

# Chapter 13: Republic of the Philippines

## Establishing the Philippines Barangay Health Emergency Response Teams (BHERTs): Community Control of Emerging Infectious Diseases in a Decentralized Government System.

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In 1991, the Philippines enacted into law the Local Government Code mandating the establishment of the system and powers of local government units (LGUs) throughout the country. From the largest to the smallest administrative units, these LGUs are provinces, cities, municipalities and the barangays.

The barangay, formerly known by the Spanish word for village, "barrio", was named after the early communal settlements of Malay people in the country. During the process of decentralization in the early 1990's, health services were devolved from the Department of Health at the national level to the governors and mayors to empower the LGUs in terms of administering health personnel and managing government's disease prevention and control programs.

It was during the multi-country SARS outbreak in 2003 that the Barangay Health Emergency Response Teams (BHERTs) were borne out of a dire necessity. As the Philippines public health care system was severely tested during the SARS outbreak, Secretary of Health, Dr. Manuel M. Dayrit, and the Department of Health (DOH), specifically the Infectious Disease Office of the National Center for Disease Prevention and Control, had responded early to an unprecedented global health emergency issued by the World Health Organization by putting up its own SARS Operations Center on 17 March 2003. An immediate direction was given to strengthen the procedures of the Bureau of Quarantine (BOQ) in establishing systems for screening and monitoring of possible cases of SARS.

As quarantine officials worked closely with airport officials and immigration authorities, measures were instituted to efficiently examine incoming passengers, travelers and returning Filipinos for fever and other symptoms. President Gloria Macapagal-Arroyo by virtue of an Executive Order1 also promptly ordered instituting immediate measures to improve health care system readiness for SARS on 26 April 2003. This included hospitals and medical preparedness, media briefings and particular focus on disease surveillance and outbreak investigation.

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Figure 1: The Department of Health, Manila, Philippines.

Figure 2: Mobilizing the Health Officials of the DOH and the Private Sector.


Determined to mobilize the community to halt the spread of the disease, a forum for the National and Local Governments Counter-Attack against SARS was held at the PICC ("Fighting SARS: A National-Local Government Conference") on 3 May 2003. A crucial Memorandum Circular was issued by the Department of Interior and Local Government (DILG) to enjoin city and town mayors and village chief executives to form community level response teams, the BHERTs. These teams were mobilized "to take the lead in prevention and control of SARS at the local level"[2].

## 1. A Time for Action

Each BHERT had been organized upon the instruction of the village Chief Executive, or "Punong Barangay" (i.e. Barangay Captain), and consists of an appointed Executive Officer, a village enforcer ("Barangay Tanod") and two health workers, one of whom is preferably a nurse or midwife. One team had been organized for every 5000 of the village population and each team was tasked to essentially monitor arrivals of persons coming from affected countries that may be suspected to have SARS and their contacts, and to immediately isolate and confine cases and place the concerned household members under quarantine for 14 days. Those who would also be monitored include those who have had direct contact with SARS cases and those with fever of more than 38 degrees centigrade and other respiratory symptoms. BHERTs were instructed to report the status of those monitored people to their village chiefs regularly.

During the Philippines SARS outbreak from April to June 2003, a total of 92 cases were admitted to the Research Institute for Tropical Medicine (RITM), San Lazaro Hospital in Manila and other regional hospitals in the provinces. Most of them were suspected SARS, eventually diagnosed to have other infections or underlying conditions.

Among 14 probable cases reported, two of them were initial cases who had started chains of transmission and died later. Six cases were either relatives of the two aforementioned cases or health workers who had contact with them, and four were imported cases from SARS affected areas - Hong Kong, Singapore and Taiwan.

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In addition, two cases were attributed by the World Health Organization to Philippines. Those two cases were British couple who had probably infected in Hong Kong. They were treated as ordinary pneumonia during their stay in Philippines during last week of February, before the WHO issued a worldwide health emergency on 12 March 2003 and before the first travel advisory was issued on 15 March. Though the couple had been diagnosed retrospectively by blood tests in the United Kingdom in May, coordination with Philippines health authorities and subsequent contact tracing were not able to document any cases of SARS during the couple's visit fortunately.

With the emergence of this new disease and the potential spread of the infection in different communities in Philippines, the BHERTs had proved to be an important foundation to the efforts of the national health officials in facilitating the referral and management of overseas Filipino workers (OFW's), travelers and tourists from SARS affected areas to the appropriate hospitals. On 20 May 2003, the WHO released its update 60 in their website (http://www.who.int), announcing the removal of Philippines from the list of areas with recent local transmission of SARS. Moreover, WHO commended Philippines' efficient surveillance and reporting system which reflected strong political commitment and a high level of awareness among health staff.

Figure 3: President Arroyo addressing a Conference of Mayors for the National-Local Counter-Attack on SARS

Since the establishment of the SARS surveillance system at the DOH-National Epidemiology Center (NEC), suspected cases were admitted to RITM in July 2003 and January 2004, but were eventually ruled out as SARS cases. The surveillance system is currently operational in coordination with the Regional Epidemiology Surveillance Units (RESUs), BOQ, RITM, and San Lazaro Hospital, and is still maintained up to the present time.

## 2. Facing the Threat of Avian Influenza

Even though the SARS outbreak in 2003 and the occasional alerts in early 2004 had relatively been short-lived, the opportunities arose to prepare the Philippines health care system, and it had also facilitated the development of protocols for surveillance and quarantine, isolation procedures and infection control. However, there was a need to sustain and nurture the capacity of the local governments to respond. Under the present Secretary of Health, Dr. Francisco T. Duque III, a nationwide training in dealing with the risks of the spread of emerging infectious diseases was conducted for local health officials during 2006 to 2008.

Figure 4: Dr. Lyndon Lee Suy of the Infectious Disease Office of the DOH Conducting a Training for BHERTs

Among the threat of these various infections, foremost is the onslaught of avian influenza that has affected Asia and Europe. Almost all neighbors of Philippines have experienced outbreaks of avian influenza among wild birds and poultry as well as sporadic cases of human infections. As fear of a new pandemic influenza raises amidst these countries, the DOH has constantly focused on developing the capabilities for community preparedness and response to public health emergencies under an Executive Order 2803 that outlines the needed response of government agencies to avian influenza.

Recognizing the need to strengthen the surveillance of birds and potentially infected humans, the BHERTs was again activated along with the mobilization of Rapid Action Teams (RATs) of the Department of Agriculture. The monitoring and reporting system utilized during the SARS outbreak in 2003 was used as a template for the reporting formats to enhance surveillance for avian flu on reporting of cases and incidents as an effective early warning system against emerging infections.

With the establishment of a specific Early Warning System for avian flu that was piloted in two areas (General Santos City and Minalin, Pampanga), an important component, the "Barangay Report Form" is used in the community and duly verified by the barangay chief. The forms contain queries on the possible risk factors from birds, ducks, poultry and humans in the community, exacting information about symptoms and related information.

Seeing the need to involve village responders in the training, the initial series of trainings for doctors, nurses and other health personnel eventually gave way to the creation of a separate pilot training course for the Barangay Health Workers and members of the BHERTs. From July 2007 to June 2008, numerous batches of two-day trainings for BHERTs were conducted in different regions of the country. A total of about 300 people were trained from selected barangays areas, from Luzon in the northern part of the Philippines to Mindanao in the south which are considered to be "hotspots" for avian influenza. These were barangay chiefs or "captains" (village heads), barangay health workers, members of the barangay peace and order brigade (called "tanods") and representatives from various mayor's office and local health offices.

A unique psychosocial method, also known as "4As" -- activity, analysis, abstraction, and application, led the participants to express their realization that BHERTs play a very important role in the prevention and control of outbreaks, especially EIDs, in the community, and made them aware of the need to formulate a preparedness plan at the grassroots level. At the end of the training workshop, the participants presented a collectively crafted preparedness plan aimed at activating the BHERTs in their areas.

### 3. Present Perfect: The Candaba Experience

The town of Candaba, occupying the easternmost part of the province of Pampanga, about 60 kilometers north of Manila, is known for its farmlands, swamps and bird sanctuaries, being the lowest point in the central portion of Luzon island in Philippines. Dr. Anita Pangan, the Municipal Health Officer of Candaba had realized the urgent need to immediately organize her health center staff and barangay health workers during the SARS outbreak in 2003. The town had many of its residents working overseas as laborers and domestic helpers, mostly in Hong Kong and other Asian countries.

The BHERTs from Candaba were instrumental in developing and implementing a system of surveillance for arriving "balikbayans" or residents who are coming home to stay for the holidays, to spend their vacation or those who have ended their job contracts. Continuously utilized over the past years under the close supervision of the Municipal Health Office, this monitoring system is still functioning up to the present, which includes a complete line listing of persons who arrive from any country, the date of their arrival, the country of origin and the intended date of departure as well as the use of investigation forms of suspected cases.[4]

Guided by the Department of Health Center for Health Development in the Central Luzon area, Dr. Pangan along with her staff developed different forms to be used by the BHERTs.

(1) A Barangay Line List Form used continuously by health workers to identify and obtain information of residents returning from overseas, mostly staying temporarily in their villages; information that are collected include residence and employment details and travel information of the returning residents.

Figure 5: Dr.Anita Pangan, the Municipal Health Officer of Candaba, Pampanga in a Meeting with Health Center Staff and Barangay Health Workers

(2) Case Investigation Forms:

- Form 1: Candaba Health Office - "Imbestigaston sa Insedente ng Pagkakasakit ng Tao") which are used by the village health workers to document cases of influenza-like illness in the community; these were patterned after the "Barangay Report Form" that was pilot tested by the DOH in the establishment of local level early warning systems for avian flu (mentioned above).

- Form 2: Candaba Health Office - Influenza Case Investigation and Laboratory Form (based on the form from the National Epidemiology

Center (NEC) and the Research Institute for Tropical Medicine (RITM) of the DOH) to be used for referring possible suspect cases to the NEC and RITM

Barangay Chairman Macapagal of Bgy. San Agustin, a village of about 780 families, expressed recognition on dedicated participation of the barangay health workers coupled with the fervent support from the local officials. The local BHERT members also learned to extend a spirit of village camaraderie as their familiarity with their neighbors permits them to unobtrusively obtain information regarding status of the travelers' health, circumstances surrounding their personal lives and the nature of their work in abroad.

Due to concern on sensitivity of information, members of the team carefully comb the streets to interview the overseas workers or their relatives themselves, and secure the vital information as someone might turn out to be infected with avian flu or other contagious diseases from another country.

As Candaba, Pampanga is considered to be an avian flu hotspot because of the enormous poultry population and the proximity of various wetlands to migratory birds, Dr. Pangan emphasizes the need to work closely with agriculture officials in order to develop the ability of the barangay health workers in reporting of deaths among the population of poultry and wild birds in the vicinity where bird to human contact may be possible.

She and the local officials in Barangay Vizal San Pablo recalled an incident in 2006, during which the municipal health office and the barangay health workers were the ones initially alerted a suspected outbreak of disease in ducks, even before the notification from Municipal Agriculture Office. Though it subsequently turned out to be a false alarm, the incident highlights the need to sustain vigilance in the community through intensive surveillance and reporting system as it reflects the potential threat to human lives. Since then, the BHERTs use this incident to remind themselves and the members of the community of the dangers that may befall their town. Time will tell when the local government and the BHERTs will be called upon again to defend their towns and villages against future threats.

### 4. The BHERTs as a Model of Community Mobilization against Emerging Infectious Diseases

Countries that have been affected by avian influenza epidemic have great concern on the spread of the disease which might be beyond the ability of the national government to control. Even if Philippines may not be on benefit of the latest technology to diagnose and manage the emerging infections that have overwhelmed the capacities of the public health system of different countries, it has so far capitalized on the most important resources to fight this deadly disease.

These are members of the community who are on the frontline of the battle against infectious diseases. Rather than being a victim to an impending outbreak of avian flu, the village community is emboldened to deploy its own BHERTs under the supervision of local officials in order to protect their cities and towns, their families and loved ones.

There is presently a need to further document other good practices in community preparedness for emerging infectious diseases in other communities of Philippines, particularly in areas where the Community-based Early Warning Systems are being established and implemented. Varying conditions such as the political, sociodemographic and geographic profile of barangays which might influence the capability of LGUs to organize BHERTs are needed to study carefully as an attempt to replicate the success of surveillance system that has been well established in the community. A basic manual for community surveillance and response may be of great value to develop in the near future.

5. References

(1) Presidential Executive Order No. 201, defining the Powers, Functions and Responsibilities of Government Agencies in Response to the SARS Contagion

(2) Memorandum Circular No. 2003-95 from the Philippine Department of Interior and Local Government (DILG): Enjoining the Creation of Barangay Health Emergency Response Teams in All Barangays Nationwide

(3) Presidential Executive Order No. 280, defining the Powers, Functions and Responsibilities of Government Agencies in Response to Avian Influenza (AI) or Bird Flu Virus and Related Matters Thereto

(4) Candaba Health Office Surveillance Forms:
- Barangay Line List Form
- Human Illness Incident Investigation Form
- Influenza Case Investigation and Laboratory Form