

Results: Three medical teams and search-and-rescue teams rescued three survivors whose bodies were trapped in the tangled wreckage of the first car. The medical teams secured intravenous lines and provided oxygen and approximately 4L of fluid before extrication. A 46-year-old woman was extricated in 14 hours, a 19-year-old man in 16.5 hours, and an 18-year-old man 22 hours after the crash. All three worsened at the final moment of extrication. Their crush syndrome required resuscitation at the scene, and intensive care such as hemodialysis and limb amputation in hospitals. Two patients survived and one patient died on the fifth day due to multiple organ dysfunctions.

Now, the curriculum of the JDMAT training course includes lectures and introductory exercises with rescue teams to learn the importance and difficulties of confined space medicine at the scene.

Conclusions: Confined space medicine was provided successfully after the train crash. Knowledge of confined-space medicine is essential to medical and rescue teams. Further education and training curriculum must be created.

Keywords: confined space medicine; disaster; education; Japan; search-and-rescue; train crash; training

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(M23) Survey of Student Attitudes Toward and Knowledge of Emergency Preparedness

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Introduction: The possibility of natural disasters and public health emergencies, coupled with the possibility of terrorism, support the need to incorporate emergency preparedness into the curricula for every health professional school.

Methods: A survey methodology was employed to assess attitudes toward and knowledge of emergency preparedness among health profession students including schools of medicine, nursing, dentistry, and public health. The survey was targeted to graduating students, administered prior to the institution of an emergency preparedness curriculum, and then repeated as an annual survey.

Results: The survey found that 51.8% had been present at a disaster site as non-responders, while only 12.1% ever had been present as a responder. With regard to baseline classroom exposure, >50% reported no exposure to such key concepts as incident command, triage, all-hazards planning, surge, and aspects of terrorism. In addition, at the baseline, most students felt they had no competency in emergency preparedness. For example, only 10% of students felt competent with personal protective equipment. While exposure both as a responder and student was low, 82.5% of students felt that emergency preparedness should be a mandatory topic in their education. Lastly, with a minimal curriculum change students showed statistically significant increases on knowledge testing.

Conclusions: While exposure was low for emergency preparedness topics and most did not recognize how information they had been taught might be applicable to emergency preparedness, there was a strong desire for additional train-

ing. In addition, simple curricular adjustments can lead to significant improvements in knowledge.

Keywords: attitude; competencies; education; emergency preparedness; students; training

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(M24) Breadth of Emergency Medicine Training in Pakistan

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Introduction: Traditionally, emergency care in Pakistan has not been a priority because of lacking primary care. Resources and trained personnel are scarce. Cultural barriers often supersede the urgency of medical conditions. Despite these challenges, the value of emergency care is gaining significance. The objective of this study is to explore the breadth of emergency medicine training in Pakistan, through an analysis of a teaching hospital with an emergency medicine residency. Aga Khan University Hospital in Karachi is a teaching institution with the only emergency medicine residency program in the region. It was started in 2000, led by US-trained physicians, and laid the foundation for emergency medicine in the country.

Methods: A review and analysis of the curriculum and clinical duties will be conducted to illustrate the specific roles and training of emergency medicine physicians. A chart review of patients seen in the emergency department during a two-week period will be conducted to determine if the current training is appropriate for the patient population and diseases seen.

Results: This study will provide a view of a curriculum in development and report on unique aspects of the program in relation to other established emergency medicine programs throughout the world. Furthermore, different roles emergency medicine physicians may play in this particular hospital setting will be identified.

Conclusions: Aga Khan University Hospital is a pioneer in establishing emergency medicine as an official discipline in the region. Through an examination of how a program is developing in Pakistan, an invaluable look of how emergency medical care is gaining significance in developing nations will be provided. This will help other nations that are interested in developing such programs to do so.

Keywords: curriculum; education; emergency medicine; hospital; Pakistan; training

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(M25) Cultural Competency Education: A Challenge for the Humanitarian Workforce

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Introduction: "Cultural Competency" is an increasingly important skill required by the humanitarian workforce. Reviews and evaluations of recent major international events criticize the lack of cultural competency skills among foreign

aid workers. This paper reviews two frameworks in the international literature to propose a model for cultural competency education in the humanitarian workforce.

Methods: The framework for disaster health, developed by the World Association for Disaster and Emergency Medicine (WADEM) Education Committee, and the Australian National Health and Medical Research Council's (NHMCR) "Cultural Competency in Health: A Guide for Policy, Partnership and Preparation" (2006) were used as frameworks for this review. A meta-review of the literature was conducted to identify cultural considerations in disaster management.

Results: A definition of cultural competence was adopted from a range of theoretical models. Both the WADEM model, which includes the "Socio political, cultural context", and the NHMRC model, which describes four dimensions for actions (systemic, organizational, professional, and the individual), identify key principles. Using these principles informed by the literature review, a model is proposed to foster culturally competent behavior incorporating all four dimensions.

Conclusions: The model argues that "everyone" is responsible for culturally appropriate and responsive management. This review makes explicit the importance of cultural competency skills in the humanitarian workforce and provides a model, underpinned by contemporary frameworks, to address this challenge.

Keywords: cultural competency; disaster health; disasters; education; humanitarian workforce; training
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(M26) Model for Emergency Preparedness and Disaster Health

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Introduction: The conceptual framework for disaster medicine is weak and unstructured. There is a need to reinforce disaster medicine education and research with appropriate conceptual models. This paper outlines the development and structure of one such model—a "work-in-progress".

Methods: A literature review of contemporary education programs in disaster medicine was performed and used to enhance the outcomes of the evolving framework of the World Association for Disaster and Emergency Medicine (WADEM) Education Committee.

Results: The literature review identified some consistent themes representing "new" thinking on conceptualizing the field of disaster medicine.

Four domains were constructed to develop a new framework for conceptualizing disaster medicine, namely: an expanded disaster health framework developed by the WADEM Education committee, which includes the primary disciplines of public health (the collective), emergency and risk management (the organizational), the clinical and psychosocial (the individual), secondary disciplines, the community, and, the socio-political-cultural context; a contemporary view of the disaster cycle; the disaster epidemi-

ology of the region; and the generic personal attributes expected of the humanitarian professional.

The consequent model demonstrates the relationships between these domains.

Conclusions: As a "work-in-progress", this model has been used to successfully guide the development of undergraduate and graduate programs in emergency preparedness and disaster health. The model provides a framework for common communication and subsequent modification in the light of further research and discussion.

Keywords: disaster medicine; education; framework; research
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Oral Presentations—Coordination and Clusters

Formation of the World Association for Disaster and Emergency Medicine Oceania Chapter: Process, Lessons Learned, and the Future

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Introduction: The World Association for Disaster and Emergency Medicine (WADEM) Oceania Regional Chapter is the first WADEM Chapter to be formed. This paper describes the journey experienced in the formation of this Chapter.

Methods: This is a descriptive, historical review.

Results: The Chapter had its origins in WADEM's 13th World Congress in Melbourne (2003). In Edinburgh (2005), the WADEM General Assembly approved the establishment of Chapters to promote both the discipline and WADEM activities. WADEM Vice President, Professor Frederick (Skip) Burkle Jr, led the development of guidelines for establishing WADEM Chapters, which were considered by the WADEM Board in Amsterdam (2007) and subsequently approved by the WADEM Officers in August 2007.

Three "Chapter co-sponsors", later expanded to a steering group of five to include members from Australia, New Zealand, and the Pacific Island Nations, led the process. Three constituting meetings were conducted by teleconference, the general geography of the Oceania region defined, and draft Chapter Charter and Chapter bylaws were distributed for input from WADEM members in the region. The Chapter was launched in November 2008.

Nominations for the inaugural Chapter Council have been called in advance of an election to be finalized in February 2009. The first Chapter Council will meet before the WADEM World Congress in Victoria, Canada (May, 2009). The Council has a list of activities proposed in the constituting meetings, upon which to base an initial strategy plan for the young Chapter.

The WADEM Chapter guidelines have been most useful and the concept of Chapter co-sponsors has proved essential. Enthusiasm in the region has been promoted by the formation of the Chapter and membership in WADEM increased.