

# Abstracts of Scientific Papers-WADEM Congress on Disaster and Emergency Medicine 2017

## Gaming: A Unique Way to Teach Active Shooter Preparedness and Response in Healthcare

Kara L. Sattler<sup>1</sup>, Paul P. Rega<sup>2</sup>, Brian N. Fink<sup>2</sup>, Lisa Pescara-Kovach<sup>3</sup>

1. Physician Assistant Studies, University of Toledo, Toledo/OH/United States of America
2. School Of Population Health, University of Toledo, Toledo/OH/United States of America
3. University of Toledo, Toledo/OH/United States of America

**Study/Objective:** Utilize non-competitive gaming to teach health care providers and students how to prepare and respond to active shootings in clinical settings, and as a prologue to a functional exercise.

**Background:** Active shooter incidents are increasing. Unique to health care settings, staff and professionals must weigh the duty to save themselves with their oath to care for their patients. Delays in decision making could be disastrous. Hospitals have ethical and legal obligations to train personnel, but may not train through simulation. Gaming has been shown to be an effective health care teaching method, yet it's an alien concept for active shooter training. Using this technique, participants can employ comprehensive plans within a simulated environment.

**Methods:** We developed an active shooter board game, using a health care venue as the setting. Upon hearing simulated gunshots, the players, acting as themselves in one game, and a fictional role in the second game, must decide whether to run, hide, and/or fight. They must also determine what actions, if any, to undertake for their patients, and what improvisational tools they have to barricade and fight with. Pre- and post-evaluations were administered to assess game efficacy and utility.

**Results:** After two games, health care students (N=12) felt they had additional knowledge and training to react quickly and save lives, barricade themselves, develop improvised weapons, and safely escape. Based on their critique, we have improved the reality and chaos that can occur during an active shooter event in a health care facility.

**Conclusion:** Health care professionals must balance ingrained duties to their patients, colleagues, and themselves. Practicing active shooter situations in a no-threat environment is imperative. Gaming is one inexpensive modality facilities can employ to train providers and students – a precursor to a functional exercise. It opens the dialogue for threat assessment and mental health treatment to address the long-term effects to everyone involved.

*Prehosp Disaster Med* 2017;32(Suppl. 1):s214  
doi:10.1017/S1049023X17005556

## Simulating a Multi-Hazard Response: A Tabletop Exercise with Response Agencies in Belize

Kimberly M. Hanson, Luis F. Hernandez, James A. Banaski  
Global Response Preparedness Team, CDC, Atlanta/GA/United States of America

**Study/Objective:** The overall objective of this tabletop exercise (TTX) was to bring together the Ministry of Health (MOH) and National Emergency Management Organization (NEMO) of Belize, in order to test the MOH's recently developed National All-Hazards Response Plan.

**Background:** Belize experiences various natural disasters on an annual basis. Hurricanes, floods, and mudslides are cause for most concern, and often result in large amounts of standing water, structural damage, and an increased burden on the health care system. Additionally, infectious disease outbreaks such as Dengue, Chikungunya, and most recently, Zika have occurred placing even more demand on already limited resources. In 2014-2015, the MOH of Belize, with technical assistance from CDC's Global Response Preparedness Team (GRPT), developed national- and district-level all-hazard response plans. In order to test the quality of those plans, a tabletop exercise was conducted.

**Methods:** The Global Response Preparedness Team used standardized templates from the Homeland Security Exercise and Evaluation Program (HSEEP) in order to develop a TTX based on the scenario of a Category 5 hurricane with a subsequent increase in cases of Dengue and Zika.

**Results:** The outcome of the TTX was largely positive in that MOH and NEMO demonstrated a strong capability to work together in order to address response issues. However, areas for improvement were highlighted including: 1) the need for additional partners, such as private clinics and laboratories, to participate in the exercise process; 2) the need for better sharing of plans across health districts; and 3) the need for response costing tools in order to better budget for emergencies.

**Conclusion:** The TTX was an overall success in demonstrating the functionality of the all-hazards response plan. This allowed for national partners to continue to build necessary relationships, and highlighted clear next steps for action in order to better prepare the nation for a multi-hazard response.

*Prehosp Disaster Med* 2017;32(Suppl. 1):s214  
doi:10.1017/S1049023X17005568

## Austere Environment Immersion Training for Disaster and Emergency Medical Personnel

Michael J. Reilly<sup>1</sup>, David S. Markenson<sup>2</sup>

1. Center For Disaster Medicine, New York Medical College, Valhalla/United States of America