

diversities in mass-casualty incident and disaster preparedness and training curricula.

Methods: Extensive literature review, quantitative data analysis of the feedback of 50 trainees (medical professionals (55%), paramedics (25%), social scientists (20%)) in two phases, before and after their participation in the simulation exercises; and qualitative analysis of 2 focus group discussions composed by facilitators and 7 expert external evaluators.

Results: Expressed concerns and challenges before the simulation exercises were afterwards, characterized as acquired skills and knowledge (increased awareness regarding disaster preparedness, enhancement of non-technical skills such as decision-making, communication, conflict resolution, teamwork and coordination among stakeholders, improvement of technical skills such as identification of critically patients and triage). Furthermore, all parties involved in the study recognized the following innovating elements: -the involvement of public medical professionals, and civil protection officers and their direct interaction with the trainees, -the active contribution of trainees in the simulation scenarios design (ie roles allocation independently their professional background) -the use of fully functional public spaces as training locations for the simulation exercises (hospitals, airport, port, hotels).

Overall, participants described feeling more prepared and confident for disaster response compared to prior the training.

Conclusion: Learning by doing, facilitating cross-sectoral and transdisciplinary collaboration, transposing real events into educational processes, enabling actual challenges, are proposed as a remedy to the apparent disconnect between theory and methodology used in disaster preparedness drilling.

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High Fidelity Simulation With the Use of 360-degree Virtual Reality for Aeromedical Training in Search and Rescue

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Study/Objective: Recent experience has demonstrated the benefits of virtual and hybrid simulation training. A successful simulation model should provide customized environments to facilitate skill training and enhance complex contextual learning, especially for disaster scenarios, which may be infrequently met by an individual.

Background: The Government Flying Service (GFS) of Hong Kong is responsible for providing 24/7 emergency helicopter and fixed-wing flying support. The GSF and the Hong Kong College of Anaesthesiologists collaborated to organize the Air Crew Resuscitation Simulation Refresher Course for the Air-crew Officers, to enhance their medical skills for search and rescue missions. In order to enhance learning outcomes, this training made use of high fidelity simulation search and rescue scenarios.

Methods: The training includes topics such as triage process, pre-hospital and helicopter resuscitation in trauma, amongst other emergency clinical skills. With the support of the Hong Kong Jockey Club Disaster Preparedness and Response Institute, Virtual Reality (VR) aeromedical incident films were produced, which will be displayed using 360 degree goggles and a dome-shaped projection platform. To enhance fidelity of the simulation, sound effects and a mock-up cockpit will be produced. The hybrid training will be established by requiring the participants to carry out first aid and resuscitation procedures on mannequins. A self-administered questionnaire will be distributed to participants for process evaluation.

Results: Regular trainings will be conducted throughout two years, reaching a total of 50 participants. The first training is on December 3, 2016. Results of the process evaluation will be ready after data collection and analysis.

Conclusion: It is anticipated that the use of VR in search and rescue training will add a more realistic aspect to this area of training, and allow for consistency in trainings and for the ease of evaluation, yet keeping the training in a safe environment and at a low-cost.

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Use of Virtual Reality in Motorsports Emergency Training *Tiffany Yeung¹, Jacky C. Chan²*

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Study/Objective: To explore the benefits of using VR simulation in motorsports medical incidents training.

Background: With the increasing popularity of using Virtual Reality (VR) in training, there has been a paucity of studies showing that content retention in memory is better, and compared to other simulations, VR bridges the gap of inconsistency of trainings while allowing participants to be trained in a realistic yet safe environment. In view of the first electric motor race in Hong Kong, the Federation Internationale d'Automobile (FIA) Formula E Hong Kong ePrix held in October 2016, a training for the medical community for such events was thus organized by the Hong Kong Jockey Club Disaster Preparedness and Response Institute. The aim of the course was to enhance command and coordination with different parties, including the marshal team, chief medical officer, first aid team, extrication team, and fire services. In the scene coordination session, participants were immersed in interactive simulated motor accident scenes, created by a VR game-based tool to interact with each other to communicate.

Methods: Two levels of assessments were done, including a self-administered course process evaluation questionnaire and a video analysis of performance assessment, which assesses the fidelity of the simulation to the real situation.

Results: A total of 80 emergency first responders, who would be on the ground during the event as emergency medical teams, were trained. The evaluation (72 questionnaires returned) showed the