

Abstracts of Oral Presentations-WADEM Congress on Disaster and Emergency Medicine 2019

SIMULATION

Implementation of Periop Disaster Response Exercise Program at Gold Coast Health

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Introduction: With the move into Gold Coast University Hospital, a new disaster plan was developed in 2017. To assess preparedness for the Commonwealth Games (April 2018), a number of mass casualty exercises were conducted, including a large multi-agency exercise with Queensland Police and Ambulance Services. During this preparation phase, senior clinicians from the perioperative area clarified their sub-plans and developed a novel model of periop response.

Aim: This study assesses this model of response and evaluates it within the context of periop disaster exercises.

Methods: The periop response model evolved through multidisciplinary key stakeholder engagement into a defined model of surgical, anesthetic, and periop nursing responses with dedicated roles and parallel communication streams from ED to OR by the respective specialties. Throughout different disaster exercises, this model of response was tested, refined, and evaluated by formal post-exercise debriefs and group meetings.

Results: Since May 2017, seven different mass casualty exercises with periop response were performed; firstly, a table-top (EmergoTrainSystem) format was used, which revealed communication and logistical deficiencies. After model refinement, further exercises were accomplished, all within the clinical environment, including movements of mock patients from ED to OR. These exercises generated improvements in communication, coordination, and logistics. Every exercise was also used to test more detailed information, communication, and organizational tasks of the various involved craft groups, such as notification, call-in lists, whiteboard structure, transport facilitation, and many more. Overall, our newly developed periop response model proved to be robust and successful, even with rotating personnel through different roles.

Discussion: Apart from the success of the periop response model, other hospital areas (ICU, bed and ward management) became involved. With growing interest and staff turn-over a regular periop disaster response exercise program has now been established. This model of periop response has potential for use in other health systems.

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Preparing for Mass Casualties: Improving Staff Preparedness and Hospital Operations through Multidisciplinary Simulation Training in Disaster Management

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Introduction: World events continue to compel hospitals to have agile and scalable response arrangements for managing natural and instigated disasters. While many hospitals have disaster plans, few exercise these plans or test their staff under realistic scenarios.

Aim: This study explores changes in perceived preparedness of multidisciplinary hospital-wide teams to manage mass casualty incidents.

Methods: Two Emergo Train System (ETS) mass casualty exercises involving 80 and 86 “victims,” respectively, were run at two southeast Queensland hospitals: one large teaching hospital and one smaller regional hospital. Pre- and post-exercise surveys were administered, capturing participants’ confidence, skills, and process knowledge anonymously on 5-point Likert scales. A waiver of ethics review was obtained. Changes in individuals’ pre- and post-scores were analyzed using paired t-tests. Open-ended questions and a “hot debrief” occurring immediately post-exercise allowed for capture of improvement ideas.

Results: Nearly 200 unique healthcare staff (n=193) participated in one exercise. At least one survey was returned by 159 staff (82.4%). Pre- and post- surveys were available for 89 staff; two-thirds (n=59) were nurses or doctors, and 46% overall were emergency department clinicians. Ninety-seven percent reported the exercise was valuable, also recommending additional simulations. Analysis of the 89 matched-pairs showed significant (p<.001) increases in self-confidence, skills, and knowledge (point increases on a five-point Likert scale (95% confidence intervals): 0.8 (0.6-0.9) for confidence and 0.4 (0.2-0.5) for both skills and knowledge. The exercise was critically appraised and a summary of operational learnings