

plus more, to those displaced by a large-scale incident. By using CRCs, federal agencies and state, tribal, local, and territorial (STLT) health departments can monitor the affected population, help prevent hospitals from becoming overburdened with persons not critically injured, compliment shelter operations, and obtain a basis for a long-term registry. However, public health staff often are not fully trained in their CRC role and the decision-making factors.

Method: The Centers for Disease Control and Prevention (CDC) developed a unique training board game, “This is a T.E.S.T.” (Tabletop Exercise Simulation Tool), for public health staff about their CRC role and decision-making factors. We play-tested the game with several CDC and STLT staff in 2022 and received informal feedback.

Results: Players found the game facilitated discussion and identified gaps in CRC plans, safety hazards, population needs, and staffing requirements. They also said the game improved collaboration and communication. Over 90% of players strongly agreed the game accurately simulated both bottlenecks and resource needs, individual needs and anxiety, and allowed a greater understanding of CRC operations.

Conclusion: Games have been used for emergency response using different platforms such as virtual reality and video games. This is a T.E.S.T. facilitates collaboration by tasking players with managing resources, staff fatigue, public anxiety, and hazards. Players provided valuable feedback on its usability while learning more about CRCs. “This is a T.E.S.T.” provides a unique, innovative training experience that incorporates components from typical tabletop and full-scale exercises, CRC capacity estimates through CDC’s CRC SimPLER (Simulation Program for Leveraging and Evaluating Resources), and key principles of adult learning.

Prehosp. Disaster Med. 2023;38(Suppl. S1):s203–s204

doi:10.1017/S1049023X23005216

Outcomes of Hemorrhage Control Training for Community Organizations in Rwanda

Oriane Longersaey MD¹, Kyle Denison DO, MPH¹, Noelle Lee¹, Innocent Nzeyimana MD², Dieudonne Rutagumba MD², Ashley Hughes³, Chelsea Lacasse⁴, Elizabeth Krebs MD⁵

1. Warren Alpert Medical School of Brown University, Providence, USA
2. Healthy People, Kigali, Rwanda
3. Bryant University, Smithfield, USA
4. Kent Hospital, Warwick, USA
5. Jefferson Health System, Philadelphia, USA

Introduction: Traumatic injury from road traffic accidents is a major cause of morbidity and mortality in Rwanda. Basic first aid training can help bystanders to provide prehospital care. The objective of this study was to determine the impact of Stop the Bleed (STB) hemorrhage control training on participant knowledge, attitudes, and practices regarding bleeding control.

Method: A total of 64 participants from two community organizations (Healthy People Rwanda and the Rwandan Emergency Care Association) were provided with training in STB. The course included a didactic presentation and skills session where participants could practice skills. A KAP (Knowledge,

Attitudes, Practices) survey was provided to participants before training, immediately after training, three months, and six months post-training.

Results: Immediately after training, participant knowledge of bleeding control techniques improved across 5 of 7 questions, including correct tourniquet placement (98% vs 85%) and the correct order of steps to take when treating bleeding (63% vs 9%). There was also a significant increase in confidence across six measures: identifying life-threatening bleeding, applying a tourniquet, applying direct pressure, wound packing, treating severe active bleeding, and teaching bleeding control techniques to others ($p < 0.001$). After three months, 100% ($n = 21$) of participants reported using at least one skill from the course, and 95.24% ($n = 20$) reported using at least one piece of equipment provided during the course. After six months, 93.33% (28 of 30) of participants reported using at least one skill from the course, and 86.67% (26 of 30) reported using at least one piece of equipment provided during the course. Notably, 17 participants reported using the tourniquet they had received by six months post-training.

Conclusion: This study found that STB training increased participant knowledge of bleeding control techniques and confidence in performing techniques for bleeding control. All participants reported using skills learned from the course.

Prehosp. Disaster Med. 2023;38(Suppl. S1):s204

doi:10.1017/S1049023X23005228

To Educate or Not to Educate: Systematic Review of Disaster Medicine Education in Kazakhstan in Compression with Post-Soviet Countries

Aidana Sissenberdiyeva MD

KRMU, Almaty, Kazakhstan

Introduction: Disaster medicine education is a huge challenge, but essential to disaster preparedness. While natural disasters have always been a part of world events, recent large-scale natural and man-made disasters have drawn attention to disaster medicine. As a consequence, medical schools in many parts of the world have begun to incorporate disaster-related topics into their curricula. However, in the territory of the former USSR, disaster medicine has just begun its development, and at the moment it is represented only in a couple countries, including Kazakhstan.

Method: Data collection was performed using a database search through the Ministry of Education and Ministry of Healthcare of the Republic of Kazakhstan, Uzbekistan, Kyrgyzstan, Russian Federation, Belarus, and Ukraine. Disaster Medicine curricula on different education levels, including bachelor, graduate, and postgraduate levels were reviewed and analyzed.

Results: Even though Kazakhstan is the ninth largest country in the world, education in the field of disaster medicine is currently represented only in one medical university in the country: specialists in disaster and emergency medicine are trained in residency and master’s programs. In the Republics of Uzbekistan and Kyrgyzstan, education in the disaster medicine field is not provided, but there are electives for bachelor students. The Federal Center for Disaster Medicine, located in Moscow,

offers doctors advanced training in disaster medicine, also disaster medicine education is provided at the bachelor and residency levels all over the Russian Federation. In Ukraine, at the moment, there is no training of specialists in disaster medicine, while in Belarus there are curricula at all levels of education.

Conclusion: Despite the fact that our life is impossible without catastrophes, most of the post-soviet countries are not having educational programs in disaster medicine. Using international experience could be beneficial so that every country will be prepared to face any disaster both locally and globally.

Prehosp. Disaster Med. 2023;38(Suppl. S1):s204–s205

doi:10.1017/S1049023X2300523X

Emergency Preparedness: Training Outcome in Hospital Staff

Patricia Roblin MS, Jennifer Guzman BA, Bonnie Arquilla DO, Clarence Braynt MPA, Donald Doukas MD, Pia Daniel MD
Downstate Health Sciences University, University Hospital
Downstate, Brooklyn, USA

Introduction: A widely acknowledged aspect of emergency preparedness is hospital-wide staff education. Maintaining interest in hospital emergency preparedness among hospital staff is challenging. A hospital-wide education process involving a robust lecture and hands on donning and doffing sessions followed by periodic disaster drills has been recently undertaken as a quality improvement process.

Method: A prospective pre- and post-test study of 256 hospital staff were given a six-hour training course in comprehensive Hospital Incident Command Systems (HICS), Hazmat (Hazardous Materials), and CBRNE (Chemical, Biological, Radiation, Nuclear, and Explosive) events. The same pre and post-test were given to all participants that contained questions to assess emergency preparedness knowledge.

Results: 256 registrars within seven months (two classes per month) completed training with pre and post-tests. The average class size was 18.3 (range= 14 to 26 registrars). 3 of 256 (1.1 % 95% confidence interval) registrars achieved the pass mark of 70% in the pre-test survey and 230 (89.8 %) registrars achieved the pass mark in the post-test (χ^2 -test $P < 0.001$) with an absolute increase in the pass rate of 84%.

Conclusion: This finding justifies Emergency Preparedness Training at our institution, showing a marked improvement in staff knowledge of HICS and CBRNE management. This study should encourage continuous widespread use of Emergency Preparedness training in hospital Emergency Preparedness.

Prehosp. Disaster Med. 2023;38(Suppl. S1):s205

doi:10.1017/S1049023X23005241

Impact of Virtual Disaster Collaboration Exercises on Disaster Leadership at Hospitals in Saudi Arabia

Mohammed Sultan PhD(c)^{1,2}, Amir Khorram-Manesh PhD³, Eric Carlström PhD¹, Johan Berlin PhD⁴, Jarle Løwe Sørensen PhD⁵

1. Institute of Health and Care Sciences, Sahlgrenska Academy, Gothenburg University, Gothenburg, Sweden
2. Healthcare Transformation, Model of Care, Regional Health Directorate, Najran, Saudi Arabia
3. Institute of Clinical Sciences, Sahlgrenska Academy, Gothenburg University, Gothenburg, Sweden
4. Department of Social and Behavioural Studies, University West, Trollhättan, Sweden
5. USN School of Business, Campus Vestfold, University of South-Eastern Norway, Kongsberg, Norway

Introduction: This study measured the impact of virtual three-level collaboration (3LC) exercises on participants' perceived levels of collaboration, learning, and utility (CLU) at hospitals in the southern region of Saudi Arabia. Our 3LC exercise is a tabletop training tool used to facilitate disaster education and document CLU. This model enables the practitioner to acquire new knowledge and promotes active learning.

Method: An English version of the CLU scale, the validated Swedish survey tool, was applied to 100 health-care managers or leaders in various positions at both the operational and tactical levels after conducting the 3LC exercises.

Results: The results show that most participants strongly agreed that the exercises focused on collaboration ($r^2 = 0.767$) and that they had acquired new knowledge during the exercises. There was a statistically significant association between participation in the collaboration exercises and perceived learning ($r^2 = 0.793$), as well as between perceived learning and utility ($r^2 = 0.811$).

Conclusion: This study confirms the feasibility of three level collaboration exercises conducted virtually. Our work also demonstrates that learning depends on collaboration practices and that collaboration exercises before crises can help to build qualities that people can apply in daily life. Collaboration elements exercised in this study contributed to perceived learning. There was a strong covariation between participation in the participants' collaboration exercises and perceived learning and utility. The virtual three-level collaboration exercises were well received by the participants and achieved an acceptable collaboration, learning, and utility score. Although exercises were conducted virtually, they were well received by the participants and achieved a value $M = 4.4$ CLU score, which opens up new dimensions in collaboration simulation exercises, at least from an organizational perspective, in a world with an increasing number of disasters and public health emergencies.

Prehosp. Disaster Med. 2023;38(Suppl. S1):s205

doi:10.1017/S1049023X23005253

Reinventing Medical Hazardous Materials Response for Radiological Emergencies: Building Resiliency in Emergency Medical Response Systems Through a Novel Approach to Education and Training

Esther Hwang DO, MPH¹, Benjamin Mize NRP², Erik Glassman MS, NRP³

1. Emory University, Atlanta, USA
2. Grady Emergency Medical Services, Atlanta, USA
3. US Department of State, Washington, USA