(11) Survey of Knowledge and Attitudes of Students to Disaster Preparedness: A Study in Four Countries

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Introduction: Training is necessary for preparing personnel involved in managing disaster responses. Teaching and training in disaster management is non-existent in most medical and nursing schools around the world. The infrastructure for disaster responses is transforming, while at the same time medical education is changing. The conventional response system is expected to need many additional healthcare personnel—a.k.a. SURGE. Only recently, under the increased scrutiny of accelerated institutional and governmental preparedness efforts, have the emerging sciences of emergency preparedness and medical education converged. The United Kingdom, India, Australia, and Colombia are countries in four different continents, yet they are bound together by the common threat of natural and human-made disasters in the daily lives of their citizens. These countries have had widely differing infrastructure support for disaster planning and training of students with implications for disaster curriculum development.
Objective: This presentation seeks to assess the knowledge, attitude, and training of students (medical and nursing) regarding disaster management in four countries.
Methods: A questionnaire is being administered to a sample of medical and nursing students in four countries: UK, India, Australia, and Colombia. Their exposure to disaster training, knowledge, and attitudes will be explored through the questionnaire. The influence of disasters, the political situation in each country, and the medical curriculum will be addressed.
Results: The results will be presented.
Conclusions: In countries faced with the risk of disasters, training of healthcare professionals should be instituted from an under-graduate level, and there should be international cooperation in curriculum development activities.
Keywords: curriculum; international; knowledge; preparedness; response; training
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(12) Training Civilians for Preparedness for Mass-Casualty Incidents and Disasters

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Objective: To evaluate the effectiveness of a mass-casualty incident (MCI) and disaster training program for civilian volunteers.
Methods: A training program was developed that conformed to the following principles: (1) the action of volunteers is limited basically in the safe area; (2) volunteers can support logistics; and (3) in order to be effective volunteers should be well organized and trained.

An evaluation was performed before and after the 14 hours of theoretical training and 10 hours of practical training. Two doctors determined the performance on the evaluation with experience in emergency medical services (EMS) based on a scale from 0 to 20. The final grade was the mean value of the evaluation scores.

The pre- and post-training tests were used to examine the achievements in the following skills: (1) immobilization; (2) airway; and (3) minor injuries.
Results: A total of 58 volunteers participated in this training. Of these, 19 were healthcare personnel (HCP) (but not with the EMS), and 39 were laypersons (LP). The value for the mean ages of the participants was 27.9 years (range 19–44 years); there were 42 male and 16 female participants.

An improvement on tested skills for all of the participants was observed; the overall performance scores increased by 28.5% (from 12.2 to 15.6). The LPs demonstrated a greater improvement (from 9.33 to 14.71; 48.13%) than HCPs (14.42 to 16.59;15.05%). This difference probably is due to the very low pre-training capabilities of the LPs.
Conclusions: Training LP or HCPs can improve their skills and performance to be applied in MCI or disaster settings. Knowing that the first responders after an MCI or a disaster usually are LPs, specific training could improve the performance of the general public in such situations.
Keywords: civilian; evaluation; lay person; mass-casualty incident; training
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(13) The Impact of Two Different Educational Strategies

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Objective: To compare the impact of a participation-based educational strategy to a traditional educational strategy on the development of a position before the education of doctors with educational functions.
Methods: A quasi-experimental study, approved by the Investigation Committee, was conducted to evaluate the effects of the use of two different educational strategies. A validated instrument consisting of 72 statements had been used previously. This instrument excluded aspects of the educational task through the use of three indicators: (1) indiscriminate agreement; (2) more popular approach; and (3) consequence. The "natural groups" were composed of seven doctors who had graduated from the educational activities in which they had been enrolled, two were enrolled in teaching, one was boarded, and a participation-based approach was used for the others. The instruments were applied previous to consent. A non-parametric statistical analysis was conducted.
Results: The Mann-Whitney *U*-test did not show any statistically significant differences between the groups prior to the interventions. The same test was provided after the completion of interventions and identified statistically significant differences in favor of the participation-based group, mainly in the consequence indicator. The Wilcoxon

test showed that the entire participation-based group significantly improved in the evaluations of the three indicators. Further comparisons will be presented.
Conclusions: A participation-based educational approach is more effective in the development of a position before the education.
Keywords: doctors; education; participation-based; strategies
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(14) Clinical Aptitudes of Emergency Medicine Residents in the Boarding of Stroke Victims

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Objectives: To construct, validate, and apply an instrument to evaluate the clinical aptitudes of the emergency medicine residents in the treatment of stroke patients.
Methods: An observational, cross-sectional study, authorized by the Local Committee of Investigation, was conducted in which the 31 residents evaluated themselves. The residents are a part of the three levels of the emergency medicine specialty of one of the seats of the Federal District. To develop the instrument, three real clinical cases of stroke patients were used. The content validity was obtained by the consensus of four out of four experts in emergency medicine and educative investigation. A pilot test of pre-degree, internal medicine doctors was conducted. The consistency was determined using the Kuder-Richardson test. The validated instrument was applied specifically in only one session, later determining the awaited answers by chance through the Perez-Padilla test. A non-parametric statistical analysis was conducted.
Results: The final version of the instrument consisted of 153 items distributed in 10 indicators. The consistency was 0.92. The maximum score was 124 and the minimum scorewas 44. Twenty-five answers were obtained by chance. The statistical analysis did not identify any differences between the academic degrees. The third-year residents obtained better qualifications for most of the indicators.
Conclusions: The constructed instrument is a suitable tool for use in evaluations. The educational process in this seat seems to promote a process of reflection and criticism for the residents.
Keywords: clinical aptitude; emergency room; instrument; residents; stroke patients
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(15) Evaluation of Just-In-Time Training Materials for "Dirty Bomb" Management

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Introduction: The purpose of this study is to determine how to train physicians for radiation emergencies.
Methods: Emergency medicine residency programs in New York City were selected for the study. The participants were given a scenario describing a patient who fled the scene of an explosion during which he was externally contaminated with radioactive material. They were asked to manage the patient with the help of training cards developed by the federal government, and then to comment on the cards through a survey.
Results: The participants were asked to critique the helpfulness of the training cards on a scale from 1 to 5 (1 = not helpful, 5 = very helpful). Overall, the participants rated the cards an average of 2.82. When asked in what format they would prefer to receive the radiation information, 98 of 244 (40%) participants responded that they preferred the Just-in-Time training card ("Quick Card") with a reference manual. Twenty-two percent preferred a poster, 20% preferred the Quick Cards alone, and 16% preferred a personal digital assistant format.

The participants then commented on what material should be found on the Quick Cards and in a manual. Concerning radiation emergency educational formats, 49% chose case scenarios, 36% preferred lectures, and 7% equally preferred online modules and video presentations. Finally, respondents reported receiving only one lecture on disaster preparedness (general) during the past two years.
Conclusions: The results of this study indicate the lack of formal education in the management of radiation emergencies that emergency medicine residents are receiving. It also shows that multiple, non-traditional formats can be used for effective training, such as Just-in-Time tools.
Keywords: education; emergency medicine; just-in-time; radiation; residents; training
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(16) General Medical and Welfare Measurement System for the Disabled/Elderly

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Widespread problems are common in the field of disaster medicine. This is true especially in providing support to disabled persons. This study examined these problems.

This study consists of three major components:
1. Operating an emergency medical and welfare support team for the medical/welfare facilities involved;
2. Establishing mobile and fixed support centers for people living in temporary housing; and
3. Improving software systems, including a new version of triage tag/disaster records for the disabled/elderly, and developing new tools to support those with visual and/or hearing disabilities.

The tool for assisting the blind is called "My Kane System" (TNK company, Japan). It is a system used to help the blind differentiate the color of tape using different vibration frequencies, by which they can select the safe route.

Establishing a systematic support system for the disabled to use during disasters is important. A new, supporting non-governmental organization, called the Japanese Welfare Supporting Network System against Large Scale Disaster (nicknamed Thunderbird) was established in 2005.