

master's degree in EMS management/education/research or disaster management/medicine, and a doctorate in disaster management/medicine.

The purpose of the study was to identify whether a need exists for these proposed educational programs and what course content should be included.

Method: A questionnaire was sent to all ambulance services licensed at the paramedic level and to Wisconsin-approved paramedic training centers. Questions included current academic degrees, age, years in EMS, job title, training, degree interests, personal and organizational benefits, barriers, and existing/new skills. Data were analyzed using descriptive statistics and correlations.

Results: The questionnaire was completed by 288 respondents, a 42% return rate. One hundred seventy-three responses expressed interest in an undergraduate (bachelor's) degree with a major in EMS, 116 in a graduate (master's) degree in EMS, 82 in a master's in disaster management, and 56 in pursuing a doctorate. The principal reasons cited for pursuing higher education were self-satisfaction and promotion. The major barrier was available time. Desired course content included computer-based learning, communication, and EMS management.

Conclusions: There is a need and a desire for higher-level education in EMS and disaster management. Due to limited resources, multiple universities should develop collaborative programs; and distance learning courses should be considered.

Keywords: education; emergency medical service; EMS; EMS degree programs; paramedic; Wisconsin
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Medical Awareness and Response to Incidents at Major Hazard Facilities

Andrew Pearce, BSc (Hons), BMBS, FACEM;¹ David G.E. Caldicott, BSc (Hons), MBBS (London);² Nicholas A. Edwards, MBBS, FRACP, FFICANZCA;³ Tony Eliseo⁴

1. Staff Specialist, Emergency Department and Trauma Service, Royal Adelaide Hospital
2. Registrar, Emergency Department, Royal Adelaide Hospital
3. Staff Specialist, Intensive Care Unit, Royal Adelaide Hospital
4. Staff Specialist, Emergency Department, Flinders Medical Centre, Adelaide, South Australia, Australia

Introduction: Major Hazard Facility (MHF) is a term applied to a facility in which dangerous substances are stored or manufactured, and which is of a size such that an incident occurring at it may have serious consequences for the community. By definition, incidents at MHFs have the capacity to significantly impact upon health facilities. Recent mass casualty incidents around the world have forced greater emphasis on major incident and disaster planning and response. However, there still appear to be significant deficiencies in interagency communication and coordination. It was hypothesized that medical facilities in South Australia (SA) were largely unaware of MHF sites or contents, and were unprepared to deal with major incidents involving them.

Methods: There are 12 listed MHFs in SA. Directors of the Emergency Departments (ED) of all tertiary, referral medical centers in this state were interviewed using a structured

questionnaire.

Results: All of the EDs were unaware of Major Hazard Facilities in their region, did not have major incident plans specific to these facilities, and appeared unprepared to deal with major incidents at these sites.

Conclusions: On the basis of this finding, in order to improve planning for such incidents, a multi-agency research collaborative, the Mass Casualty and Terrorist Incident Collaboration (MACTI) was formed. Its functions include the facilitation of inter-agency communication and dissemination of information.

Keywords: Australia; awareness; collaboration; communications; emergency department; inter-agency; event; hazard; Major Hazard Facility (MHF); planning; plans; response; risk; substances, dangerous
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E-mail: andrew.pearce@adelaide.edu.au

Hazmat Medical Life Support Program, Ministry of Health, Singapore

M.K.F. Leong; R. Ponampalam; F.C.Y. Lee; S.H. Goh

Singapore is a leading petrochemical production, storage, and trading hub in the region. There exists a potential for a technological event involving a wide variety of industrial chemicals. The 1995 Tokyo subway sarin gas attack and the recent reports of terrorist activity in Singapore served to remind us that hazardous chemicals in our midst can have devastating effects on the civilian population.

The Hazmat Medical Life Support Program, conceived in 1999, is a Ministry of Health-funded program that aims to provide education and training for medical, nursing, and paramedical staff who may be called upon to respond to and deal with a hazmat incident and casualties. The program administers four courses: (1) Basic Provider; (2) Hospital Provider; (3) Hospital Decontamination; and (4) Hazmat Medical Operations.

As hazmat incidents that result in mass casualties are relatively infrequent events, course formats and materials have been designed to provide a rational, practical, and easy-to-recall algorithm for the novice responder. Concepts, rather than systematic coverage of all available chemicals, provide a mental and practical framework for the emergency medical worker to respond to an incident, as well as to provide life support to hazmat casualties. An example of a fundamental concept is the chain of survival of a hazmat casualty: early recognition and activation of hazmat plan, administration of antidotes, decontamination, and hazmat medical life support. Issues pertaining to the triage, evaluation, and treatment of casualties in a potentially hazardous environment are covered with the teaching of a modified primary survey. The program also emphasizes standardization of instruction, assessment of competencies, and certification, and is an important tool for employers deciding on the appropriate use of their staff during a hazmat incident.

Keywords: casualties; chemical; courses; education; hazardous materials; Hazmat Medical Life Support Course; industry; plan; primary survey; training
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