

exercises focuses on the formulation of “aims”, “goals”, and “objectives” that can be measured. The instructors as students are urged to comply with set standards and to evaluate training sessions using these standards. The evaluation process is considered the most important component of the model. The value of relating results from training to the most critical performance indicator, patient outcome, is also emphasized. Patient outcome is defined as preventable death and preventable complication. A template for evaluating the instructor/students was developed and introduced stepwise including 13 different indicators.

Results are reported from 33 training sessions with more than 100 instructors as students (a session is defined as a small exercise developed and run by the instructor/students). The highest score was given to “evaluation” and “giving feedback” in relation to performance indicators; the most difficult component was making relevant and timely interventions in the simulation exercise.

This pedagogic model for training instructors could be useful in teaching instructors in disaster medicine. Weak points of instructors are demonstrated and can serve as a tool for improvement.

Keywords: disaster medicine; evaluation; instructors; pedagogic model; training

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Session 4: Standards in Emergency and Disaster Medicine

Chairs: Geert Seynaeve; Marvin L. Birnbaum;

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Design and Evaluation of an Educational Program on the Core Components of Emergency Preparedness and Disaster Health for Health Professionals

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Background: The Education Committee of the World Association for Disaster and Emergency Medicine (WADEM) recommends that all health professional graduates should be educated and trained on the core competencies of emergency preparedness and disaster health. This presentation will report on the design and evaluation of an educational program on emergency preparedness and disaster health for health professionals at the graduate level by one Australian university.

Methods: The WADEM Education Committee framework for “Disaster Health” was used as the template. A literature review of reports of educational programs in this field was performed. Within the constraints of the time available, an educational program was designed, implemented, and evaluated.

Results: A four-unit, Graduate Certificate was designed, reflecting the WADEM Framework for Disaster Health and the World Health Organization (WHO) structure for

“Health Action in Crises”. The first unit provides an introduction, the remaining units address preparedness, response, and recovery respectively. The implementation of the first unit required full-time attendance for one week and was available either as an intensive short course or as an assessed unit. University-required graduate attributes were incorporated, and pedagogical issues were considered. The students reported favorably on the first unit and suggested amendments for consideration in next year’s program.

Discussion: Graduate programs in Disaster Medicine are increasing in number, but without international standards to guide these developments. The WADEM template proved to be beneficial. The experience gained in this program may be useful for others designing similar programs for undergraduate, health professional students.

Keywords: disaster health; education; preparedness; training; World Association for Disaster and Emergency Medicine

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Designing Sustainable Hospital Preparedness Training: A Three-Phased Approach

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Healthcare systems are widely described throughout the literature as being under-prepared and under-equipped to handle a major disaster or public health emergency effectively. Many healthcare institutions fail to provide adequate training to staff in disaster-related emergency preparedness topics and hospital emergency plans.

Using numerous search engines and databases, we identified papers, policies and best-practices that described techniques, methodologies and strategies for training hospital workers in preparedness and emergency response functions. Additionally, over 30 hospitals in a major US metropolitan suburban area were surveyed on hospital-worker preparedness training and education.

Based on the needs assessed and the gaps described by hospital preparedness professionals and throughout the literature, a three-phased model for hospital worker preparedness training was created. The model is based on the need for long-term retention, short classroom time with an instructor, distributive and distance learning approaches, and a mechanism for practical skills demonstration and hands-on competency assessment.

The training model is comprised of three main phases or stages of learning:

1. Familiarization with the facility emergency plan;
2. Identification and recognition of an individual’s functional role and responsibilities during an incident;
3. Demonstration of skills competency when performing their assigned role during mock disaster drills and exercises.

Presenting preparedness education and training in a three phased approach allows staff to receive repeated exposure to the educational material over a longer period of time, build better skill and knowledge retention through separate, distinct learning activities, and create a function-

al- and institution-specific foundation of knowledge in emergency preparedness and response.

Keywords: education; emergency response; hospital; preparedness; training

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Importance of Disaster Medicine and the Significance of the Compendium

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During the past several years, disaster medicine has been increasing in importance due to the increased frequency and greater severity of disasters. The large number of casualties that have resulted is a global concern. Since the 11 September 2001 attacks on the United States, the establishment of systematic measuring and medical response systems has become an urgent need. However, there are many issues that must be resolved in the field of disaster medicine. In order to solve the various medical problems that occur during a disaster, it first is necessary to compile or systematize "disaster medicine. Over the last four years, the authors have compiled a 22-volume compendium of disaster medicine. This project almost has been completed and it deals with various viewpoints of disaster medicine as of the fiscal year 2005. The concept of the compendium and its details will be presented. Its use should be helpful for medical staff as well as for the general public or for education. Although most of it is written in Japanese, some of them have been translated into English.

Keywords: collection; compendium; disaster medicine; references; systematize

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Preparing Physicians for Military Expeditions by Using Adventure-Based Learning

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Physicians participating in military expeditions will increasingly be confronted with smaller and simpler medical facilities (such as field hospitals) in a variety of settings.

Interviews with several experienced military physicians and educators revealed that it is challenging to perform medical skills during current military expeditions. Physicians have to cope with extreme climates, with contradicting and incomplete information, and/ physical discomfort due to military transportation. This requires specific abilities and practice levels that cannot be acquired in regular, civilian hospitals.

Adventure-based learning (also known as experiential learning or action learning) may be useful in this context. A life adventure game is developed in which military physicians experience a military expedition. For approximately two hours they are at the mercy of the circumstances of the expedition. After about one hour they must

perform their medical skills, accompanied by various surprises and distractions.

This adventure-based learning is built around a Human Patient Simulator, including climate rooms with temperature extremes, and a transportation simulator. The effects on self-efficacy, perceived mental and physical effort and medical skills are assessed. A pilot study of this type of learning with six physicians indicates that the adventure scenario is realistic and helpful for competence development and maintenance. The results of the pilot will be presented during the conference.

Keywords: adventure-based learning; expeditions; game; military; physicians; training

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Cultural Diversity: A Challenge for Emergency Health

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Introduction: In this presentation, cultural diversity training in emergency health will be challenged. Common rationales for teaching cultural diversity include: (1) globalization; (2) migration; and (3) improved health outcomes. Such rationalizations in the non-emergency, time-rich, health environment are admirable, but are at odds with the time-poor emergency setting where speed is of the essence and cultural diversity is too easily placed in the too-hard basket.

Methods: In order to determine whether cultural diversity challenges emergency health, focus groups that included metropolitan and rural paramedics, community groups, emergency medical responders, and trainers of health professionals were conducted. A computer-assisted, qualitative research tool was used to code transcriptions.

Results: The results demonstrate how cultural factors can adversely impact emergency care in unexpected ways. A discrepancy between patients and emergency healthcare workers about what is an acute health event exists. Communication, language barriers, and the use of interpreters could undermine emergency health care, and paramedic attitudes and organizational culture could potentially impact patient care.

Discussion: In an emergency setting, cultural diversity challenges emergency health care, creating additional levels of complexity. Patients and emergency healthcare workers would benefit from further education in the differing perceptions of an acute health event. Cultural diversity stimulates the need for a higher level of communication models, and the effective use of interpreters, as well as raises the potential risk of attitudes and organizational culture impacting patient care.

Conclusion: Instead of placing cultural diversity in the too-hard basket, the challenge is to make it easier and to champion an effective model to achieve improved health outcomes in emergency health.

Keywords: cultural diversity; education; emergency care; health care; training

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