

around the world should work toward scientific achievements in this particular field. Considering the enormous disaster potential in Turkey, Turkey should lead the way in contributing to the specialty of disaster medicine. This should be an institutional, social, national, and global responsibility. Worldwide efforts also should serve this need with similar intentions. Disaster specialists should be certified, because that could result in an increase in the number of articles published in international journals. If disaster medicine was considered a separate specialty, global academic advancement could be made in the field. Today, academicians do not seem to be interested in disaster medicine because there is not much they can contribute to the field. But if the specialty could be established, there would be more comprehensive goals in the field of disaster medicine. In this study, the idea that more scientific studies relating to human lives could be performed if the disaster medicine is set as a separate specialty of medicine.

Keywords: disaster medicine; education; international; medical specialty; medicine; Turkey

Prehosp Disast Med 2007;22(2):s24–s25

(39) First Responders First: A Model for Prophylaxing First Responders during an Epidemic

K.A. Qureshi,¹ E. Scanlon²

1. University of Hawaii at Manoa, Honolulu, Hawaii USA
2. Nassau County Department of Health, Nassau County, New York USA

In the United States, the national plan for population-based emergency vaccinations or prophylaxis calls for protecting first responders (e.g., fire, police, emergency medical services (EMS), public health, and hospital staff) first. The Nassau County Department of Health (NC-DOH) developed a plan to operate first-responder point-of-distribution clinics (FR-PODs) through the county's 71 local volunteer fire/EMS departments and police departments.

The NC-DOH collaborated with these agencies to develop a FR-POD plan. In this plan, the majority of the staffing came from a variety of volunteer groups, including firefighters, emergency medical technicians, Medical Reserve Corps (MRC), and Community Emergency Response Team (CERT) members. Over the course of one year, this diverse group of volunteers received training on the incident command system, basic POD operations, the role of MRC and CERT volunteers imbedded in a FR-POD, and the role of public health during an epidemic. At each training program, pre-/post-tests and a course evaluation were administered. In June 2006, the ability of the volunteers to perform in the FR-PODs was tested during a large scale, county-wide drill that included the police, nine fire/EMS departments, and 12 hospitals. Paid and volunteer workers ($n = 674$) who received FR-POD training processed 4,246 recipients over 4–6 hours. The plan and the training were successful. Volunteers were able to perform their emergency response functional roles, problems or issues were rapidly identified and addressed, the average thru-put time for recipients was approximately 20 minutes, and 99% of recipients would have received the correct medication as per the established protocol.

Keywords: education; epidemic; first responders; prophylaxis; training

Prehosp Disast Med 2007;22(2):s25

(40) University Students Triage Training (A Preventive Program)

A. Ali Madadi,¹ J. Mohtashami,² Z. Sadat³

1. Tehran, Iran
2. Shahid Beheshti University, Tehran, Iran
3. Tehran University of Medical Sciences, Tehran, Iran

Introduction: As societies are developing, the necessity for professional interventions in order to protect the health of the people is becoming clear. The increasing population and lack of professional personnel are among the factors increasing the risk coefficient. In addition to reinforcement troops, there are other human resources that can provide suitable support. If medical triage courses are successful in educating students, they may provide potential support for triage. The aim of this research is studying the need for the medical education in triage from the students' perspective.

Methods: The perspectives of 100 students (46 female, 54 male) of various fields in the University of Tehran were assessed using a self-reporting questionnaire.

Results: Of these students, 95% expressed that triage education should be a requirement, 95% believed this education is not merely for reinforcement troops, and 90% believed that an experimental (practical) credit should be added to the university course. Ninety percent declared that education in triage helped increase family members' sense of security.

Discussion: Students from every society can act as a logistic force during a disaster response. Thus, the implementation of a practical credit in the university can help familiarize triage fundamentals and must be considered as a preventive program.

Keywords: education; Iran; personnel; students; triage; university

Prehosp Disast Med 2007;22(2):s25

(41) Use of a Highly-Equipped Manikin in Cardiopulmonary Resuscitation Classes Could Improve the Efficacy of Training

T.G. Loukas,¹ K. Kritikos,² B. Gerodimou,² A. Kotzias,² M. Poriazi,² S. Nanas²

1. Elefsina, Greece
2. Critical Care Department, Medical School, Athens, Greece

Objectives: Medical students are expected to be able to perform basic life support. A prospective study to assess the level of cardiopulmonary resuscitation (CPR) skills of medical students after completion of a manikin-assisted CPR classes was performed.

Methods: One hour after attending a CPR class, 68 medical students participated in a prospective, observational study. A full-torso manikin was connected to a computer. The students performed CPR for two minutes, and the number of ventilations, average tidal volume, rhythm of compressions, and compression depth were recorded.

Results: The compression rate was between 90–110/min in 82% (56/68) of trials, while 18% (12/68) were >110/min. The compression depth was 40–50 mm in 47% (32/68), <40 mm in 12% (8/68), and >50 mm in 41% (28/68). Four students (6%) managed to perform two rescue breaths, 12 (18%) succeeded in four attempts, 16 (24%) in five attempts, 20 (28%) in six attempts, and 16 (24%) in eight

attempts. Eight students (12%) ventilated the manikin with 500–600 ml air, six (18%) with <400 ml air, and 24 (70%) with >600 ml.

Conclusions: The ability to perform effective cardiac compressions and artificial ventilation was satisfactory. The use of the highly-equipped manikin improved the efficacy of the CPR courses.

Keywords: basic life support; cardiopulmonary resuscitation; manikin; medical students; training

Prehosp Disast Med 2007;22(2):s25–s26

(42) Mouth-to-Mouth Ventilation Restrains Rescuers from Performing Compressions-Only Cardiopulmonary Resuscitation

T.G. Loukas;¹ K. Kritikos;² B. Gerodimou;² A. Kotzias;²

M. Poriazi;² S. Nanas²

1. Elefsina, Greece

2. Critical Care Department, Medical School, Athens, Greece

Hypothesis: Proper teaching during cardiopulmonary resuscitation (CPR) training improves the willingness of the rescuers to perform CPR.

Methods: The questionnaire used was constructed by a team of CPR experts. A total of 46 healthcare providers (HCPs) were evaluated.

Results: The age of the subjects ranged from 21–48 years. The sample consisted of nine males and 37 females, 33 of whom were nurses and 13 were medical doctors. Nineteen HCPs (42%) had not attended basic life support courses during the last three years. Twenty-one (45.6%) believed that they had sufficient knowledge of CPR. Three (71.7%) would not perform CPR on a stranger (out-of-hospital), mainly due to their unwillingness to perform mouth-to-mouth ventilations. When they were informed that they could perform compressions-only CPR without being accused of malpractice, 30 out of the 33 HCPs (91%), who earlier stated that they would not perform CPR, now confirmed that they actually would perform CPR.

Conclusions: The knowledge of CPR was not satisfactory. Results from this study indicate that mouth-to-mouth ventilation restrains rescuers from performing compressions-only CPR. The fact that proper information-sharing during CPR training changed the attitude of the rescuers towards the cardiorespiratory arrest victim, illustrates the need for improvement in CPR training.

Keywords: cardiopulmonary resuscitation (CPR); compressions-only cardiopulmonary resuscitation; education; knowledge; mouth-to-mouth ventilation; rescuers; training

Prehosp Disast Med 2007;22(2):s26

(43) Evaluation of Competency-Based, Online Learning Modules for Nurses

E.E. Weiner; M.M. Irwin; J.S. Gordon

Vanderbilt University, Nashville, Tennessee, USA

Introduction: Several grants have been received to develop an online curriculum for nurses in emergency preparedness using the competencies developed by the International Nursing Coalition for Mass Casualty Education (INCMCE). A unique aspect of the development of these modules

is that they reflect the “How People Learn” Cycle (HPL). **Methods:** Five proposed modules were completed on 01 November 2006. This presentation will provide data to determine the effectiveness and efficiency of learning programs designed to educate nurses volunteering for service.

Results: Data analysis is currently ongoing at the writing of this abstract. One initial finding is that learners did not complete all modules in sequence, but rather individual modules. Faculty members have reported that they found the modules to be most useful for stimulating seminar discussions. Additionally, the modules provided a variety of international resources that could be used alone or in combination with other resources in a rich multimedia experience. Overall confidence scores also have increased from pre- to post-module completion. The comparison of face-to-face to online learning was not possible due to the fact that the majority of learners chose the online method. Perhaps, this selection may be a reflection of today’s society, in which computer-accessed learning is becoming more of a norm.

Conclusions: The modules currently are being translated into other languages in conjunction with the Pan-American Health Organization. The long-term objective of this study is to provide quality educational materials for volunteer nurses, thereby improving the quality of health following emergency public health events worldwide.

Keywords: computer-based module; educational materials; emergency nursing; emergency preparedness; online learning

Prehosp Disast Med 2007;22(2):s26

(44) Challenges and Opportunities for Chemical, Biological, Radiological, Nuclear First Responder Training

M.P.W. van Berlo

TNO Defence, Security and Safety, Soesterberg, The Netherlands

The objectives of the European Union-funded research project Innovative Measures for Protection Against Chemical, Biological, Radiological, and Nuclear (CBRN) Terrorism (IMPACT) are: (1) to establish the foundation for an integrated European CBRN counter-terrorism research and acquisition program; and (2) to validate, assess, and demonstrate innovative technological capabilities, operational concepts, and procedures to assist in developing preventive and suppressive crisis management. Current European capabilities to detect and respond to CBRN threats are modest, and are spread among many organizations. This lack of coordination stresses the need to unify the current response capability and establish standards and guidelines for European nations.

Training is an important factor in this context. The objective of a training system is to ensure that units/people involved in the response to CBRN events acquire and maintain an adequate readiness levels to perform assigned mission(s) in accordance with doctrine/strategy. However, this is complex. Tasks must be performed in a variety of environments and scenarios, and several doctrines must be considered. The competencies vary from the individual level to the team and organizational level, from mono-disciplinary