Hurry up and wait: evacuating Cairns Base Hospital—a case study

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On February 1, 2011, Tropical Cyclone (TC) Yasi began to accelerate towards the North Queensland coast. TC Yasi developed into a Category 5 cyclone, with an eye 100km wide and a diameter of 600 to 800 km, a system comparable in size and wind speed to Hurricane Katrina which devastated New Orleans in 2005 (BOM, 2011). The Australian Bureau of Meteorology (BOM) predicted TC Yasi would make landfall at Cairns, Queensland, on February 2 at approximately 22:00 hours, which coincided with a high tide (BOM, 2011). An associated storm surge of 5-7m above the normal tide was also predicted. As a result, on the morning of February 1, the Premier of Queensland announced the unprecedented decision that Cairns hospitals would be evacuated in Queensland’s largest mass medical evacuation and the largest hospital evacuation ever undertaken in Australia (Woods, Goodman, Mills, Usher, McBride, 2011). Patients unsuitable for discharge were evacuated by air to Brisbane metropolitan hospitals approximately 1700 km south of Cairns. Preparations for the transport of 356 patients, staff and relatives began on February 1 (Little et al., 2012; Woods et al., 2011). Cairns Base Hospital (CBH) closed at 07:00 February 2, and a temporary emergency medical facility was deployed at an indoor sports stadium approximately 10 km inland, outside of the storm surge zone (Little et al., 2012; Woods et al., 2011). Although there were plans for vertical and horizontal patient evacuations, and evacuation of the entire hospital to a nearby congregational point, CBH did not have emergency and disaster plans to evacuate patients to Brisbane, close the hospital, and open an emergency medical facility (Little et al., 2012).

This case study will explore the process of a pre-emptive evacuation of a 330 bed regional hospital prior to the cyclone. In the preliminary data (component 2 of the total data set) reported in this presentation, a range of health care professionals and middle management staff (n=15) were interviewed about their experience of the hospital evacuation. Patient care and safety was the overarching priority for everyone involved in the hospital evacuation, but communication issues challenged the effective management of the evacuation process. Four hierarchical levels of leadership were identified. Communication breakdowns between each level, and the lack of an evacuation plan, led to confusion about roles, responsibilities and processes, contributed to lengthy delays for patients waiting to be evacuated, and resulted in less than optimal patient care. Given the unpredictability of natural disasters, a comprehensive disaster evacuation plan focusing on communication, preplanning and leadership, is essential for hospitals in vulnerable locations. This presentation provides an insight into the challenges of such an evacuation operation from the perspective of the doctors, nurses and other healthcare workers involved, and touches on lessons that can be learned for future disaster management. Recommendations from the preliminary data analysis echo those of Little et al., and are as follows:

- hospital emergency plans need to consider the need for evacuation
  - disaster staffing requirements/need for outside support as local health care professionals need to care for their own family as well
  - clear channels and methods of communication within the hospital
- early establishment of a casualty clearing centre staffed by personnel from elsewhere to care for patients awaiting evacuation
- medical records and sufficient medications and supplies for 24 hours need to accompany each patient
- a structured plan for establishing an alternative medical facility
- monitoring equipment and battery power need to be planned for
- backup communication systems need to be in place.
References
