

Topic : Logistical requirements for disaster relief

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### Abstract

**Title:**

Improving Operating Theatre Capacity for Disaster by Team Coordination:  
Evidence from the Corn Starch Dust Explosion at Taiwan Formosa Water Front  
Park on 2015

**Background:** The Corn Starch dust explosion caused four hundred and eighty four injuries and fifteen deaths on June 27th, 2015. The explosion was caused by high-temperature stage lamps and high-concentration of corn starch dust during the party at a water front park, New Taipei City, Taiwan. To date, it is still the worst mass burn disaster in Taiwan. Followed the acute stage in ED, the huge operating theatre capacity was required immediately for burn treatment.

**Patients and methods:** Thirty-five patients were admitted to Taipei Veteran General Hospital, a 3000-bed tertiary medical center at northern Taiwan. An extra huge operating theatre capacity was needed by those victims. Hospital Incident Command System (HICS) was activated including administration officers, multi-disciplinary medical professionals and social workers. Resources bottlenecks were identified in operating theatre block times, medical staffs and medical devices and supplies. At first, we re-allocated the operating theatre. Two operating suits were designated only for burn treatment. It helped to improve the scheduling and to reduce ineffective time. Secondly, we called for medical volunteers so that we could allocate extra surgeons and floating nurses into those two designated suits. Extra manpower made the process much more smooth and reduced turn-around time. Finally, we established a logistic team led by an experienced OT nurse staff. The leader played a pivotal role in

material management. The leader also acted as the contact window to receive the medical supplies donation. It helped to assure a stable and safe logistic supply system.

**Conclusions:** Extra operating theatre capacity was created. Three hundred and forty eight surgeries were performed with 458.1 surgical hours in six months. Team approach and coordination are the keys to success.

**Keywords:** corn starch dust explosion, operating theatre capacity, burn treatment, team coordination

主題：以團隊方式提昇手術室效能：2015 八仙塵暴的經驗

背景：2015 年的八仙塵爆事件係因舞臺燈的熱度引起玉米粉塵的爆炸，造成 484 人的燒燙傷。至今，仍然是最嚴重的爆炸事件之一。

目的：描述以團隊協調合作的方式，提升手術室運作效能以因應隨之而來的巨量清創手術需求。

方法：手術室團隊共同協調合作，透過重新分配手術間、徵召醫療專業志工以及設置單一窗口的緊急物資管理中心進行資源的管理與調度。

結果：經過手術室團隊協調合作，手術室效能提升，除原有選擇性手術照常運作之外，增加了 348 人次手術，458.1 小時的手術時數。

關鍵詞：八仙塵爆，手術室效能，燒燙傷處理，團隊合作

# 參與 2018 WSDN 大會心得

臺北榮總 戴宏達

感謝台灣護理學會的支持，讓我得以參加 2018 年於德國布萊梅舉辦的第五屆世界災難護理大會(World Society of Disaster Nursing, WSDN)。近年來，地震、海嘯以及洪水等自然災害或者核、化等人為災害似乎更嚴重的影響人類的生存與生活。災難護理，在累積了一定的經驗與理論後，演化成為一個新的護理次專科，是一個蓬勃的護理新領域。

這次出席的學會代表團人數眾多，吸引了參與國家的目光。學會貼心的準備了 Nursing Now 的標語以及國旗，讓臺灣代表團成為大會的焦點，不僅成功的展現了臺灣在專業學術上的實力，更順利的爭取到 2020 的主辦權，可謂收穫豐碩。



臺灣護理學會代表團的成員合影

此次大會主題著重在「全球災難危機管理的未來挑戰」。面對全

球氣候變遷的衝擊，自然災害對開發中國家造成相當大的衝擊。在大會主題中，最讓我感到興趣的，分別是 Dornan 博士、Evans 教授與 Chandra 先生對於災難現象的研究成果報告。Dornan 博士以半結構式問卷，對 18-50 歲的，經歷過災難的母親探討東緬甸災後人民的衝突與生活經驗，發現災民經驗到「被迫離鄉背井」與「太多的恐懼」；他也發離鄉背井之後，災民要經歷到極端的貧窮、薄弱的公共建設以及受限的交通運輸等現象。這些都是未來可以作為災難護理介入的機會點。

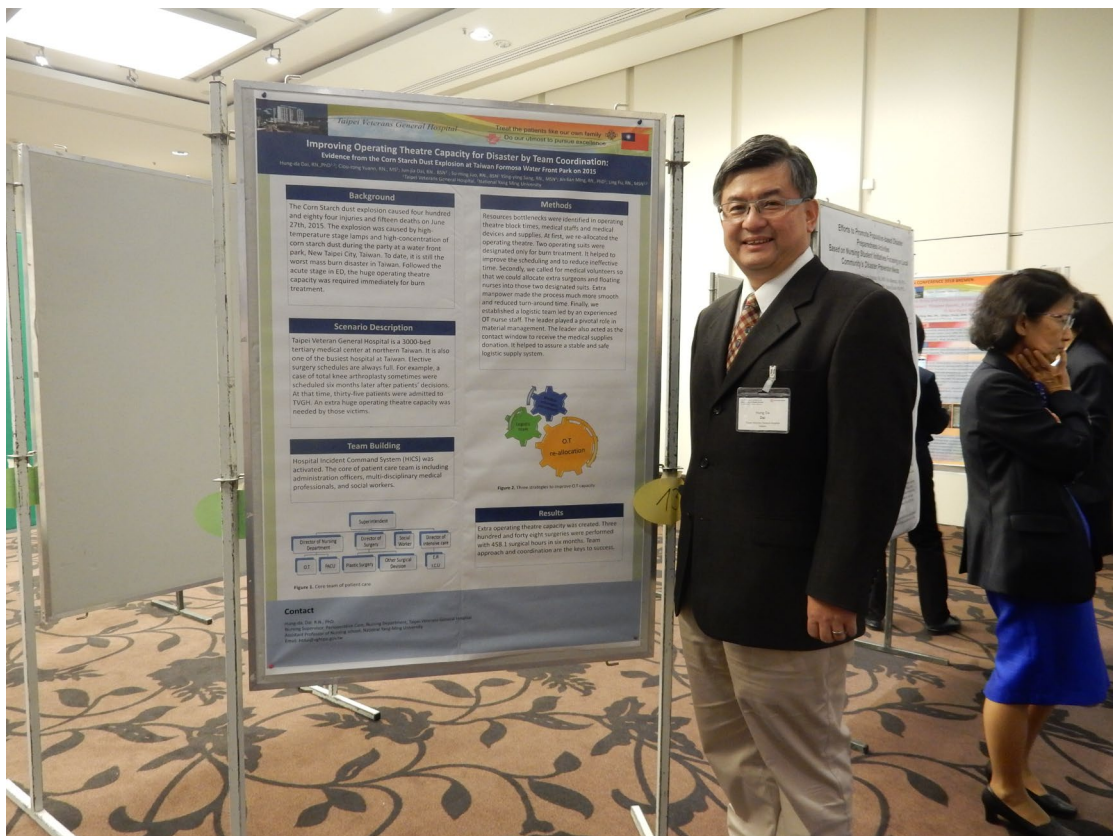
Evans 教授則是以量性的問卷調查法來探討烏干達地區災難曝觸與生活品質之間的關係。他發現性別、年齡與所經歷到的災難無關。他也發現最強烈的相關是災難的曝觸與生活環境條件。因此他也做了一個「改善生活環境可能是改善災民生活品質的方法之一」的推論。

Chandra 先生則以深度訪談方法來研究印尼災難生還者對災難照護的期望。研究發現，災難生還者期望：

1. 在疏散地或庇護所提供實質的護理照顧。
2. 提供即時合宜的資訊
3. 提供跨部門整合的資源

以上 3 點除了作為照護的指引之外，也建議可以用來發展印尼災難護理的照護指標。

宏達這次很幸運的能夠在大會發表討論型海報，向外國專業夥伴展示臺北榮總手術室在八仙塵爆急救與復健時期，透過「調整手術排程」、「徵招醫護志工」以及「設置手術物資調度管理中心」等三個策略，成功的創造手術室的運作能量。尤其興奮的是，帶著國旗，再一次向世界展現臺灣的努力與成就。



發表討論型海報

在短短的幾天內，無論在開幕式上的感動、會議中對大會主題的深入學習以及與專業護理伙伴的交流，均獲益匪淺，也再次的豐富了個人思考的內容與方式。未來，一定要持續這樣的充電之旅！