preparedness consisting of tabletop drills and disaster simulation. Based on the Incident Command System (ICS) framework, our system prepares medical providers to respond independently to country level disasters.

Background: Disaster response remains an important component of emergency preparedness internationally. To this end, the Incident Command System (ICS) provides a standardized approach to the command, control and coordination of emergency response.

Methods: A two-day workshop was conducted with medical providers in Bangalore, India that used serial disaster simulations to improve disaster response using the Incident Command System (ICS). Through increasing responsibility and self-directed tabletops, the participants (doctors, medical students, nurses and police) gained the skills to respond independently to a simulated countrywide disaster. After the exercise, they were asked to grade the usefulness of simulation and lectures.

Results: Forty-four providers responded to the questionnaire, all of which (n = 44, 100%) recommended the course. They graded the final disaster drill as most useful (n = 36, 82%) and also graded lectures from topic experts as useful (n = 36, 83%). Based on qualitative written feedback, participants felt drills helped them in communication and leadership.

Conclusion: This novel teaching modality, using simulation and tabletop drills is an effective tool to teach the Incident Command System (ICS) to medical providers. Participants felt they benefited from training and would respond better to future disasters.

Assessment of Hospital Disaster Readiness: A Tertiary Care Teaching Hospital Experience

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Study/Objective: Evaluate disaster readiness in a large tertiary care teaching hospital environment.

Background: The Centre Hospitalier de l’Université de Montréal is a large tertiary care teaching hospital without the designation of “trauma center”. It will soon move to its new location in downtown Montreal, a $3.5 billion investment. The PHARE project (Projet Hospitalier d’Amélioration du Rôle d’Expert en situation de désastre) is a CHUM initiative to assess and improve hospital disaster readiness and planning for the new mega hospital.

Methods: In order to evaluate hospital disaster readiness, an online study was conducted among the entire CHUM community. We evaluated work experience, as well as basic and specific training in emergency measures. The online survey was conducted on a volunteer basis between September 13 and October 2, 2016. Completed questionnaires were included in the analysis.

Results: Overall, 2,927 members of the CHUM community completed the survey; managers, physicians, employees and volunteers were represented at 77%, 29%, 24% and 32% respectively. Although 64% of participants reported basic training in emergency measures, these were mostly managers (86%) and employees compared to physicians (15%) and volunteers (17%). Overall, 60% of participants felt well prepared to face aggression (code white), medical emergency on site (code purple), or fire (code red) but inadequately prepared to face a bomb alert or call threat (code black, 67%). Very few participants reported specific training in emergency measures such as massive patient arrival (code orange, 8%), decontamination (3%) or general evacuation (code green, 25%). Overall, the level of knowledge (% of correct answers) of emergency color codes was aligned with perception of preparedness.

Conclusion: The PHARE project at the CHUM revealed that medical staff and volunteers are insufficiently prepared to face basic, as well as specific disaster situations. Efforts in the following months will be directed toward training disaster experts at our institution using table-top exercises.

US Disaster Medicine Fellowships: What is Out There?

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Study/Objective: The goal of this study is to differentiate between the various Disaster Medicine (DM) fellowships in the United States (US) by analyzing objective data that include: length of program, prerequisites, disciplines offered, curricula taught, and utilization of blended or hybrid educational modalities. This will be helpful to applicants as they make decisions on which programs to apply to.

Background: According to the Society for Academic Emergency Medicine (SAEM), there are 17 Disaster Medicine fellowship programs in the United States as of 2016. These fellowships are Non-American College Graduate Medical Education (ACGME) accredited, and most utilize a unique curriculum and educational program, making it difficult for applicants to make educated decisions. As of now, there is no single online source providing a full description of all DM fellowships available. By concentrating information into useable metrics, this study provides an objective comparison of the available options for DM fellowships in the US.

Methods: A comprehensive survey of online data available on fellowship websites, as identified though the SAEM list of US programs. A data-mining tool was used to evaluate the characteristics of each fellowship program.

Results: Demographic, prerequisite, curriculum, and programmatic data for the US DM fellowships demonstrates the unique characteristics of each program. An example of two data points, number of faculty and outside rotations, can be seen in Table 1.
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.

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.

It’s a crush… It’s a collapse… It’s… Wait, that’s No Stampede!

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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.