

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 Health 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-