

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 score was 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.

Although these aids are useful, there still are many problems, including a lack of financial support, problems with the educational system, and keeping people motivated. Moreover, the establishment of a coordinating system between official organizations, medical facilities, the welfare system, and volunteer groups, also remains a big issue.

Keywords: disabled; disaster; education; Japan; plan

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(17) Training Medical Students in Bag-Valve-Mask Technique as an Alternative to Mechanical Ventilation in a Disaster Surge Setting

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With the recent disasters that have occurred and the increasing threat of pandemic influenza, hospitals are assessing their ability to address surge capacity. During a disaster in which victims require advanced ventilatory support, alternative means for ventilation will be necessary. Mechanical ventilators are a finite resource. Respiratory therapists properly trained to provide proper bag-valve-mask (BVM) ventilation also are a limited resource. Many other healthcare professionals will be over-extended in emergency disaster situations. In the academic hospital setting, medical students are a large, potentially underutilized resource. They often are eager to help, but they are not licensed to practice and can often feel superfluous in emergency settings. While medical students cannot perform medical decision-making or unsupervised invasive procedures, they can be trained to do important essential tasks. Teaching and assessing the ability of medical students to adequately provide manual ventilation support can utilize an invaluable medical resource to provide a necessary life-saving duty.

In this study, the rapid training of medical students and their ability to provide effective manual ventilation using bag-valve-mask technique was evaluated.

A rapid training session highlighting essential aspects on if the correct BVM technique was provided to 40 medical students. The training session was developed with consultation from respiratory therapists and anesthesiologists. Following the session, the students participated in a simulated experience, monitored according to a checklist of essential BVM competency requirements. Pre-test and post-test surveys were administered to assess the medical students' knowledge and ability to provide adequate BVM technique.

The results illustrate that medical student effectiveness in learning proper BVM technique could be used in a disaster surge situation.

Keywords: disaster; ventilatory support; bag-valve-mask; medical students; training

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(18) Need for Emergency Medicine in Nepal

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Nepal is a country that is developing in every aspect. Because of its difficult geographical conditions and low economical status, mortality rates are increasing. There still is a lack of a proper healthcare system, and there are a minimum number of available personnel from the health posts to modern tertiary hospitals. Additionally, there is no Emergency Healthcare System and no Emergency Medicine Specialty. Every hospital emergency is managed general practitioners who are trained as doctors (GP), by the Institute of Medicine at Tribhuvan University. They provide all emergency medicine, emergency surgery and orthopedics, emergency obstetrics and gynecology, and more. They practice in every part of the country from District Hospitals to Tertiary-Level Hospitals.

It is necessary that further academic training and recognition be established for emergency medicine. In addition, academic Emergency Medicine courses must be developed and the upgraded training must be administered to the existing General Practitioners and new comers. The management of emergency medicine is very poor, and there is no training available for prehospital emergency management. The poor management and minimal hospital emergency services can be attributed to a lack of proper infrastructure, equipment, and insufficiently trained personnel. Therefore, it is essential to develop an academic Emergency Medicine and Emergency Healthcare System by well-trained persons in Nepal. Hopefully, these endeavors will receive worldwide support.

Keywords: emergency medicine; health care; management; Nepal; personnel

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(19) Evaluation of a Continuing Education Program for EMS Personnel on the Island of Crete

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Introduction: This study evaluated the effectiveness of a novel program of continuing education for EMS personnel serving in Heraklion, Crete, Greece during a two-year period. **Methods:** First, EMS personnel participated in a pre-educational test consisting of 20 multiple-choice questions. Next, participants (in groups of 20–25) engaged in a two-day, 16-hour seminar consisting of a 6-hour theoretic session and a 10-hour 'hands-on workshop' focusing on: (1) the use of artificial airways (nasal- and oro-pharyngeal airways, laryngeal masks); (2) basic life support and use of Automatic External Defibrillators; and (3) trauma victim extrication and immobilization. The participants then took a post-educational test consisting of the same 20 multiple-choice questions as the pre-educational test, one week after seminar completion. Pre- and post-educational test results were compared. A test result of <60% was regarded as test failure.