccine development. Vaccines are one of the most effective means of disease control, but a vexing issue is the delay between the start of an outbreak and market availability of vaccines. Clinical trials for the Zika vaccine begin next year and the vaccine is only expected to be available in 2018.

Commercial and regulatory issues often hamper equitable access and swift development of vaccines. The newly launched Coalition for Epidemic Preparedness Innovations (CEPI), founded by the governments of Norway and India in partnership with the Wellcome Trust, Bill & Melinda Gates Foundation, and the World Economic Forum, is seeking to overcome these barriers and accelerate vaccine development for emerging diseases. The organisation intends to fund manufacturing capacity and early-stage human trials. There are also plans to establish a small stockpile of trial vaccines. ASEAN should perhaps consider joining CEPI and contribute to the nascent international efforts directed towards vaccine development.

Emerging diseases can cause substantial loss of human lives, particularly to developing states. In addition to their immediate effects, diseases like Zika infections can lead to significant long-term burden on a country's health system. To be sure, strengthening national public health systems builds capacity but to proactively tackle emerging diseases, investments are also required at the regional and international levels. Thus, deeper regional cooperation and active engagement with relevant stakeholders are needed.

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