

I-35W Bridge Collapse in Minneapolis, Minnesota on 01 August 2007

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Introduction: On 01 August 2007 at 18:00 hours, the unthinkable happened in downtown Minneapolis. A major, eight-lane interstate bridge over the Mississippi River suddenly collapsed during rush hour. There were 190 people and 120 vehicles on the bridge when it fell. In a matter of a few seconds, 13 people were killed, and >100 were injured. This event captured the attention of the international media. The response by local fire, emergency medical services, and law enforcement agencies has been described as a “model of effectiveness”.

Methods: The local response to the bridge collapse—and the coordination with metropolitan, State, and Federal partners—demonstrated the extraordinary value of comprehensive disaster planning and training. The city’s ability to respond had evolved over several years of investing heavily in all of the elements that make a crucial difference when events occur. In July 2007, the City of Minneapolis had just completed a five-year plan for emergency preparedness.

Results: The value of planning, conducting a gap analysis to identify shortcomings in response capability, and filling those gaps by acquiring equipment and training with regional partners will be discussed. In Minneapolis, this resulted in excellent working relationships. The success of the 800 MHz radio system also will be discussed. The city was in the best possible position to be successful while responding to this event.

Conclusions: The presentation, based on the after-action analysis conducted by the Federal Emergency Management Agency, will highlight 11 problem areas as well as 19 notable successes and best practices that other agencies and jurisdictions will find valuable.

Keywords: best practices; bridge collapse; Minneapolis; preparedness
Prehosp Disaster Med

Lessons Learned from the Ashmore Reef Refugee Boat Explosion: Australia’s Most Remote Major Medical Response

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Objective: The objective of this study was to describe the clinical lessons learned from the medical response to treat 44 seriously injured asylum seeking refugees injured in an explosion aboard their vessel located 800 km from the nearest moderately-sized hospital.

Methods: Of the 49 passengers and crew onboard Suspect Illegal Immigrant Vessel (SIEV) Number 36 on 16 April 2009, 44 survived an explosion on board. These survivors had an average burn surface area of 25%, with several having burn areas in excess of 60%. Six required intubation by a medical response team in the field, and at least eight others had intubation on arrival at the health facility. Response procedures were reviewed in the wake of this incident, and

several recommendations for future delayed and remote access responses will be presented.

Results: Notification and response coordination in a remote Australian context will be briefly discussed. Rates of intubation and the need for field escharotomy were decreased by careful titration of small aliquots of intravenous fluid. The use of thin sheets of protective plastic film was useful, but caused minor difficulties with treatment later due to long retrieval times. Several uniform and equipment innovations have been developed, and were tested and improved after this incident including lightweight vented shirts, innovative communications for patient information transfer from a remote location, and patient identification systems.

Conclusions: No patients died once rescued from the ocean, despite an average retrieval time to hospital of >27 hours.

Keywords: Australia; boat; explosion; intubation; medical response
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Preparedness of First Responders and Risk Rating of European Union Terror Threat Life Cycles

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In the European Union (EU), the role of first responders as principal actors during crisis/emergency/disaster operations needs a new approach and a change in qualitative (i.e., relative) evaluation instruments of their function and effectiveness. The contemporary appearance and incidence of new global threats requires new approaches in the processes, serving to the extinguishment, elimination, and liquidation of these threats within their operational and incidental life cycles. Here, the needs of risk rate at real time need a defined environment as a principal domain (others fundamental domains include: (1) the nature of the attack; (2) the enemy; (3) country; (4) EU; (5) global economy; (6) real time and space; (7) information and media; (8) religious fundamentals; (9) social networks; (10) societies; and (11) politics). The situation indicates the priorities of never-ending crisis management and security research, which must develop, implement, and use more exact and predictable quantitative and qualitative rational indicators of crisis domains, participants, and behavior as well as situational awareness and more effective technologies. Such behavior requires new capabilities of control/regulation processes, systems, persons, and organizations, which exploit successful and effective crisis/emergency/disaster management in their work. The behavior of relevant entities in human corporations also requires new approaches within rating, assessment, and evaluation of the threats, hazards, perils, dangers risks, and biofeedback. It is one of the fundamental aims of the CAST security research project.

The functions and processes performance of the first responders and their management of Terror Threats Life Cycles, intended to decrease risk ratings, will be outlined. New approaches and mathematical dependencies of the operational algorithm and the behavior of first responders at the crisis interfaces will be discussed, which can contribute to more effective awareness and performance of