(A277) Assessing the Psychosocial Elements of Crowds at Mass Gatherings

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The physicality of mass gatherings has been well described in the literature. The factors effecting the rate of illness and injury at mass gatherings have been well described and include the type and duration of the event, the type and age of crowd, and the availability of drugs and alcohol. In 2004 Arbon proposed a conceptual model that describes the relationship between the environmental, psychosocial and the biomedical domains of mass gatherings. However to date the science of mass gatherings has focussed on the environmental and biomedical domains. There is minimal evidence to support or describe the psychosocial domain. Current tools available to assess the psychosocial domain are scarce even though it is considered an integral part of a mass gathering event. Berlonghi (1995) and Zietz (2009) proposed two measurements, crowd type and crowd mood respectively. This paper reports on a pilot project undertaken to evaluate how effective these tools are to understand the psychosocial domain of a mass gathering event.

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(A278) Providing Medical Coverage for an Unfamiliar Sport Event: Tent-Pegging and the 2nd Asian Beach Games

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Background: The addition of Tent-pegging to the 2nd Asian Beach games as one of its 14 Competition events was a welcomed step, especially to the equestrian community of the games' host country, Oman. An equestrian sport of ancient military origin with a long history in Asia, Tent-pegging It a fast-paced sport in which a lance or sword is used to pick pegs off the ground while riding a horse at full gallop. The sport is gaining popularity especially in a number of countries around the world, including Oman.

Discussion and Observations: The hazards inherent in equestrian sports and specifically in Tent –pegging, furthermore, the mass gathering created by the equine presence, the participants, as well as the spectators, required a well planned medical coverage to safely conduct the games. Taking into account that Tent-pegging events normally receive limited medical support, the presentation will discuss the concepts and methods that are commonly followed by the host country on planning and implementing the medical care to sport events of Olympic standards, along with an illustration on how exclusively these concepts were applied to the Tent -pegging events during the 2nd Asian Beach Games. In addition, the presentation will elaborate on the challenges that were dealt with by the medical care providers, and the outcome following a 1st major sporting event of such a scale to be conducted by the host country, Oman. As more countries bid to host major sport events for their first time, suggestion for improving the methodology of providing medical coverage to a sport event will be discussed in the presentation.

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(A279) Evidence-Based Decision-Making in Triage

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Background and Aims: Decision-making is the major component in triaging emergency department patients. Influencing factors on decision-making have been identified but it`s not clear how much of the decision is based upon scientific criteria. The objective of this study was to determine frequency of using reliable and valid guidelines by nurses in emergency departments.

Methods: It was a descriptive survey study. The questionnaire was composed of demographic data, evidence-based triage questions (15) and triage decision-making questions (10). The questionnaire reliability was 0.87 using the test-retest method. Content validity was considered based upon Canadian Triage and Acuity Scale.

Results: 70 nurses from 10 emergency departments participated. 40 % of nurses` responses to evidence-based questions was correct. The percentage of inter-rater agreement between nurses was moderate (0.56) related to decision-making questions. No valid and reliable guideline was utilized in emergency departments.

Conclusion: Nurses` decision-making was poorly based on evidence-based criteria. Low level of nurses` knowledge about triage may be derived from lack of official and specialized triage training courses. Academic triage courses establishment and development of national triage scale are recommended.

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(A280) Safety of Rural Hospitals during Flood: A Case Study on Begusarai District of Bihar, India

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Introduction: India is one of the most flood prone countries in the world, flooding annually about 9 million hectares and accounting for one-fifth of global flood deaths. Approximately 56.5 % of flood-affected Indians live in Bihar. Out of 38 districts in Bihar, 22 are flood prone, including Begusarai. The life line to the community is the Primary Health Center (PHC) which is at stake during a disaster such as floods.

Methods: To study the status of primary health care in rural parts of Begusarai during recurring floods, a survey was undertaken to analyze the preparedness and response mechanism at various hospital levels. The status of rural hospitals during a flood was represented by a case study on the PHC of Bakhri block of Begusarai district. To determine the prevailing situation during floods, the chief medical officers of each level of health care centers were interviewed.

Results: The PHC of Bakhri caters to a population of about 408,896, which is four times the normal load for a PHC. In 2007, it was affected severely by flooding from the Baghmati River. The PHCs that were studied perennially face a shortage of human resource and infrastructural support. This is compounded by unsafe locations and structural hazards associated

with the hospital building, rendering the working conditions unsafe for the medical team during disasters.
Conclusion: This paper envisages the functionality and challenges of healthcare providers during floods despite their limited available resources. The prevailing case scenario demonstrates the challenges in rural India, and the best practices for safe rural hospitals in coping with disasters in a resource-poor setting will be discussed.
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(A281) Protecting and Preparing Critical Hospital Infrastructure — Redundancy, Security, and Disaster Response

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Western Australia (WA) currently is undergoing a major rebuild of its key metropolitan and regional hospitals, with the planned construction of a major tertiary hospital, pediatric hospital, and several large general hospitals in the metropolitan area, and a range of small and medium size hospitals in WA over the next five years. Protecting these hospitals from major internal failure and external assault, while preparing them to cope with mass casualties, has been a major focus of the WA Department of Health over the last five years. This program has involved capital investment in current infrastructure, including critical asset protection, and detailed planning to ensure that the new health infrastructure will have both the redundant systems, to allow for continued operations in a range of infrastructure failure and disaster scenarios, and the facilities to deal with a mass-casualty incident. This presentation will review the implementation of this critical infrastructure program, the evolving issues facing hospitals working to ensure their continued operations in a range of scenarios, the security and infrastructure threats facing major hospitals, and the planning required to ensure that these threats are addressed at an early stage of hospital development. Issues as diverse as the placement of underground garages to minimize bomb threats, the location of helicopter landing pads, and the consideration of how to lock down hospitals to prevent the uncontrolled access of contaminated patients, are some of the challenges that need measured consideration and a planned response. The preparations and planning for such contingencies, and the infrastructure to facilitate continued operations and an appropriate disaster response, are key elements in protecting critical health infrastructure.
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(A282) Comparison of Safety Index in Iranian Hospitals

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Introduction: Hospitals are highly complex facilities that play a key role in the medical response to disasters. However, they are susceptible to the impact of disasters with respect to their structural, non-structural and functional elements. Many hospitals have collapsed or been damaged and rendered nonfunctional as a consequence of disasters. The resilience of a hospital along with the capability of effective medical response to disasters is a key part of a community based disaster plan.
Objective: The objective of this study was to evaluate and compare hospitals in Iran with respect to safety.
Methods: This study was performed as a survey in four hospitals in Iran. The Hospital Safety Index package from WHO was used as an evaluation tool. The evaluation team consisted of: a PhD in structural engineering, an architect with a Master's degree, a specialist in electrical and mechanical maintenance, a medical doctor, a specialist in disaster management, and an expert in health care planning. The hospitals were evaluated in three elements; structural, non-structural, and organizational. The hospital safety calculator was used.
Results: The most important hazard for these hospitals was earthquakes. The structural safety at three hospitals was inadequate or at risk; and consequently needs intervention in a near future. Also, the administrative and organizational element of these hospitals was inadequate or at risk. All hospitals need intervention in the near future due to non-structural safety being inadequate. The overall safety index at one hospital was A (functional); in two hospitals B (at risk); and in one hospital C (inadequate).
Conclusions: The Iranian hospitals which had been assessed were on the whole unsafe. Also, these hospitals do not have a disaster management plan. Implementing a comprehensive disaster plan, including mitigation and a preparedness plan, would most likely enhance the safety of these hospitals.
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(A283) Hospital Security Planning for Patient Surge Incidents: A Comparison of Three National Systems in China, India, and Japan

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Introduction: As the number of disasters caused by natural and non-natural hazards increase, so does the emphasis placed on healthcare security planning for the influx of patients that often accompany such events. This presentation expands on a previously published examination of national healthcare security systems and emphasizes the role of security in the hospital environment during disasters in China, India, and Japan. National emergency preparedness planning systems and disaster type are examined. Elements of planning for a mass-casualty incident (MCI) that most directly impact security planning include mass-notification alert systems, patient routing processes to hospitals (from an MCI scene) and within hospitals (emergency department flow), staffing, disaster triage, patient identification, tracking and discharge, volunteer tracking, and the adaptability and flexibility of space and processes.
Methods: Researchers conducted extensive literature reviews of country-specific health care and physical security elements of patient surge. The comparative analysis was augmented by communication with national healthcare security experts.