Hospitals well equipped for emergencies in Manila

Case Study

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Manila, Philippines – In September 2009, the Philippines was ravaged by Typhoon Ketsana. The disaster took the life of more than a thousand people in Southeast Asia. The modern UERM Medical Center in the heart of the capital city of Manila lacked preparations for strong typhoons.

"The hospital was devastated. The building was inundated with floodwater rising from the river just fifty meters from the hospital, affecting both the clinics and the emergency room. We had to relocate our equipment and patients on the second and third floors," reminisces Mr. Alexis B. Bitanghol, Director of UERM Medical Center's Disaster Control Unit.

"At that time, we did not have a disaster mitigation strategy in place with which we could have prevented the damages caused by the flooding. It took 48 hours for the floodwater to recede and two weeks to clean up the hospital," Mr. Bitanghol says.

Mr. Alexis B. Bitanghol stands in front of an emergency boat at the UERM Medical Center. These boats can be used to transfer equipment between hospital buildings during a flood.

Investments in preparedness pay off

Since 2009, UERM Medical Center has done a lot of work to increase its preparedness to natural hazards. An important step was the Hospital Preparedness for Emergency (HOPE) training that was initiated in the hospital as part of the Program for Enhancement of Emergency Response (PEER) supported by USAID's Office of U.S. Foreign Disaster Assistance (OFDA).

"We wanted to increase our structural preparedness, knowledge and equipment to better prepare to hazards caused by floods, earthquakes and fires," Mr. Bitanghol says. He is referring to HOPE's aim to strengthen the capacity of hospital staff and emergency managers to deal with challenges caused by natural hazards.

"The basic training was followed by a session concentrating specifically on hospital incident command systems. More than forty staff from the hospital and the adjacent College of Nursing have now received HOPE training," says Mr. Bitanghol.

> "Thanks to the water gates, the floodwater didn't reach the hospital during the storm,"
>
> states Mr. Alexis B. Bitanghol, Director of UERM Medical Center's Disaster Control Unit.

Apart from training its staff, as a result of HOPE, the hospital invested in two floodgates that now protect the buildings and generators from floodwater. The amount of equipment was increased with boats that can be used to transfer materials between the buildings. Twelve water pumps were installed to make sure the floodwater can efficiently be pumped back into the river.

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The pumping machines at UERM Medical Center automatically start pumping floodwater back in the river when the water level reaches a certain height. The modern monitoring boards make it easy to oversee the pumps that are tested every month.

Investments in disaster preparedness equipment turned out the pay off when another strong storm with heavy rainfall hit Manila in 2013.

"Thanks to the two water gates, the floodwater didn't reach the hospital. We are moving towards being fully prepared against natural hazards, including typhoons," Mr. Bitanghol states.

Earthquake and fire drills used to take place at UERM Medical Center once a year, but are now organized twice annually. The emergency room has been rearranged so it can easily be transferred to a contemporary location when the need arises.

"We are planning to further equip the hospital with sand bags and design posters with guidance on how to act in times of earthquakes or fires. We are also preparing a training on patient evacuation," Mr. Bitanghol says.

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Preparing a hospital five kilometers from the fault line

The Philippine Heart Center sits on relatively high ground over firm adobe in Quezon City in Metro Manila. However, the West Valley fault line is located just five kilometers from the hospital and – together with the annual typhoons – causes considerable hazard risk to the 38-year-old hospital building.

"When an earthquake comes, you can always expect a fire. The hospital has had a couple of fires in its history so it is very possible for one to start during significant ground shaking. Since many fires are likely to break out across the city when an earthquake hits, the fire bureau may not get to us in time. That is why I have taken basic firefighting and rescue training together with some colleagues. Now the hospital has a volunteer fire brigade," says Medical Technician Mr. Elmer Collong.

"From a historic point of view, another major risk for us is flooding. If, for some reason, we were unable to pump the water run-off that gets into our drainage system during heavy and sustained downpour, it would flood the basement and knock us out of operation since our generators, kitchen, and stock rooms are down there," Mr. Collong states.

This happened once in the 1970's. Since transferring the generators to higher ground is too expensive, the hospital's engineering division has

The UERM Medical Center built water walls and flood gates to prevent floodwater from the river from reaching the hospital.

included pumping and other flood control procedures as part of their emergency action drills.

"Thanks to preparedness measures, flooding has not happened since, even during Typhoon Ketsana," says Mr. Collong who also chairs the hospital's Emergency Management Sub-Committee and acts as Health Emergency Management Staff (HEMS) Coordinator with the Department of Health of the Philippines.

Hospital incident command systems to be put in place

A total of thirty officers including medical staff, nurses, engineers, accountants, and security officers from the Philippine Heart Center have participated in the two HOPE trainings organized at the hospital. The second training was also attended by staff from neighboring health care facilities.

"Sometimes the problem with deployment is not so much about the absence of nurses and doctors, but the support personnel. Even our IT support personnel participated in the HOPE training because data transfer – communicating in and out of an impacted area – is crucial in emergencies," Mr. Collong says.

Mr. Collong has experienced the challenges of hospital incident command systems not being adequately in place. In the aftermath of Typhoon Haiyan, he recalls a situation when the generators of a hospital he was sent to suddenly ran out of gas.

"The person who needed to initiate the purchase of gas supply was not available because of the disaster. There was money for gas, but emergency purchases were not made. Logistical problems dogged disaster operations because of gaps in the incident command system and emergency plans. These kinds of important questions are asked during HOPE training: Who are part of the hospital's incident command system and who is in command?" Mr. Collong states.

"We are currently working on our own hospital incident command system, meaning for example the activation of staff during emergencies. We are also updating our emergency management policies to include psychosocial support in order to help our staff deal with what they experience during disasters," Mr. Collong adds.

By Leila Uotila

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