

# CROSSING BARRIERS

■ By Dr. Faith Mesa

**E**XPERTS SAID the world was due for another pandemic influenza. In contrast to the regular seasonal epidemics caused by minor genetic changes which lead to the emergence of new viral strains every year, pandemic influenza is caused by a major “genetic re-assortment” by a human and non-human virus in a non-human host. In the case of the 2009 influenza, the new virus was a re-assortment of four strains, one endemic to humans, one endemic to birds and two endemic to pigs. The lowly swine played host to the re-assortment and infection was transmitted to humans.

Each year in the United States, seasonal influenza-related illnesses result in an average of 36,000 deaths and 200,000 hospitalizations.<sup>1</sup> In the Philippines, influenza is the 5<sup>th</sup> leading cause of overall morbidity, affecting 350,000 individuals in 2007.<sup>2</sup>

Vaccination, the best prevention for the seasonal flu, is recommended for people who are high-risk for severe diseases like the elderly, patients with cancer, unstable diabetes or chronic obstructive lung diseases. In the Philippines, vaccination for influenza has been limited to the above cases.

For pandemic influenza to occur, the novel virus has to be pathogenic and virulent to humans. It must like-

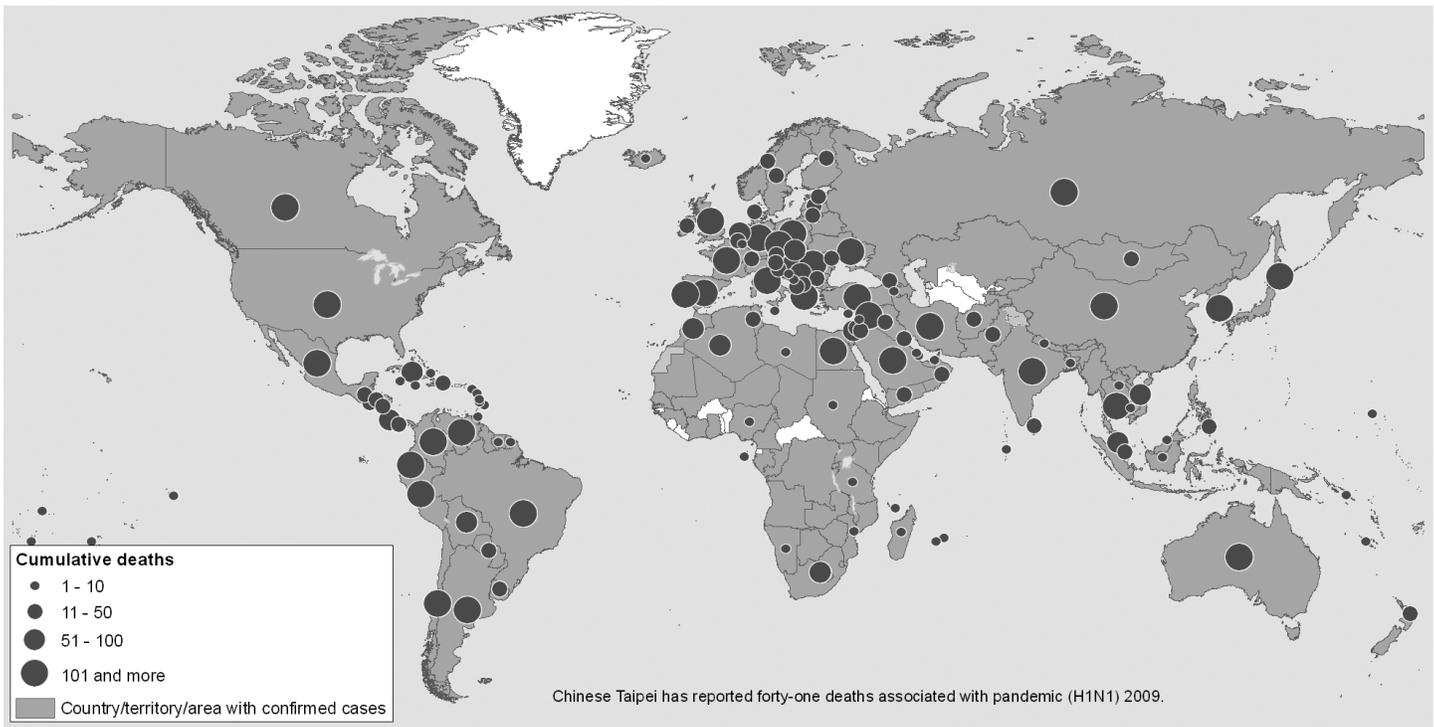
**Complacency, not over-reaction, is the greatest danger posed by the flu pandemic.**

..... wise be capable of sustained person-to-person transmission for which the population has little or no immunity. The 1918 Spanish flu caused a global mortality of 100 million, while the 1958 pandemic flu which originated from China resulted in one million deaths. The risk of pandemics may be greater today than in the past due to speed of international travel.

The earliest cases of human infection with the novel influenza virus A (H1N1) were detected in April 2009 in San Diego and Imperial County, California and in Guadalupe County, Texas. The virus soon spread rapidly. Within days, hundreds of suspected cases,

JAY AZUCENA

Countries, territories and areas with lab confirmed cases and number of deaths as reported to WHO



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Data Source: World Health Organization  
Map Production: Public Health Information and Geographic Information Systems (GIS)  
World Health Organization



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Map produced: 22 April 2010, 09:30 GMT

Source: [http://gamapservr.who.int/mapLibrary/Files/Maps/GlobalSubnationalMasterGradcolour\\_20100418\\_weekly.png](http://gamapservr.who.int/mapLibrary/Files/Maps/GlobalSubnationalMasterGradcolour_20100418_weekly.png)

some of them fatal, were discovered in Mexico, in the U.S. and several other countries in the Northern Hemisphere.<sup>1</sup>

The virus, which was easily transmissible via respiratory droplets, followed the international travel route and infected several countries in less than a month's time.

By June 2009, A (H1N1) was reported in 103 countries, with about 55, 867 confirmed cases and 238 deaths. WHO's latest monitoring update, dated April 23, 2010, reports that "more than 214 countries and overseas territories or communities have reported laboratory confirmed cases of pandemic influenza H1N1 2009, including over 17,853 deaths." It must be noted that the reported number of fatal cases is an under representation of the actual number of deaths. According to WHO, "many deaths are never tested or recognized as influenza related."

In a highly globalized world,

viral spread came as an unfortunate package of international trade. With countries already reeling from the effects of the global economic crisis, limiting international travel to prevent viral infection was out of the question.

### Emergency Preparedness: The Crux of the Matter

The first case in the Philippines was confirmed on May 21, 2009, about a month before the World Health Organization (WHO) declared a pandemic level Phase six<sup>3</sup>.

The Research Institute for Tropical Medicine (RITM), which had been designated by the Department of Health (DOH) in 2004 as the National Influenza Center, led the Influenza Surveillance Network, under DOH guidance. The project sought to establish an effective and timely influenza surveillance network in the country by collecting information on the circulating influenza strains

during inter-pandemic periods and providing influenza isolates to the WHO Global Influenza Surveillance Network for use in vaccine production and research. The network wanted to monitor, analyze and disseminate epidemiologic infor-

mation on influenza activity for public health intervention and case management while strengthening the health systems at the LGU level for sustainable surveillance.

As local health care practitioners watched the cases spread

## NOT YET OVER

**I**N FEBRUARY 2010, the World Health Organization (WHO) said that while transmission has been declining in many parts of the world, "the A/H1N1 pandemic influenza has not fully passed its peak yet."

**Dr. Keiji Fukuda, WHO special adviser on pandemic influenza, emphasized that although the A (H1N1) pandemic "appeared not as severe" as originally feared by health officials, "the situation could change" given the highly unpredictable nature of flu viruses. The possibility that the virus could mutate and become more virulent cannot be ruled out by scientists.**

**Dr. Fukuda stressed the need for countries to be prepared for a second wave of the pandemic. WHO advised governments to "keep their guard against any severe outbreaks and continue their vaccination programs."**

Sources: [http://www.chinadaily.com.cn/world/2010-02/24/content\\_9498872.htm](http://www.chinadaily.com.cn/world/2010-02/24/content_9498872.htm)

<http://balita.ph/2009/12/30/ah1n1-pandemic-not-over-yet-warns-who-chief/>

rapidly across the US and Mexico, and then Europe and Australia, they dreaded the confirmation of the first case in the country. As the virus crossed borders, the government established the Philippines Emergency Management Task Force for Influenza A (H1N1) to coordinate all national and local efforts to contain the virus.

In May 2009, the National Disaster Coordinating Council (NDCC) designated DOH Secretary Francisco Duque III as the "Overall Crisis Manager (De-Facto NDCC Chairman) for 2009 A/H1H1 Flu".

The DOH issued technical and operational guidelines enforced by national and local government entities among organizations engaged in public health protection and health care provision. Also, directors of DOH Centers for Health Development were mandated to organize the local Disaster Coordinating Councils to respond to the influenza outbreak. Secretary Duque assured the country that measures were in place to detect early cases and contain transmission.

The Hospital Infection Control Committee and Hospital Disaster Preparedness Committee coordinated most of the private and public hospitals' initial responses to the imminent pandemic. Information on the clinical management of the disease was disseminated among health care providers. Emergency department personnel were educated in handling suspected or confirmed cases.

Despite these measures, my reaction when I received the test result of the first positive case we had at Manila Doctors' Hospital was disbelief followed by dread. I have experience with emergency preparedness and response, but the tasks that lay ahead seemed formidable.

The DOH focused the initial response to early detection and containment of the virus by contact-tracing and event-based surveillance. All "cases under observation" (patients suspected to have the disease based on exposure and symptoms) were

advised admission to a DOH referral hospital and a laboratory confirmatory test.

However, with the rapid spread of the disease globally and within the country, such strategies became less feasible and sustainable. WHO recommended that countries in transition should be prepared to move towards implementing mitigation measures to minimize the impact of the pandemic.<sup>4</sup>

At the emergency department, we were overwhelmed by the sheer number of consultations for fever, cough and colds. The RITM was likewise swamped with specimens for confirmatory laboratory testing. Very soon, the number of affected individuals increased every day. Returning overseas Filipino workers were a particular problem. I treated one who was supposed to go back to his hometown on vacation. At this time, we could not accommodate him for admission because of lack of rooms. While the DOH recommended home quarantine, he worried about his family. He said there was not enough space in their home for him to be properly isolated.

### **Access to Health Care: The Challenge of a (H1N1)**

The severity of a pandemic may vary from country to country and among different locations within the country. Main determinants of severity include 1) the pandemic virus and its virological characteristics, 2) vulnerability of population, 3) the capacity for response.<sup>5</sup>

The current strain of influenza A (H1N1) causes self-limiting infections in a majority of infected individuals. Initial advisories issued by the DOH for preventing the spread of infection included strict hand washing, practicing proper cough etiquette and social distancing or limiting contacts -- advice that had always been emphasized by health care practitioners even before the pandemic.

Unfortunately, in a third world country such as the Philippines, poverty makes the population highly vulnerable to

infectious diseases. In fact, data from the National Statistics Office in 2009 still lists infectious diseases like pneumonia, diarrhea, bronchitis, tuberculosis and influenza among the top ten leading causes of morbidity. Overcrowding in urban poor communities, lack of knowledge on proper health practices, and lack of water facilities are just some of the basic health concerns that put the majority of Filipinos at risk for influenza A (H1N1).

The DOH has also initially identified 5 DOH-retained government hospitals as primary referral and admitting centers. Three of these were in Metro Manila, one in the Visayas and one in Mindanao. But as the number of cases increased, the lack of adequate health facilities, limited number of health care workers and slow delivery of services in government hospitals became more pronounced and perceptible to patients. Selected private hospitals were allowed to admit patients in their facilities and manage the cases according to the guidelines issued by the health department.

A calamity fund of 93.5M was requested by the DOH to cover for the preparedness plan for the pandemic influenza. This included purchases for stockpiling of anti-viral medications, personnel protective equipment and other logistics/supplies. When community level transmission was apparent, local government units also had to allot funds to take care of the health needs of their constituents. This underscored the fact that the country has been spending very little on health care as reported by the NSO. For example, in 2007, health only constituted 3% of our gross national product.

The use of antiviral drugs should be part of a comprehensive approach consistent with the overall pandemic preparedness plan, the use of which should be in accordance with DOH guidelines. A tablet of oseltamivir (Tamiflu) costs P160. For a full course of treatment, one has to spend P1600 on this

medicine alone. This certainly places a strain on the resources of Juan de la Cruz who may even learn less than the minimum wage.

During the avian flu scare, calls were already raised by public health practitioners and human rights groups about making drugs of public health importance exempt from patent laws, to make the drugs accessible and affordable to low-income families. When the A (H1N1) vaccine becomes available, the same principle must be utilized. The government may also intervene to procure essential medicines to protect the interest of its people.

One public health practitioner has warned that "Complacency, not over-reaction, is the greatest danger posed by the flu pandemic."<sup>6</sup> Our response to the public health emergency that is the A (H1N1) reflects and exposes the inadequacies of our national health care system. Unfortunately, those that bear and suffer are those who cannot access essential health care services. It is now a challenge for local communities to take action to ensure that their lives will not be collateral damage in the battle against influenza A (H1N1).

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- 6 Sanie, Mediodora, MD, unpublished lecture, May 2009

*Dr. Mesa, a member of the Medical Action Group, is a specialist in emergency medicine. She was involved in the early surveillance of influenza in the Philippines.*