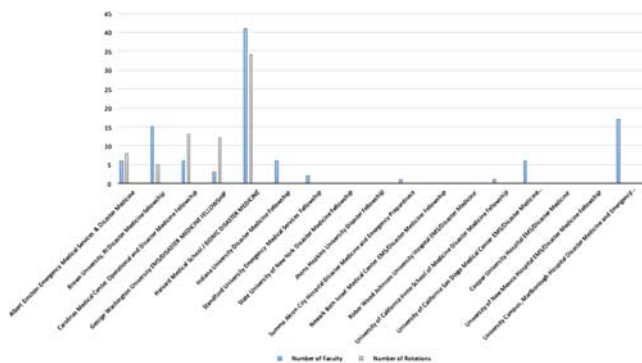


Conclusion: Because US DM fellowships are non-ACGME accredited, there is a lack of conformity in their educational models. This study provides applicants with the differentiating data needed to make educated decisions on which is the best fit for them.



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Disaster Severity Index: Proposal of a New Tool in Disaster Metrics

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Study/Objective: The Richter Scale measures the magnitude of a seismic occurrence, but does not feasibly quantify the magnitude of the "Disaster" at the point of impact in real humanitarian needs based on United Nations International Strategy for Disaster Reduction (UNISDR) 2009 Disaster Terminology. A Disaster Severity Index similar to Richter Log Algorithm has been formulated; this will quantify needs, holistically, and objectively, in the hands of any stakeholders and even across timelines.

Background: An agreed terminology in quantifying "Disaster" matters, and inconsistency in measuring it by stakeholders, posed a challenge globally in formulating legislation and policies responding to it.

Methods: A mathematical calculation which uses the median score percentage of 100% as a baseline, indicating the ability to cope within the local capacity. Seventeen indicators were selected based on the UNISDR 2009 disaster definition of vulnerability and exposure and holistic approach as a pre-condition. The severity of the disaster is defined as the level of unmet needs. 30 Natural disasters were tested retrospectively and non-parametric tests were used to test the correlation of the Disaster Severity Index scored against the Indicators.

Results: The findings showed that 20 out of 30 Natural Disasters tested fulfil the inability to cope within local capacity in Disaster Terminology. Non-parametric tests showed that there is a correlation between the 30 Disaster Severity Index Scored and the Indicators.

Conclusion: By computing a median fit percentage score of 100% as the ability to cope, and the correlation of the

17 indicators in this Disaster Severity Index Scale, 20 natural disasters fit into the Disaster definition. This Disaster Severity Index will enable humanitarian stakeholders to measure and compare the severity of the disaster objectively and enable future response to be based on needs.

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Microchips, from a Disaster Perspective

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Study/Objective: To review the documented uses of microchips in the medical field, and explore their possible utilisation in the disaster medicine environment.

Background: Microchips have a number of non-medical uses in varied fields including banking, retail and the veterinary sectors. In some countries it is mandatory to chip domestic pets to enable identification if they stray from home. Disaster preparedness organisations in the US advocate chipping animals to facilitate post-disaster reunification. To date there is limited data on use of microchips in the field of disaster medicine or the ethical implications of their use.

Methods: The authors performed a review of literature indexed in PubMed and the Cochrane Library with no limits on year of publication or language, including both human and animal results. Exploded search terms included "microchip*" "Biochip*" "RFID*" "Disaster RFID*" tracking and/or identification.

Results: Search strategy yielded 686 citations, with 40 records used in this review, 9 from the veterinary field and 31 from the medical field. These papers suggested multiple existing uses of the microchipping technology, including identification, the retrieval of medical information in the event of an emergency and the use of GPS-enabled chips in locating missing individuals, a few of which can be used in the setting of a disaster.

Conclusion: Based on the results of the study, several different uses of this technology were identified. Microchips have proven to be beneficial in tracking and identification, in both the medical and the veterinary medicine field. This paper aims to explore this topic further by looking at the current uses of microchips, and by suggesting additional uses of this technology in the disaster setting, such as triaging and patient identification.

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It's a crush... It's a collapse... It's... Wait, that's No Stampede!

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Study/Objective: To quantify the frequency and intention with which “stampede” is used to describe types of Mass Gathering (MG) disasters.

Background: Hazard vulnerability analysis would identify “human stampedes” as high probability events at MGs. Over 200 “stampedes” have occurred in the past 30 years. At the 2015 Hajj, at least 2,000 pilgrims died in one of the deadliest MG disasters in recent history. News and literature referenced the event as the “Hajj Stampede”, implying abruptly increased speed and mass panic. At the crux of many of these events, however, is a dense, immobile crowd – hardly the uncontrolled mindless mass implied.

Methods: The authors performed a systematic search of peer reviewed literature indexed in PubMed, EMBASE, and Web of Science. Abstracts were limited to human studies in English and keyword ‘stampede’. Grey literature using ‘stampede’ in the title or abstract in reference to MG disasters were also reviewed.

Results: Search strategy using the term “stampede” yielded 649 articles. After excluding those using the term 1) apropos computing, 2) as an acronym, or 3) colloquially, fifty-six remained which used the term in reference to mass gathering disasters. Within these articles, fourteen incidents were described in detail. “Stampede” was used in the same context as “crowd disaster”, “turbulence”, “quake”, “mass panic”, “crush”, and “trampling”.

Conclusion: It is important to distinguish between stampede and non-stampede events. Few articles describing stampedes actually involve speed anywhere in the description. The generic “stampede”, through suggesting a fast moving, irrational and culpable crowd, focuses on herding the masses rather than improving venue safety. We must stem the notion that these disasters are a whim of the crowd and work towards evidence-based engineered solutions.

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Canadian Hospital Disaster Preparedness

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Study/Objective: The objective of this study is to assess the level of disaster preparedness at Canadian hospitals.

Background: The most recent (2011) study of Canadian disaster preparedness provided valuable but rather limited insight due to the poor response rate (11%). Many new regional natural and man-made disasters have occurred since then, which mandates a reassessment of Canadian hospital disaster preparedness.

Methods: Design: 12-item paper survey, convenience sample. Target population: attendants of three Canadian conferences (ED chiefs/physicians, trauma surgeons/directors, EMS medical directors, ED nurse managers, Trauma/EMS fellows, and/

or emergency management personnel). Period: Trauma Association of Canada Conference May 2016; Canadian Conference on Emergency Planning and Preparedness for Healthcare Facilities May 2016; Canadian Association of Emergency Physicians Conference June 2016.

Results: The overall response rate was 86.1% [Ontario (54.4%), Quebec (30.9%), rest of Canada (14.7%)]. Level-1 trauma centers comprised 45.6% of responders’ hospitals. As for responder roles, 38.5% were ED physicians, 11.5% emergency managers, and 9.0% trauma directors. External disaster response plans were present in 97.5% and internal disaster response plans were present in 89.7% of responders’ hospitals. Within the three years preceding the survey, tabletop drills were held at 70.6% and live drills at 57.3% of responders’ hospitals. Centralized mass notification systems were present in 63.2% of responders’ hospitals. In the three years preceding the survey, 44.1% of responders reported an activation for an external disaster.

Conclusion: The overwhelming majority of responders report the presence of disaster response plans at their hospitals. The drill frequency appears higher than previously reported but should be increased further to comply with most recognized international recommendations for disaster preparedness. Study limitations include recall and sampling biases since the collected data was mostly limited to academic settings with uneven representation of certain provinces and rural areas. A standardized assessment of Canadian hospital emergency preparedness is warranted in light of these results.

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Emerging Disasters and Non Traditional Health Threats,

A Terminology Scoping Review

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Study/Objective: To examine and map the range of new and emerging disaster risks, based on evolving disaster: definitions, terms, and classifications in contemporary practice.

Background: Disaster risk reporting is primarily produced to identify who may be at risk (vulnerable populations) to specific events (cause). There is a paucity of discussion and literature attempting to establish what the emerging causes are of disasters, and consequently recognition of their potential impact. Possible reasons for this may include perceptions of these causes being non traditional threats, and therefore not readily identifiable as disasters. Nevertheless, many of these events currently meet established criteria defining ‘disasters’.

Methods: A scoping review utilizing the framework articulated by the Joanna Briggs Institute was undertaken to examine the extent, range and nature of new definitions of disaster in the existing literature.

Results: There is great diversity within disaster peer reviewed literature and further breadth in the “grey literature”,