

department staff. This study will assess whether the intervention generated an improvement in disaster preparedness in either or both groups.

Keywords: Australia; disaster; emergency medical services; exercise; hospital; mock; preparedness

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Development and Implementation of a Simulation Exercise for the Special Unit for Disaster Medicine in Collaboration with the “Hellenic Volunteer Rescue Team” Non-Governmental Organization

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The objective of organizing such an exercise for the first time is to test the effectiveness of working together with non-governmental organizations (NGOs) on search and rescue operations in case of mass-casualty incidents due to natural disasters, transportation crashes, and terrorist attacks. The scenario of the exercise involved disruption of the Corynth Isthm Bridge because of an earthquake and the subsequent rescue of the victims.

The Hellenic NGO team was responsible for search and rescue while the Special Unit for Disaster Medicine had the responsibility of triaging, treating, and transporting the victims to the hospital. There were no informational meetings to prepared each team arranged prior to the exercise.

To respond to the needs of the exercise, the NGOs participated with 30 people, 20 of whom had special training in rescue. They set up the necessary equipment for rope transportation over the Isthm. The Special Unit for Disaster Medicine participated with one team of 12 paramedics and one medical doctor, two rescue vehicles, and one mobile coordination center. On arrival at the disaster site, the title of incident commander was assigned, and team officers organized and started the triage and treatment process. The head of the medical services and one paramedic were assigned as observers. Nine victims were rescued, triaged, treated, and transported to the hospital in the first 30 minutes.

In conclusion, it was found that NGOs trained in search and rescue and the Special Unit team can collaborate to respond to mass casualties, and provide the best results. However, it is better if previously common exercises are effectuated to know each other and know about each other's work.

Keywords: communication; exercise; Greece; non-governmental organizations (NGOs); search and rescue; Special Unit for Disaster Medicine

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Use of Simulations in Prehospital Trauma Education of Paramedics: Development of an Educational Model

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Introduction: A literature review suggests that simulation training improves pre-clinical and possibly actual clinical performance in a range of health disciplines, and therefore, could be expected reasonably to do the same for paramedics. A project was undertaken, based on the observations of the Consultative Committee on Road Traffic Fatalities in Victoria over a 5-year period, that identified consistent management, diagnostic, and technique errors in prehospital trauma care associated with adverse outcomes.

Objectives: The study aimed to answer the question: “Do clinical simulations using a Human Patient Simulator in the education of paramedics in trauma care reduce error rates in pre-clinical performance?” In addition, the study examined the educational methods underpinning the conduct of clinical simulations.

Methods: The research design was a randomised, controlled study using a pre/post-test design. The participants were student Ambulance and Intensive Care Paramedics (n = 120) at three different phases of training. Ethics approval was obtained.

Results: Significant improvement in post-test performance was demonstrated by students undertaking simulation-based learning as compared to students undertaking case-study based learning ($p = 0.008$). A sub-group analysis demonstrated that the most significant difference between control and study groups was evident in novice paramedics ($p = 0.014$). This difference diminished in the more experienced student ambulance paramedic group ($p = 0.059$) and was not evident in the student intensive care paramedic group ($p = 0.767$). The method adopted for the conduct of simulations was further developed, identifying a third level to incorporate the impact of situational elements on learning.

Discussion: Several issues can be considered with respect to the results of this project. Firstly, it is suggested that the use of simulations is beneficial in prehospital trauma paramedic training. Consideration also should be given to the use of simulation in other health disciplines. Secondly, these results have provided new evidence to question some of the general assumptions concerning the conduct of clinical simulations at the Monash University Centre for Ambulance and Paramedic Studies (MUCAPS), which were the basis of the methods adopted for this project.

Conclusions: Results suggest that the use of clinical simulations is beneficial as a learning tool, with significant improvement in study group post-test scores when compared to control group post-test scores. These benefits, in terms of improved performance, were of particular significance in the novice group. Benefit also was demonstrated when mean gains were compared between control and study groups; however, these did not show a significant difference. These findings have implications for the development of future paramedic education programs. A new