Conclusion: MCs in a disaster zone impact both the staff and their performance. Their presence when possible can have a positive impact on both staff and patients and should be made possible when available.

Prehosp Disaster Med 2017;32(Suppl. 1):s117–s118
doi:10.1017/S1049023X1700334X

Developing a Multi-layered Bleeding Control Program in Your Community

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Study/Objective: The goal of this session is to provide participants with an overview of a bleeding control program design and implementation. The session will cover the core elements of a bleeding control program, including equipment selection, bleeding control kit placement, bleeding control training programs, and public access.
Background: Severe bleeding remains a major cause of death amongst trauma patients worldwide. Beyond the disturbing trend of complex and highly coordinated terrorist attacks, an opportunity exists to enhance society's readiness and resiliency from all types of traumatic mechanisms of injury, both intentional and unintentional. Attaining early control of severe bleeding as close to the point of injury has been established as a known strategy to improve survival on the battlefield. The expansion of these concepts to the law enforcement and prehospital Emergency Medical Services community is already occurring. Expert consensus groups from both government and academia advocate that bleeding control equipment and training should also be made available in the civilian population.
Methods: Howard County (Maryland, USA) has created one of the first county-wide, multi-layered bleeding control initiatives in the North America. This program includes enhanced capabilities for first responders (police, fire, and EMS) as well as elements directed toward the civilians through a public access bleeding control program. The design, implementation, and lessons learned associated with this multi-tiered program will be presented.
Results: First responders have received training and equipment to provide bleeding control and other life-saving interventions. Public access bleeding control kits have placed in every public school. Additional kits are being placed with AEDs and in other high risk locations. School health personnel have been trained in bleeding control. Free bleeding control classes are available through a community outreach program.
Conclusion: Bleeding control programs represent an easily implementable, all-hazards medical countermeasure to help increase resiliency and minimize mortality from severe bleeding.

Prehosp Disaster Med 2017;32(Suppl. 1):s118
doi:10.1017/S1049023X17003351

Active Shooter Incidents - What are we Doing to Prepare?

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Study/Objective: New York University (NYU) Langone's Active Shooter Program has been designed so that staff know what to do if such an incident occurs. This presentation walks participants through their Active Shooter Plan. Next, the presenter explains how to develop an effective Active Shooter tabletop exercise for hospital leadership across three modules. Lastly, this presentation focuses on the Training Program for all staff.
Background: Knowing what to do during an active shooter incident increases the odds of saving your life, our patients, visitors and others. The recent terrorist attacks in San Bernardino, Paris, and Belgium reminds us to be vigilant, and to be ready anywhere, anytime. Hospitals are soft targets. We all know how important it is to have a plan, being able to warn those at imminent risk, and to train our staff, faculty and students on what they can do to ensure the least loss of life possible, while making every reasonable attempt to continue caring for patients.
Methods: Attendees will learn how to develop a Plan that provides guidance regarding the expected response actions. This presentation will describe how to utilize emergency communications tools for communicating with staff during and following an incident, the support to law enforcement that may be required to provide, and the provisions for establishing a Crisis Support Center to aid recovery services for staff, faculty, students, patients, visitors and their families. This presentation will then illustrate how to conduct an executive-level Active Shooter tabletop exercise.
Results: This Tabletop Exercise (TTX) will be based upon NYU Langone's December 2015 exercise with around 50 executives and senior managers from across the enterprise, using a hypothetical active shooter scenario. The series of questions for each module put forth to the leadership to deliberate and resolve will be discussed.
Conclusion: NYU Langone developed a "Run, Hide, Fight" video to train all staff. The video will be shown.

Prehosp Disaster Med 2017;32(Suppl. 1):s118
doi:10.1017/S1049023X17003363

MDA Experience Dealing with Penetrating Injuries in Terrorist Incidents

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Study/Objective: This study is aimed at reviewing the cases caused by stubbing and shooting (penetrating trauma). The patients were triaged by the Magen David Adom (MDA) team on the scene as suffering from substantial injuries or more serious injuries (patients declared Dead on Scene were excluded).
Background: Since September 2015, Magen David Adom in Israel - MDA (the National public EMS provider in Israel) have treated 526 victims from deliberate attacks. Among them, 56 suffered substantial injuries.
Methods: The study analysis is the response to 21 patients suffering from penetrating trauma injuries (stabbing and shooting) in those incidents (triaged on scene as suffering from substantial injuries), analyzing the response, on scene and evacuation time.
Results: In 43% of the cases, the on scene time was longer than 10 minutes, and transportation time in 71% of the cases was longer than 10 min (in 28%, 21-30 minutes).

Conclusion: The results call for a comprehensive understanding of the scene: the teams are working in a scene that has not been secured, with possible presence of additional perpetrators. Personnel has to work using Personal Protective Equipment (PPE) due to that risk. Dealing with an injured perpetrator requires security checks, authorization of the security authorities on the scene, and moral dilemmas. Transportation times might be prolonged. This creates a unique environment that calls for specific on-scene protocols, as well as training of the personnel (staff and volunteers) to be able to successfully perform their tasks in this hostile environment. On-scene procedures, as well as unique procedures developed (eg, police escort to overcome traffic), and revised treatment protocols as result of lessons learned from incidents will be presented.

Prehosp Disaster Med 2017;32(Suppl. 1):s118–s119
doi:10.1017/S1049023X17003375

Clinical Care for Sexual Assault Survivors (CCSAS): the Use of a Multimedia Training Tool.

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Study/Objective: Evaluate a multimedia training tool used to train Health Care Providers (HCPs) as key actors in improving the delivery of quality Clinical Care for Sexual Assault Survivors (CCSAS).

Background: Sexual assault rises as a global public health issue, in conflict-affected populations, where SGBV becomes a strategy of war. Training HCPs has been prioritized by humanitarian actors globally to improve the quality CCSAS. Few studies have evaluated the effectiveness of such training.

Methods: Four ToTs days were provided to relevant community HCPs working in a conflict area in Jordan, Turkey, Syria, and Lebanon. The CCSAS multi-media tool developed by the IRC was used as a unified training tool aiming to improve clinical care. The recruitment process included a general call for application, entailing a detailed syllabus for the training course whereby individuals expressed their interest in attending and submitted their resume to ensure that their qualifications were in-line with the pre-set selection criteria for the training.

Results: Six ToTs took place; in Jordan, two groups of 25 have improved by 142% and 57.6% on average at post-test in knowledge and attitudes to care for survivors. The third ToT in Turkey, 13 participants have improved by 47% on average and nine participants have improved by 82.6% on average. In Lebanon, 19 participants have improved by 62.5% on average. In Syria, 18 participants have improved by 46.2% on average. Key barriers to quality care identified included poor or lack of access to services, lack of privacy and confidentiality, and lack of essential resources and treatment including PEP, as well as an unclear referral mechanism. Action plans were developed by participants to address these barriers and follow-up to the evaluating progress was planned.

Conclusion: The CCSAS multi-media training tool showed an initial positive impact and has demonstrated effectiveness in promoting compassion and competence among trained HCPs and improving quality of care in humanitarian settings.

Prehosp Disaster Med 2017;32(Suppl. 1):s119
doi:10.1017/S1049023X17003387

Paris Terrorist Attack on November 13, 2015 - Applying Wartime In-hospital Triage and Damage Control Strategies

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Study/Objective: The Paris terrorist attack of November 13th 2015 caused 130 deaths and 351 injured.

Background: Our work aims to show how in-hospital triage and damage control strategies, acquired during the recent conflicts in Afghanistan and Sahel, enable a rational and appropriate management of the patients.

Methods: We retrospectively reviewed the cohort of 17 patients treated at the Percy Military Teaching Hospital on the nights of November 13-14, 2015.

Results: The mean age was 39 ± 8 years. Eight patients (47%) had a thoracic injury (mean AIS = 3[1-6]), 5 (29%) an upper limb injury (mean AIS = 2[1-3]), 4 (24%) an abdominal injury (mean AIS = 3[2-4]), 3 (18%) a face injury (AIS 2 = medium [1-3]), 3 (18%) a lower limb injury (AIS = 1), 2 (12%) a spine injury (AIS = 5) and 1 (6%) a brain injury (AIS = 5). There was no patient identity error. Two patients (12%) were categorized immediate with extreme mention (T1E) (ISS 19 and 29), 6 (35%) immediate (T1) (average ISS = 24 [13-41]), 4 (24%) delayed (T2) (average ISS = 6 [1-16]) and 5 (29%) minimal (T3) (average ISS = 1 [1-3]). Four patients (24%) had a damage control procedure with a mean surgical time of 68 min (43-84). All patients were treated according to the deadlines imposed by their categorization. One patient died of multiple organ failure in the aftermath of a resuscitation thoracotomy. All patient records were reviewed and three were analyzed as perfectible, without consequences for the patients involved.

Conclusion: The current context exposes us to the threat of new possible terrorist attacks and requires that the medical community get prepared to manage multiple war casualties. The familiarization to the modern principles of war surgery seems mandatory to face this type of situation.

Prehosp Disaster Med 2017;32(Suppl. 1):s119
doi:10.1017/S1049023X17003399

Lessons of Military Anesthesiologists after Terror Attacks in Paris. Comparison with Battlefield Experience.

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