Health Incident Command: An Educational Program

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Introduction: In the UK, the command structure for a major incident is based on a medallion system within each emergency service, working together. At the incident site, the health response is managed by the ambulance service, with a Silver Ambulance Officer. The emergency planning guidance also recommends a Medical Incident Commander to work alongside and aid clinical decision-making. Currently, there are no defined competencies for this role and a three-day "short course", the Major Incident Medical Management and Support (MIMMS) program, is the only education available. There is a clear need for a formal program to ensure scene commanders, both ambulance and medical, are "fit for purpose".
Methods: A collaboration of the 14 UK ambulance services has worked to perform a training needs analysis, creating the basis for an educational program. Using national subject matter experts, with governmental financial support, a program is being written.
Results: Manchester Metropolitan University has accredited a tiered Masters program in Health Incident Command. The first class of students, consisting of ambulance officers and medical personnel, will enter the program in September 2009.

Through a blended distance learning program, these commanders will complete modules in command theory and practice at tactical and strategic levels, incident investigation, legal enquiry and personnel management, followed by a period original research to achieve full academic recognition.
Conclusions: There is now an academically accredited standard for Health Incident Command in the UK. The Department of Health has stated that this should be mandatory for the role within a short period.

Keywords: distance learning; education; Health Incident Command; Masters program; United Kingdom
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National Disaster Life Support Programs—A Model for Standardized, All-Hazards Disaster Medicine Training

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Introduction: The development of the [US] National Disaster Life Support (NDLS) programs (Advanced, Basic, and Core Disaster Life Support) began prior to 11 September 2001, but in its aftermath, the NDLS programs have become a leading all-hazards disaster medicine training program in the US. The NDLS programs are taught through a training center model. The curriculum is revised via the National Disaster Life Support Education Consortium (NDLSEC), a multi-disciplinary, multi-specialty consortium.
Methods: The National Disaster Life Support Foundation (NDLSF) is a not-for-profit organization developed by the academic medical centers and partners that developed the NDLS programs. The founding institutions are the Medical College of Georgia, the University of Georgia, the University of Texas Southwestern, the University of Texas-Houston, and the American Medical Association. The NDLSF has the responsibility to oversee, certify, and monitor a network of training centers. The NDLSEC consist of individual members and 75 representative stakeholder organizations.
Results: The training center network overseen by the NDLSF consists of 70 training centers in the US and 10 developing international training centers. The NDLSEC has >150 members with representatives from virtually every medical discipline and specialty. More than 70,000 individuals have been trained.
Conclusions: The NDLS programs have employed a training center network model to deploy standardized, all-hazards disaster educational programs. The NDLS programs have been successful in bridging the gap in disaster medicine education programs in the US and may represent a useful model for other countries to provide disaster medicine education.

Keywords: all-hazards approach; disaster medicine; education; National Disaster Life Support; standardization; training
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Grounded Development of a Ubiquitous Learning Environment for First Responders

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Introduction: In order to cope with the new challenges they face every day, first responders (e.g., police, firefighters, medical support troops) must become more flexible and self-directed in adopting the newest innovations on disaster management (e.g., network-centric operations). A ubiquitous learning environment could support learning anywhere and anytime, facilitated by a flexible mix of mobile technologies (e.g., personal digital assistants, game consoles) and interactive, adaptive didactical strategies. In this study, a grounded foundation is provided from which a ubiquitous learning environment can be designed.
Methods: First, a systematic meta-review on self-directed learning was performed to define the elements that stimulate self-directedness (PsycInfo, 1967–2007). Using these elements, ubiquitous learning environment scripts were developed and presented to first responders (n = 62) using a story in pictures, combined with questionnaires.
Results: Five elements were identified from the literature: (1) learner control; (2) self-regulating learning strategies; (3) reflection; (4) interaction with the social world; and (5) interaction with the physical world.

Next, four different ubiquitous learning environments were designed: (1) practicing at quiet moments during regular work; (2) enrichment of team exercises for individual learning; (3) last minute learning during a crisis; and (4) virtual reality simulating a crisis. Data analyses showed that the designs were considered supportive for preparation for

disaster management and can fit in the organizational structure and culture.

Conclusions: The educational, organizational, and technological characteristics from which a ubiquitous learning environment can be built were identified. It should support self-directed learning anywhere and anytime. The current state of affairs in developing and piloting a ubiquitous learning environment for first responders will be presented.

Keywords: development; education; first responder; training; ubiquitous learning environment
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Core Competencies for Emergency Preparedness Education for Health Professional Schools

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The possibility of natural disasters and public health emergencies coupled with the possibility of terrorism, supports the need to incorporate emergency preparedness and response material into the curricula for every health professional school. To date, the focus has been on the education of the existing healthcare workforce. Students' needs differ from those of practitioners in that there is a fundamental difference between educational and occupational competencies. It also is important to recognize that in order to assure proper preparedness, there must be a clear connection between public health departments and all other healthcare entities. To this end, public health students were included in the creation of competencies and it was shown that non-clinical practitioners can, and indeed must, be included in this process.

A list of emergency preparedness core competencies for healthcare professions and their applicability to medical, dental, nursing, and public health students was created. Although this set of competencies was designed using these disciplines, they may be adapted easily to other healthcare disciplines. The only variations would be in the assignment of proficiency levels and the decision of whether or not clinical competencies are appropriate. The core competencies have been divided into the following four categories that represent broad subject areas and the separation of the competencies related to direct patient care:

1. Emergency Management Principles;
2. Terrorism and Public Health Emergency Preparedness;
3. Public Health Surveillance and Response; and
4. Patient Care for Disasters, Terrorism and Public Heath Emergencies

Keywords: competency; education; preparedness; school; training
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Does Simulation Improve Skill and Coordination among the Trauma Team of an Emergency Department?

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Background: The "To Err is Human" report by Institute of Medicine is the basis for reducing medical error. Simulation as a teaching tool was studied to determine whether it improves skill and coordination among the trauma team of an emergency department.

Methods: This was an observational study. The group consisted of one surgical senior resident, one medical senior resident, one orthopedics senior resident, two junior nurses, and two hospital attendants. Emergency department protocol for triage and initial resuscitation were given one day prior to the day of simulation. A basic manikin was prepared specifically for the trauma scenario. A nurse narrated the trauma scenario. The entire episode was video-recorded using a digital camera. The scenario observers evaluated, on-site and during a video debriefing, based on skill assessment, decision making, and coordination of the trauma team using a Likert scale of 1 to 5. The Likert scale was defined as 1: poor, 2: satisfactory, 3: good, 4: very good, and 5: excellent. Ethical clearance was obtained.

Results: Three simulations were conducted during seven months. There were 21 total participants; 39 were observers-cum-evaluators. The skill assessment rating as a group was 3, decision making was 2, and coordination was 1 in the first simulation. The overall average rating was 3 at the end of third simulation.

Conclusions: Simulation does improve the skill and coordination among a trauma team.

Keywords: competency; education; emergency department; simulation; training; trauma team
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Evaluating Interprofessional Education in Disaster Management

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Introduction: A recent national assessment of emergency planning in Canada suggests that healthcare professionals are not properly prepared for disasters. In response to this gap, an interprofessional course in disaster management was developed, implemented, and evaluated in Toronto from 2007 to 2008. Undergraduate students in nursing, medicine, paramedicine, police, media, and health administration programs from Centennial College, the Michener Institute for Applied Health Sciences, George Brown College, Ryerson University, and the University of Toronto, took the eight-week online course. Curriculum developers set interprofessional competency as a major course outcome right from the start, and this concept guided content and activity development. The course was highly interactive and included video, a discussion forum, an online board game, and the opportunity to participate in a mock disaster simulation with professional staff.

Methods: A research study, funded by Health Canada, was conducted using quantitative and qualitative methods to examine the impact of the course on students' disaster management competencies and interprofessional attitudes.

Results: Results indicate that the online course and simulation exercise provided an excellent opportunity for undergraduate students to learn and practice inter-professional collaboration, develop disaster management skills, and develop empathy for victims.

Conclusions: Results underscore the necessity of extensive inter-institutional collaboration regarding simulation plan-