



TWO WEEKS OF LIFE-SAVING AND BURN CARE EDUCATION

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When I saw the news of the dust explosion on T.V., my heart sank. The strong sentiment came partly because I am a nurse. The day after the incident, around 5pm, I received a call from the head nurse that Taipei Tzu Chi Hospital need immediate backup, and that I should take the 6pm train, accompanied by Nurse Chen Wen-Chun. Without giving it much thought, I said yes right away.

My mission, in addition to providing clinical support, also includes on-site education. With only an hour to pack, I was fortunate to have the full and timely support from my Surgical ICU colleagues, who prepared all relevant items, as well as my flash drive containing vital data, and with additional burn care material added at the last minute. When Wen-Chun and I rushed to the train station, my colleagues had already arrived and await us with everything I need. It was thanks that we made it to Taipei in time and well-prepared.

No Time for Grief, Only for Expertise

For Taipei Tzu Chi Hospital, the situation was rather concerning—12 out of the 30 beds in the trauma burn ICU were patients admitted on the very same day, which created an overwhelming loading that is equally strenuous for us, if not more so, should the same amount of patients be admitted to Hualien Tzu Chi Hospital. Therefore despite having burn care experience, Wen-Chun and I had to spent crazy amount of time working, wound dressing in particular. We usually start working at 8am and wrap up around 10 to 11pm.

During our first week as support, I never breathed one gulp of air outside the hospital, as all of my time was spent inside hospital wards. Most of us were too occupied to eat. “Aren’t you scared with you see those wounds,” some asked. My nursing experience had prepared me for what was coming, and the fact that I am still a surgical nurse certainly answered the question. But surely, not scared does not equate with indifference.



As soon as they arrive in Taipei, Wang To-Jung and Chen Wen-Chun immediately joined the frontline staff to dress the patients' wounds.

Dust Explosion Burn Care

I was well aware how devastating emotions are and how much of a burden it can be. How can we have the clarity and astuteness to care for your wound while feeling sad and depressed, or to observe your urine output, heart rate, and wound conditions with teary eyes? I had to carefully study and assess patients' wound conditions, make the right decisions, and educate others all at the same time. The best I could do was to stay strong, making certain that every patient, and their wounds, receive the best care possible.

Clarity and rationality came from years of experience. I am not indifferent. Working with emotions can lead to mounting stress. When dressing the wounds of these burn patients, for example, I had to endure their screams and cries, complete the tasks with surgical precision, while chatting with them, comforting them, provoking them, or even scolding them, trying every single method as long as it calms them down. Yes, I knew it was cruel. When patients plead to me, I had to reply in a cold voice, "this is only the beginning, the pain will only grow worse! If you do not learn now, how can you make it past today, tomorrow, or the day after that? If we don't prepare you psychologically, you will not be able to survive the future. So what is it going to be?"



So, 12 beds, 12 patients, 12 voices screaming in pain. They were in torment, we were having it easy either, but timely words of encouragement remained crucial each step of the way.



Finally the wound dressing is over,
it is time to organize the material while teaching.

Racing Against Time, Every Second Counts

The truth is, all major hospitals are understaffed. When half the ward is flooded with new patients, the impact on medical staff is consequential, adding additional burden onto already-strained staff. Taipei Tzu Chi Hospital was commendable in at least two regards: first, receiving trauma burn patients when there were no burn wards available; and second, the necessary preparations were organized in a short amount of time, including centralizing burn patients, setting up medical equipments, and providing essential materials.

When we first arrived on the scene, there was no time to teach. We went straight into clinical work, wound dressing primarily, to relieve some of the mounting pressure, and weave the teachings in-between when the situation stabilizes. The training of a burn nurse takes not hours, days or weeks, to pass on our training and knowledge using those little pockets of time was an impossible task. The arrow, though, was no longer on the bow string, but flying in midair. We do what we can.

I was aware of how nerve-wracking everyone was, having us watching them closely while occupied with mountains of tasks, instructing them to do this and that. Our roles weren't lovable to begin with, but it was impossible for me, under those conditions, to instruct them with a gentle, pleasant voice, "come, let me show you, change the gauze like this, don't worry, there's nothing to be afraid of..." There was no time! You can teaching slowly in a classroom, not on-site! Our patients were lying right in front of us, wounds exposed, shivering in excruciating pain, waiting to have their wounds dressed!

Another predicament we faced was the large but unstable group of supporting nurses, which forced us to teach from scratch again and again. Our strategy had to change.

Teaching Both Teams at the Same Time

Take a patient with 80% body surface burn, for example, 2 experienced nurses could complete the entire wound dressing in 2 hours, but 6 inexperienced nurses, 2 hours are hardly enough. Since Taipei Tzu Chi Hospital assembled two dedicated dressing teams, my plan was to teach these dressing team nurses and have them

instruct others. On the other hand, since each bed has an assigned primary nurse, if they can learn it, it is better for the patients.

I was greedy at first, wanting to have both teams taught as soon as possible. The ward often echoed with my voice, “come, I know you are busy, but you have to understand the conditions of these wounds before administering medications...” Endless tasks and nerve-wracking pressure cracked both the inexperienced and the experienced to tears, but the sessions must go on. Some lessons must be taught as the situation develops to have a desirable effect, like wounds education without seeing the wounds can be difficult to understand. What degree of burn is this? How well is the recovery? What are the changes in color? How does the wound react to the dressing? There is a layer of dead skin after burn injury that requires debridement before new skin can grow, the opened wound would then need skin grafting, both are indispensable and painful procedures that would most likely be repeated several times over. Only in front of the wounds can I tell you how to identify a 2nd or 3rd degree burn, and whether the conditions improved or worsened. The accumulation of time and experience is the only way to learn.

I did not have the heart to push them further, knowing how overtired they already were, so I had to change my strategy once again. I reduced the load on primary nurses and redirect my attention to instructing the dressing teams, asking the arriving shift to report 30 minutes earlier, the departing shift to stay 30 minutes longer, then I would have the opportunity to teach both teams at once, going through each bed discussing the conditions of individual patients, the challenges we are facing, and the proposed solutions.....

As hard as we fought, dressing 12 patients twice a day, 2 hours each time, with 3 dressing times taking shifts, we still had to work 12 to 16 hours to complete! It was not hard to imagine how exhausted we were.

Clear Flow Chart to Prevent Infection

I then designed single-sheet teaching aid, incorporating in detail the entire nursing process, for the primary nurses and the dressing team. Each misstep worsens the patients’ conditions. The aseptic principle, for example, when not followed properly could lead to patient infection. With the single-sheet teaching aid, everyone who came

to support had to review it carefully before entering. Once the system was established, everyone benefited.

Then came the shift change wound report. In the later stages of treatment, a patient may have 4 to 5 types of wounds and dressing methods, a clear distinction of each is a sure way to keep patients safe.

The emphasis was placed on, aside from dressing procedure, the design and setup of equipments. Burn patients require protective isolation, any harmless bacteria in a normal environment could sometimes be fatal to them. Cap, mask, shoe cover, and gowns are fundamental equipments to protect against cross contamination. Wound dressing has high demand of medical material. When I drafted a list of additional material demands, some asked, why would I need all these stuff? "It's not what I need, but what these patients need," I answered.

For example, each ward had 3 pairs of scissors, I demanded 24 pairs. First, when dressing the wound, you need to remove the old dressing, and that would take one pair of scissors; after cleaning the wound and place new dressing, another pair is needed for trimming. In short, dressing a patient would require at least two pairs of scissors, and



Wang To-Jung adjusted her strategy, teaching two teams at once during shift change. Taipei Tzu Chi Hospital nurses recorded the process.



The ward beds are crowded with life-supporting apparatus and heat lamps that are there to ensure the patients' survival.

12 patients make it 24 pairs. We dress twice a day, which makes it 48 pairs. Although 24 pairs were sufficient, we had to count on the supply room to sterilize them in time for next dressing. Other medical materials had equally large demands. The amount of medical supplies needed to care for burn patients is beyond the capacity of a general surgical ward.

Having all the medical material prepared ahead of time is crucial for clinical practice to proceed smoothly. Not only does it reduce staff stress, patients would also be able to receive the best care possible. We redesigned the carts for wrap cloth and dressing material to have all necessary items installed, which significantly reduced the time of fetching items, and minimized the duration of the patients' pain.

The Commendable Taipei Tzu Chi Hospital

Our experience from the past helped us to respond to situations instantly, giving an exact list of items needed when and how many. Some might consider me as a perfectionist, given the short amount of time to teach and learn, and I was well aware the stress I had been exerting on the team. The only goal, though, was to ensure that our patients who were in excruciating pain receives the best care possible, or my purpose of being here is lost.

I might be strict, but I continued to adjust and adapt as situation arise. I did not seek to erase everyone's dedication and effort. I would like to thank the trust of my colleagues, and commend those who endured and persisted.

I was certainly impressed by the mobilization capability of Taipei Tzu Chi Hospital, not only for their timely supply of medical materials, but the speedy organization of equipments in mere days as well. I was concerned at first whether my two-week support was sufficient in a long, arduous battle of burn care, and what would happen after I leave? I hope that before I leave, I can share all my knowledge with the team.

Discharge Is Only a Beginning

After I returned to Hualien, I saw on the news that the burn patients had either transferred to general ward or discharged, the emotions were overwhelming. I bet that everyone in Taipei Tzu Chi Hospital were thrilled. We were there for two weeks, they stood their post for two months, the hardship from the beginning to the end was beyond words.

Our experience in burn care allow us to see further. The recovering process of these burn patients does not end with the ward transfer or the discharge, they are but a comma, not a full stop. When these patients are discharged, they have to face a prolonged rehabilitation and re-adaptation. No one knows how long it may take. Can these teenagers endure the hardship that lies ahead? The joy of patient discharge, to me, is only temporary. We have only reached our goal when these young people again lead a peaceful and happy life.

I have scoliosis, wearing a spine brace to work is my daily routine. I have been in clinical practice for 15 years, which translates to 15 years of bracing. It would be a lie if I just brush it off like it's nothing, but I have no regret. Once I became a nurse, I realized that my character traits are a great match to this environment. My greatest accomplishment and worth comes from the safe recovery of my patients. I wish that our society would provide strength and support to these burn survivors, and that they can lead a good and prosperous life.