

Conclusion: Our team deployed as a specialized surgical cell, which plays an important role to support national medical efforts, and critical to function is coordination, communication, and preparation. The Virtual OSOCC site is an important tool to maintain EMT membership, and to monitor for updates information about disasters and effectively communicate with other key stakeholders.

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Undergraduate Inter-Professional Collaboration in a Simulated Mass Casualty Incident

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Study/Objective: Measure undergraduate interprofessional collaboration and teach basic trauma skills in a simulated Mass Casualty Incident (MCI).

Background: Recent large scale natural disasters and Mass Casualty Incidents (MCIs), have highlighted the need for staff and hospital emergency preparedness. Disasters and MCI simulations are infrequent, and typically only involve post-graduate level trainees and staff in clinical roles. Trauma training at the undergraduate level has been identified as inadequate in multiple disciplines.

Methods: To address these shortfalls, a preclinical course for medical students was redesigned to include one day of trauma and inter-professional content. Curricular alignment was achieved among the Cumming School of Medicine, University of Calgary Faculties of Nursing and Social Work, and the Southern Alberta Institute of Technology (SAIT) Respiratory Therapy and Paramedic programs, to enable three hundred and forty six undergraduate students to participate in an MCI known as Trauma Day. Inter-professional teams of four to six students managed a standardized trauma victim in two separate scenarios, and observed expert modeling of a live trauma simulation between successive scenarios. The student teams were debriefed by co-facilitators from different professions, guided by the Mayo High Performance Teamwork Scale (MHPTS), the Canadian Inter-Professional Health Collaborative (CIHC) National Competency Framework, and the principles of Advanced Trauma Life Support (ATLS). Facilitators and students formally rated the team performance after each scenario using the MHPTS, and students completed a Self Efficacy Assessment at the end of the day.

Results: There were statistically significant improvements in team performance ratings as an overall measure, and in four of eight factors of the MHPTS. In the Self Efficacy Assessment survey students rated their confidence significantly higher after the simulations in all eight areas, with significant differences between professions.

Conclusion: An interprofessional simulated that MCI provides opportunities to improve team performance and self efficacy, based on the Mayo High Performance Teamwork Scale.

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The Brooklyn Coalition Exercises Patient Movement in a Burn Mass Casualty Event

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Study/Objective: The hospitals of The Brooklyn Coalition (TBC) used a city-wide drill to test various components of the New York City Burn Plan that is under development.

Background: The borough of Brooklyn has no burn centers. The secondary transfer of burn victims in a Mass-Casualty Incident (MCI) is a gap identified from annual coalition-wide drills which built on each other.

Methods: A full-scale exercise evaluated the secondary transfer of victims in a burn MCI, utilizing the proposed NYC Burn Plan. Fire Department of New York (FDNY) centrally coordinated the transfer of 69 victims using faxed Patient Transfer Request forms. The NYSDOH e-FINDS was utilized for patient tracking. An electronic Situational Assessment Tool (SAT) delivered prompts and collected data.

Results: e-FINDS tracked 96% of patients; 100% of hospitals reported the required Patient Transfer Request forms were too long; 38% of hospital transfer requests required more than two attempts to reach FDNY; 26% of victims were refused transfer; 52% of victims required physician presence during transfer.

Conclusion: The NYC Burn Plan was successfully drilled by TBC and e-FINDS was a reliable tool. The method for communication between the hospitals and FDNY failed for multiple facilities, highlighting the need for alternative methods of contact. The required Patient Transfer Request form was too lengthy to utilize during an MCI and is being amended using only the essential information identified by this study. Many transfer requests were denied, leaving facilities to manage burn victims. Many victims needed a physician during transport, limiting the ability to transport victims. These results make it evident that non-burn centers need to develop contingency plans for burn victims of an MCI. These gaps in the NYC Burn Plan, identified by TBC drill, are impacting the current development of the protocol. The use of sequential, coalition-wide drills with increasing inclusivity is useful in identifying capability gaps and exercising existing protocols.

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Incorporating an Active Shooter Preparedness and Response Program into the Healthcare Students' Simulation Educational Curriculum

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Study/Objective: To increase healthcare learners' awareness to active shooter situations via simulation education.

Background: Active shooter incidents in San Bernardino, Paris, and Orlando illustrate "soft targets" vulnerabilities.

Healthcare facilities are “soft targets.” The “Run-Hide-Fight” mantra can be easily assimilated by the average learner in generic “active shooter” educational programs. However, healthcare professionals, confronting an active shooter situation, must reconcile conflicting goals: personal, staff, and their patient’s safety. Indecisiveness may lead to catastrophe. Targeted education addressing these concerns can be explored in medical simulations.

Methods: A case-based simulation medical program (four hours weekly) is included within an emergency medical clerkship involving multidisciplinary students and faculty. At the start of their rotation, students receive “active shooter” educational material including the hospital protocol. While managing a typical ED simulated patient (varying levels of criticality), an “active shooter” component is added. Students must reconcile “Run-Hide-Fight” within the context of patient care. Debriefings follow.

Results: Sessions are held twice monthly in a no-threat environment with approval and assistance from university police trained in “active shooter” education. Within a span of ninety minutes, students manage a case into which one active shooter scenario is added. Depending on shooter location and patient condition, students must decide to run (with what and whom) or hide (barricade techniques) and fight (improvisational weapons). Debriefing emphasizes no right answer. Each situation is unique. Lifesaving strategies and tactics emphasize the improvised barricades and weapons that are uniquely found in a patient’s room. Over 100 students have gone through this program since its inception.

Conclusion: Incorporating active shooter scenarios in medical simulations is accomplished in a no-threat, no-consequence environment. Regular training of healthcare and public health students through simulation of typical and atypical scenarios in healthcare facilities provides experience and sharpens mental “muscle memory” – allowing them to make wise decisions quickly during an actual active shooter incident.

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Research Based to Maximize Effectiveness of Simulation for Hospital Disaster Plan (HDP) Teams in Indonesia

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Study/Objective: To evaluate a disaster simulation process in a hospital, and determine the HDP team’s awareness in making an operationally HDP document

Background: Simulation is a recommended tool to test the functioning of HDP. Nevertheless, it is just a tool.

An effective simulation was determined by a training developer. In Indonesia, HDP simulation becomes one of hospital accreditation points. It was biased, if the principle purpose of simulation was just for accreditation. The Center for Health Policy Management (CHPM FoM UGM) who’s concern is in assisting hospitals to develop an operationally HDP document and simulation. It was important to evaluate simulations in revising the HDP document, and in increasing the hospital staff’s awareness to implementing HDP.

Methods: This study used qualitative with pre-post-test design, comparing hospitals using research based simulation and ones that do not. Research based simulation was given in three hospitals. Subjects were HDP teams in 5 hospitals in Java Island, Indonesia who got HDP and simulation assistance by CHPM FoM UGM during 2015-2016. Study instruments were an open questionnaire (scenario conception, job/task identification in normal and disaster situation, gap identification of HDP document), self-evaluation and debriefing documentation.

Results: There was no significant difference in scenario conception from the two hospitals. However, they contrasted considerably in job identification and HDP team self-evaluation. In research based simulation, HDP teams could explain their role greatly and found many gaps between disaster simulation and their HDP document. Its impact, revising the HDP document based on disaster simulation gap initiated by HDP teams, was faster (± 1 week after simulation) and more correct, especially in disaster SOP and Hospital Incident Command System.

Conclusion: Research based simulation could be implemented in the Indonesian hospitals by creating HDP teams, and a more serious and conscious took at the lessons from simulation. It’s important for a training developer to establish an educational and research atmosphere during hospital simulations, to maximize the potency as a lesson learned. In order that, hospital disaster simulations becomes a significant test tool for HDP document.

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Addressing Healthcare Personnel Preparedness in Disasters: An Introduction of a Participatory Design Educational Model in Greece

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Study/Objective: Results of a participatory design educational model regarding medical preparedness in disasters, based on simulation exercises, implemented in the framework of the MSc program “International Medicine-Health crisis management” of the Medical School of Athens, Greece.

Background: Disaster response and management has been described as one of the most challenging tasks. Although numerous competencies for disaster healthcare personnel have been developed and endorsed by governmental, professional and non-governmental organizations, universal acceptance and application of these competencies is lacking, resulting in