

COMBATting INFECTIOUS DISEASES: THE ZIKA VIRUS

by *Jeremy Dexter B. Mirasol*

Last August 2016, the Philippines' Department of Health (DOH) was on full alert after reports from Singapore confirmed local transmission of new cases of Zika virus in the city-state. Since then, hundreds of people in Singapore have been tested positive of the virus, making the country the largest foothold of the mosquito-borne virus in Asia. Understandably, it generated concerns that the number could escalate quickly, prompting some countries to issue warnings against non-essential travel to Singapore. The potential for cross-border transmission has heightened international awareness of this infectious disease.

The Zika virus is not a new discovery, but it has only begun to spread around the world in the last seven years starting in the Pacific island nations and eventually plaguing Latin America. According to the World Health Organization (WHO), Zika is a mosquito-borne virus that was first detected in monkeys in 1947 and later in human in 1952. The virus is transmitted to humans through the bite of an infected *Aedes aegypti* mosquitoes – the same species that carries dengue, chikungunya and yellow fever.

In the last two years, the Zika virus has commanded worldwide attention due to particular risks to pregnant women. There are scientific studies that confirm that the virus can cause infant neurological disorders such as microcephaly, a severe birth defect in which babies are born with abnormally small heads and underdeveloped brains, and neurological complications like the Guillain-Barré syndrome, a sudden weakening of muscles.¹ These cases led the WHO to declare the Zika virus and related complications a *Public Health Emergency of International Concern*, a global-scale alarm that warns of implications in public health beyond the affected state's national borders and underscores the need to coordinate international action.²

Susceptibility of the Philippines

A [study](#) suggested that the Philippines is vulnerable to a Zika outbreak because of its limited health resources. It examined various factors – the number of people who travelled from Zika-affected areas in South America and Asia, the presence of mosquitoes that can potentially carry the virus, and the warming climate – to assess and identify which countries could be most at risk from an outbreak. For this reason, a strategic plan using available health and human resources must be in place to effectively minimize health, economic, and social consequences of a Zika outbreak.

On the part of the Philippine government, DOH has intensified its campaign by closely monitoring and testing symptomatic travelers particularly from countries who have cases of Zika virus. Along with these customary immediate measures, efforts to prevent the spread of the virus include surveillance, clinical management, vector control, and health promotion. On top of these efforts, the DOH has assured the public that there are 2,000 kits available for testing Zika virus on suspected patients.

As of February 2017, there are 57 Zika cases recorded in the Philippines, including seven cases involving pregnant women. These cases are mostly situated in urban areas. This development could potentially become a major health concern since population density is projected to increase in urban areas due to migration and thus would create unfavorable conditions that allow communicable diseases to spread faster than before.³

Spread of diseases and human mobility

Over two billion passengers travelled annually by air in the first decade of the 21st century, compared with the 68.5 million passengers recorded in the 1950s. major improvements in international transportation made human mobility faster and more affordable than before, facilitating movement of people across continents. The proliferation of budget airlines and low-cost carriers has certainly contributed significantly to this trend. In the Philippines, air traffic has been steadily growing amid promotional offers such as seat sales which offer the lowest possible fares. In 2015, over 36 million passengers transited through Manila alone.⁴

With these developments in transportation, movement of pathogens and microbes also becomes more robust, thus increasing the risks in public health security. Health professionals have warned that confined and recirculated air in airplanes may pose a significant health risks of contracting diseases that are airborne and extremely contagious as manifested in past health outbreaks

caused by Ebola, AH1N1, SARS, avian flu and now, Zika.

The occurrence of these infectious diseases has raised questions on how well prepared the world is in dealing with new virulent infectious diseases in an era of increased human mobility. Public health epidemics, a non-traditional security issue, have grown into a national and global security threat. In health security, this highlights the fact that microbes know no borders and its effects could range from disintegration of health systems and collapse of transportation systems to closing of borders and restriction of travel. The Zika virus poses a serious and imminent international threat that even wealth nations are in danger of.

Addressing pandemics

Health challenges related to migration could be more effectively addressed through international collaborative undertakings. For instance, in 2016, the WHO came up with the [Zika Strategic Response Plan](#) to guide the continuing international response and joint actions against Zika virus infection. The plan underscored greater focus on preventing and managing medical complications, expanding health systems' capacities including that of the Philippines, sexual and reproductive health, risk communication targeting pregnant women, and integrated vector management. It calls for states to forge joint operations plan in detection, prevention, care and support, research, and coordination.

On the one hand, the Philippines has signified its intent to replicate the Cuban health system by studying the measures employed by Cuba in preventing the spread of the Zika virus. Almost the entire Caribbean has experienced widespread transmission of the virus, but health experts claim that there has been only sporadic spread in Cuba due largely to their preparation to detect and respond to the virus as soon as possible, and the involvement of the public.⁵ As part of Cuba's war on the virus, a nationwide campaign of intensive mosquito spraying, monitoring, and quarantining has been promoted with the objective of decimation of mosquitoes in every neighborhood.⁶ The campaign was designed to get everyone involve including students as young as ten years old. International medical experts noted that other countries can learn from Cuba's intense focus and its capacity to organize its population which in turn leads to a strong and effective response.

The present threat of the Zika virus makes it more imperative to invest in a resilient health system which includes robust health information system, adequate number of health workers, availability of medicines, sound health infrastructure, and public financing. A resilient health system would strategically address all dimensions of health security in a synchronized and synergistic way. No country is immune from pandemics and hence, it is in this circumstance that the international community should be more vigilant about health security challenges that globalization brings to the world.

Contemporary pandemics and outbreaks of diseases are pervasive reminders of our vulnerability to emerging threats and inability to predict such event. Within this configuration, communicable diseases have become highly mobilized; health conditions in one country or region assumes a greater capacity than ever before to influence those conditions in other parts of the world. 🌿

Endnotes

¹World Health Organization, "Fact Sheet on Zika Virus". <http://www.who.int/mediacentre/factsheets/zika/en/> (accessed 10 October 2016).

²World Health Organization, "International Health Regulations (IHR) Procedures Concerning Public Health Emergencies of International Concern (PHEIC)." <http://www.who.int/ihr/procedures/pheic/en/> (accessed 10 October 2016).

³World Economic Forum, "The Global Report Risks 2016 11th Edition." <http://www3.weforum.org/docs/Media/TheGlobalRisksReport2016.pdf> (accessed 10 October 2016).

⁴Official Gazette, "Two Million More Passengers in 2015." <http://www.gov.ph/2016/01/21/two-million-more-passengers-2015/> (accessed 11 October 2016).

⁵European Centre for Disease Prevention and Control, "Current Zika Transmission." http://ecdc.europa.eu/en/healthtopics/zika_virus_infection/zika-outbreak/pages/zika-countries-with-transmission.aspx (accessed 11 October 2016).

⁶The Washington Post, "Cuba Reports Remarkable Success in Containing Zika Virus." https://www.washingtonpost.com/world/the_americas/cuba-reports-remarkable-success-in-containing-zika-virus/2016/09/02/72d8a308-70c4-11e6-993f-73c693a89820_story.html (accessed 11 October 2016).

Jeremy Dexter B. Mirasol is a Foreign Affairs Research Specialist with the Center for International Relations and Strategic Studies of the Foreign Service Institute.

Mr. Mirasol can be reached at jbmirasol@fsi.gov.ph

CIRSS Commentaries is a regular short publication of the Center for International Relations and Strategic Studies (CIRSS) of the Foreign Service Institute (FSI) focusing on the latest regional and global developments and issues.

The views expressed in this publication are of the authors alone and do not reflect the official position of the Foreign Service Institute, the Department of Foreign Affairs and the Government of the Philippines.

The Center for International Relations and Strategic Studies (CIRSS) of the Foreign Service Institute (FSI) undertakes studies in support of the formulation, review, and dissemination of Philippine foreign policy. It also organizes conferences, roundtable discussions (RTD), lectures, and forums as channels for interaction, cooperation, and integration of the efforts of local and foreign experts from government, private and academic sectors on foreign policy issues and their domestic implications.

