

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

J.Y. Lin,<sup>1</sup> N. Bhalla<sup>2</sup>

1. University of Illinois at Chicago, Chicago, Illinois USA

2. USA

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

R.K. Kumar Maharjan; N. Prasad

Institute of Medicine, Tuth, Kathmandu, Nepal

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

P. Malliotakis,<sup>1</sup> M. Zeaki,<sup>2</sup> M. Zervopoulos,<sup>2</sup>

E. Kontoudaki,<sup>2</sup> T. Loulaki,<sup>2</sup> E. Kompolaki,<sup>2</sup> E. Matheaki,<sup>2</sup>

D. Vourvachakis<sup>2</sup>

1. Heraklion, Greece

2. EKAV Heraklion, Heraklion, Greece

**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.

**Results:** From February 2005 to October 2006, 217 participants completed the program; 117 and 100 in the years 2005 and 2006 respectively. Pre- and post-educational test results were as follows: 19 out of 117 (16.3%) and 27 out of 100 (27%) participants failed the pre-educational test in the years 2005 and 2006 respectively, while the corresponding post-educational test failure results were 3.5% and 0% respectively ( $p < 0.05$ ).

**Conclusions:** A significant proportion of the participants (16.3% in 2005 and 27% in 2006) failed the pre-educational test, while the post-educational test failure rate improved significantly by dropping to less than 5%. Implementation of a continuing education program for EMS personnel on a regular basis may serve as a useful tool in facilitating skill and knowledge improvement.

**Keywords:** continuing education; EMS personnel; post-educational testing

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### (20) Efforts Toward Increasing the Awareness of Disaster Training and Research at a University in Turkey

M.H. Haberal,<sup>1</sup> A. Kut,<sup>2</sup> C. Ozcan,<sup>2</sup> I. Budakoglu,<sup>2</sup>  
A. Hatipoglu,<sup>2</sup> M. Coruh,<sup>2</sup> M. Haberal<sup>2</sup>

1. Baskent University, Ankara, Turkey

2. Turkey

A disaster due to natural, technological, or human-made hazards is destructive to people and their communities and sharply reduces social and economic well-being. Therefore, the strategy for improving disaster response should emphasize repairing and improving the social and economic status of those affected. There already are many successful programs and applications operating in Turkey. Unfortunately, trained healthcare providers equipped with appropriate knowledge, attitude, and behavioral skills regarding disaster management are lacking.

In 2006, Baskent University established a Center for Disaster Training, Research, and Implementation according to the legal regulations of the High Education Council in Turkey. The Mithat Coruh Quality Management Center collaborated with the University's Burn and Fire Disaster Institute on the establishment of this Center. The Center for Disaster Training, Research, and Implementation will train and integrate selected healthcare staff from the seven existing healthcare facilities at Baskent University. The staff will learn about disaster management topics; specifically, the preparation and dissemination of training guidelines and protocol for disaster-specific problems at the national level. The Center will collaborate with national and international disaster management centers. The successful training activities will be recommended to the University for integration into the pre-graduation program of certain educational tracks.

**Keywords:** disaster management; disaster training and research; education; Turkey; university programs

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### (21) One Center's Experience in First-Aid Training: A Case Study in Turkey

M.H. Haberal,<sup>1</sup> I. Budakoglu,<sup>2</sup> C. Ozcan,<sup>2</sup> A. Karaban,<sup>2</sup>  
A. Kut,<sup>2</sup> M. Haberal<sup>2</sup>

1. Baskent University, Ankara, Turkey

2. Turkey

**Introduction:** After the 1999 Marmara Earthquake in Turkey, the civil initiative in first aid resulted in many incidents of severe malpractice and insufficient care. In 2002, the Turkish Government published legislation on first aid that required all first-aid responders to be certified by governmentally-approved first-aid training centers. In response to this legislation, Baskent University established a First-aid Training Center in 2004.

**Methods:** This Center is staffed by first-aid trainers that have certified 47 people over the duration of six courses. The eight-day, nationally-standardized course program covers topics of first aid and training, with a focus on skill improvement. Both topics, first-aid and training skills, were assessed by a pre-test that determined the baseline knowledge-level of attendees. After the course, a post-test was administered, which measured the knowledge-level and skill development of attendees.

**Results:** The mean value of the pretest first aid scores of the students was  $80.1 \pm 1.0$ , while post test score were  $93.4 \pm 0.7$  ( $p < 0.05$ ). Of the students, a minimum of 89% were at a proficient level in 20 BLS steps. Regarding training skills, the mean value for the pretest scores was  $74.4 \pm 1.2$ , while post-test score was  $90.7 \pm 0.7$  ( $p < 0.05$ ). Of the attendees, a minimum of 61% were at the proficient level in 16 presentation skill steps.

**Conclusions:** Given that 96% of Turkey's population lives in potential disaster areas, the importance of training first-aid responders is obvious. Turkey will persist on this well-planned and successful project until the needs of the country are satisfied.

**Keywords:** education; first-aid training; Marmara Earthquake; Turkey

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### (22) Post-Graduate Fellowship in Emergency Medicine Disaster Preparedness: Providing Physicians with Special Training in Hospital-Based Planning and Public Health

C.C. Campbell,<sup>1</sup> K. Uraneck,<sup>2</sup> S.A. Kohlhoff,<sup>2</sup> B. Arquilla<sup>2</sup>

1. State University of New York, Downstate Medical Center,

Brooklyn, New York USA

2. USA

The significance of preparing a medical response to a disaster in the United States has become more apparent in light of a number of domestic events that have occurred in the past decade. Keeping with this trend of recent awareness, SUNY Downstate Medical Center, a large teaching hospital and medical school, and Kings County Hospital Center, a Level-1 trauma center in Brooklyn, New York have joined with the New York City Department of Health and Mental Hygiene to create a disaster preparedness fellowship for physicians. This particular program is unique because it prepares physicians to be a leading force in hospital-based planning and planning within public health agencies.