

Cover
Story

Mobilization for ***Earthquake Relief and Rescue***

A Documentary of Hualien Tzu Chi Hospital Response to
Mass Casualty Incident after the 0206 Hualien Earthquake



The Eastern Emergency Operation Center (EEOC) of The Ministry of Health and Welfare (MoHW) was established in Hualien Tzu Chi Hospital (HTCH), under the command of Dir. Lai Pei-Fang of the Emergency Medicine, in charge of integrating and coordinating emergency medical resources in Hualien-Taitung region, allocating resources effectively in the times of disaster, keep a record of the capacity of every emergency units of every medical institutions, and divert patients and resources accordingly. HTCH also has a system in place to address different categories of disasters, known as Hospital Incident Command System (HICS).

Soon after the Hualien earthquake struck, news of collapsed buildings began to spread. The hospital immediately initiated Mass Casualty Incident Response, appointing temporary command to the director of the ER or senior attending physician on duty (which was Dr. Chen Huang-Bin), and transfers command to the chief commander Supt. Lin Shinn-Zong upon his arrival. However, with the influx of mass casualties as result of the earthquake, Supt. Lin had to manage both in-hospital disaster inspection and mass casualty response simultaneously, hence under his decision the chain of command remained in Dr. Chen's hands. During the usual non-working hours, the hospital assigns "supervisor on-duty", "head nurse on-duty", "administrator on-duty" and etc. to handle general emergency situations. On the eve of the earthquake, the entire staff on duty were mobilized.



By You Shou-Hua, Peng Wei-Yun, Huang Szu-Chi

On Feb 6, at 11:50pm, an earthquake with a Richter magnitude of 6.0 shattered the earth. In an instant, the residential complex Yun-Men Tsui-Ti tilted, and Marshal Hotel collapsed. Hualien Tzu Chi Hospital (HTCH) initiated mass casualty incident response at 12:10am, mobilizing the entire hospital staff, with additional support from outside the hospital, and ended the response at 02:27am. Within 137 minutes,

over 100 patients were treated. With the end of emergency aid came the follow-up care on mental and physical health.

Hualien Tzu Chi volunteers launched a series of disaster relief effort, Tzu Chi volunteers around the world also sprang into action with fundraisers for the displaced survivors. Together they prayed for Hualiensers to be able to rebuild their homes and restore their lives.

HTCH nurses voluntarily rushed to ER to assist curing the wounded.





The ER Deputy Head Nurse Chou Ying-Fang (first right in blue vest) mentioned that the reason why the ER team responded so rapidly in the face of this earthquake was because of the routine drills and training.

Effective Chain of Command

“I have never seen earthquake of this magnitude. I did not know that buildings had collapsed at the time, but I did expect a lot of patients coming in, so I initiated the protocol for mass casualty incident response as soon as possible,” Lin recalled. One of the most vigilant and occupied individuals in this entire ordeal must be Supt. Lin Shinn-Zong,

who arrived at the hospital shortly after the earthquake. “On my way from the dorm to the ER, I observed the exterior of the hospital and Jing-Si Hall. The walk took about 7~8 minutes. By the time I arrived, the ER was already in action. The interim commander, labels, instructions, categorizations were already in process. Of course the hospital staff were already there.”

“Immediately after the earthquake, we were in action. We first inspect the current

ER Nurse Chang Ya-Wen immediately engaged in the mass casualty incident response after her night shift was over, wearing a “Safety Commander” vest, coordinating stable and less critical areas.



number of ER patients, equipment, hospital interior, and hardware for any damages or injuries. The superintendent then took over the chain of command, established the emergency operation center, and initiate mass casualty incident response. Under the mass casualty

incident response, patients are divided into four categories and are treated accordingly,” ER Dpty. Head Nurse Chou Ying-Fang who was on duty at the time explained. “The ER actually runs a mass casualty drill every year. Our team members are required to undergo trauma



The interns placed a patient on the bed and began CPR, while Dr. Wang Chien-Hsing (left) pushed the bed into the critical area.

training and are prepared for such a scenario. Therefore, (in regards to the emergency operation) the mission was a successful one.”

ER nurse Chang Ya-Wen was working the night shift on Feb 6. The earthquake struck when she was about to take off,

and instead of heading home, she stayed. “I didn’t think too much. I simply rush right into emergency aid,” she said. It was until 2:30am did she manage to squeeze some time to count the number of patients, and only then did she realize that the ER had treated over 100 patients. She mentioned

that, despite it been her responsibility, she felt like she was quite capable, having the ability to attend to these patients in such a short time. Chang further explained that the ER was filled with patients with varying degrees of injuries, so she divided the urgent from the less urgent, and subsequently assigned nurses to patients, with the hope that every patient would at least be assigned one nurse, after all patients been transported to a hospital right after a devastating earthquake would feel a lot better with a nurse available. She also reminded every patient to remain as they were to ensure that they could be located, monitored and treated promptly.

Last but not the least, she wanted to express her gratitude to the hospital volunteers who managed to calm the agitation and anxiety of the patients.

Most Patients Were Non-Critical

“A week prior (to Feb 7) we had several earthquakes, which was a little odd. I had many surgeries on that day, so I was exhausted. On the night of Feb 5 I performed a rather long operation, so I slept earlier than usual on the 6th, around 11pm. Before I fell asleep, the room started shaking. I decided to take a look around, only to find my family all gathered



Luckily, most patients were not in critical condition. Photo depicts a resident treating the victims.



Victims were sent to Hualien Tzu Chi Hospital ER for treatment. Most of them were in fear of how huge the quake was.

at the 1st floor, with the front door open for a quick exist. I thought they were too tense. Living in Hualien for all this time, earthquake is how we live. Plus, there hasn't been any buildings that collapsed," said Dir. Wang Chien-Hsing of the Surgery and Trauma Center, HTCH, on the eve of the earthquake.

"I then look at my phone, which was flooded with Line messages. I was in the Hualien Tzu Chi employee and volunteer group, and there were messages in the group indicating that buildings had collapsed, so I thought the hospital might be busy. Just as I was getting changed to

leave, I saw on my phone, '00:13 ER Red Nine', the hospital had initiated the mass casualty response. I came downstairs in my uniform, and my kid asked me, 'dad, where are you going?' On my way from Keats Rd. to the hospital, I was surprised by the amount of cars in the street at this hour!" Dir. Wang said. As he arrived at the hospital, he saw many hospital staff moving towards the ER in their casual wear. At the ER, it was crowded. He found and reported to the interim commander Chen Huang-Bin, who said to him, "the criticals are yours." When I stepped in to the critical area, a patient

was receiving CPR and passed away soon after. “I stayed in (the critical area), where emergency nurses, nurses from the surgical ICU, and other staff were as well. The next patient who came in was an OHCA (out-of-hospital cardiac arrest) patient, who was resuscitated in the ER, and later transferred to the medical ICU

for observation (the patient was identified as Yu Fei from China).”

“The critical area was full. In preparation of more critical patients, we tried to preserve space by transferring patients out of the ER for further treatments. Once we had a bed or two vacant, I went and stood by the entrance

Though gathered in emergency, Hualien Tzu Chi Hospital staff were in discipline to help the wounded.



to see what was happening. Not long after I heard shouting, followed by two people rushing in to push a bed out,” Wang said. His instinct told him that something was wrong. Although he did not hear any sirens, which meant that it was probably not as serious, but he followed them out anyway. It was a car. Two intern medical

students stabilized the bed and pull a patient out, which indicated that the patient was immobile. Wang knew the situation was critical. The interns jumped onto the bed and began CPR, while Wang, shouting people to move out of the way, raced the bed into the critical area. It was almost 2am. The patient’s

More than a hundred people were sent to the ER within two hours, staff made any possible room for treatment.





Staff would stay by the victims to comfort them after the treatment.

pupil had dilated before arrival. Despite resuscitation, the patient passed away soon after.

“Except for the three OCHA patients, we had another three who went into surgery, and were discharged the day after,” Wang recalled. Around 02:30am the emergency was lifted. He went and took a look at the less critical and stable areas. “Fortunately most of the patients in this disaster were flesh wounds. There were no brain damage, no pulmonary hemorrhage, no abdominal hemorrhage. It was fortunate that there weren’t that many patients in the less critical area

as well,” Wang said. He returned home around 3am, slept until 6am, woke up in preparation of the department meeting at 07:30am. After that was the trauma call from Feb 7 8am to Feb 8 8am. By the time he finished his surgery on Feb 8 at 5pm and was ready to head home, Wang encountered anesthesiologist Su Yi-Kai, who was holding an umbrella. “It is raining?” Wang asked.

Dr. Su asked Wang if his family was alright. Wang realized that he was not so certain, though before he left the house seemed intact and the furniture were in place. Dr. Su, who was not a local,



Vaccine shots to prevent tetanus.

was too afraid to return to the dormitory, so instead he moved to the volunteer quarters. “There are many nurses who are too scared to go home and decided to sleep in the duty room.”

Full Logistic Support

With the entire hospital on emergency aid, the role of logistic support was indispensably important. Dir. Shen Feng-Chi of the General Affairs Office said, “(after the earthquake) uninterrupted water and electricity supply is crucial, so our staff and medical technicians were

dispatched immediately. Of course, there weren’t enough beds (in the ER), so we prepared stretchers. In a cold weather like that, blankets and clothes are essential, and we were able to prepare enough in a very short time.” He added, “in such a chaotic moment, the security officers also played a vital role in ensuring the access of automobiles and personnel.”

The entire HTCH staff, including the general affair office, were mobilized to attend to the physical discomfort of the displaced citizens, as well as calming their fear and anxiety, throughout the sleepless night.