REGION 1
Regional Disaster Health Response System

MASSACHUSETTS GENERAL HOSPITAL
GLOBAL HEALTH

Domestic and International Disaster Preparedness Education during Intensive Humanitarian Training

Merson, J.[1, 2, 3], Giambusso, K.[2], Nally, J.[1,2], Mather, D.[1], Searle, E.F. [1], Biddinger, P.[1, 4, 5]

[1] Center for Disaster Medicine, Department of Emergency Medicine, Massachusetts General Hospital; [2] Global Disaster Response, Massachusetts General Hospital; [3] MGH Institute of Health Professions; [4] Mass General Brigham; [5] Harvard Medical School

Objective

Domestic and International Disaster Responders should engage in professional preparedness through targeted training and exercises. The Harvard Humanitarian Initiative Humanitarian Response Intensive Course (HRIC) includes a 3-day in-person simulation to prepare future humanitarian workers. The Massachusetts General Hospital (MGH) Disaster Medical Team (DMT) and Global Disaster Response (GDR) team supported the HRIC through the development of a simulated field hospital for course participants. Additionally, the MGH teams engaged in a multi-day continuing education program. MGH partnered with the UMASS Disaster Fellowship Program, U.S. Navy War College Fellowship, CT Department of Public Health, ASPR R1, and EPECARE Non-Government Disaster Response Organization to assist in the implementation of the training exercise.

Exercise objectives included:

1. Improve participant understanding of MGH deployment protocols and infection control during field deployment, following the MGH DMT ConOps.
2. Evaluate MGH DMT's and GDR's capability to deploy personnel to austere environments and establish a mobile field hospital to support the Harvard Humanitarian Initiative simulation weekend.
3. Assess the ability of teams to set up and maintain a medical field hospital to include base of operations (BoO) during a 3-day field exercise, utilizing the concepts established in the MGH DMT clinical and support personnel staffing roster, DMT Logistic Plan, and RDHRS Regional Wrap Around Services resource document.

Methods

Team members functioned as a unit employing the National Incident Management System and utilized the Incident Command System (ICS) and General Staff positions to manage the field hospital and training program. Instruction and expectation details on the incident command structure were covered in the safety and security briefing with a focus on accountability.

An interdisciplinary team developed and delivered eight discrete educational modules noted in the training agenda utilizing small group methodologies and combining didactics and simulation for a total of 14 hours of content over the 3-day course. Each module was approved for continuing medical education (CME/CEU) and Massachusetts Office of Emergency Medical Services (OEMS) credit. Participants rotated through didactic sessions and the HRIC field hospital simulation.

Participants engaged in a structured debriefing (Hotwash) and completed written evaluations at the end of each day. Hotwash notes were compiled to generate an After-Action Report utilizing the HSEEP Format. Each participant rated didactic sessions on a 5-point Likert scale and asked how you and your patients/teams benefit from what you have learned.

Training Agenda

Patient movement, splinting, and Stop The Bleed
Hyper and hypothermia care in the field
Ethics in disaster response: Interfacing with locals, resource limitations, medical decisions, and considerations for domestic and international deployments
Austerity training: Selfcare, surviving for 72 hours with limited resources (food, water, shelter)
Gender-based violence in humanitarian settings
Humanitarian systems: The United Nations cluster system, The World Health Organization Medicine Teams classification system, and the US-Based Incident Command Structure
Deployment processing - field health, safety, and security, self-care in the field, risk mitigation, and incident action plans
Employee Assistance Program Global Disaster Response Training: Self-care

Results

- There were a total of 44 participants, including MDs, PAs, RNs, CNMs, Paramedics, EMTs, and logistics personnel.
- 18 (40.9%) participants completed evaluations, a requirement to receive continuing medical education credit and
- 7 (15.9%) participants signed the OEMS roster to receive credit through that mechanism
- Overall the training received good reviews from participants:
    - The mean rating for all didactic sessions was 4.53 on a 5-point Likert scale
    - Qualitative comments included: increased perception of personal safety during future deployments, enhanced sense of teamwork, improved awareness of personal psychological stress during deployments
- Opportunities for improvement identified by participants included:
    - Need for enhanced communication prior to the event
    - Lack of knowledge of appropriate clothing for deployment, including the simulation weekend
    - Broken personal equipment

The hotwash identified strengths, including awareness of interprofessional teamwork prior to deployment and knowledge of team preparedness, activation, and deployment. Areas of improvement included the need for increased pre-deployment communication and awareness of personal equipment including sleeping bags and cold-weather/rain preparation.

Conclusion

Structured learning within a large-scale immersive, interprofessional simulation resulted in participants reporting increased preparation for real-world events.

Team members reported overwhelmingly positive experiences with individuals and teams improving their ability to prepare, activate, deploy, and return home. Teams established an understanding of potential gaps in a resource-limited environment while also experiencing the importance of building relationships with team members, ensuring personal accountability, and understanding the roles and responsibilities of other professions.

Future large-scale exercises and iterations of the MGH deployment to the HRIC should include restructured advance communication and workshops to prepare personnel for the event as well as deployments, thus ensuring safety and accountability of all team members.

References

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Contact the authors via jrmerson@mghihp.edu