

Reports and Session Summaries of the 19th World Congress on Disaster and Emergency Medicine

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Editor's Introductory Note

This section of *Prehospital and Disaster Medicine (PDM)* presents reports and summaries of the 19th World Congress on Disaster and Emergency Medicine (WCDEM) held in Cape Town, South Africa in April of 2015. Abstracts of Congress oral and poster presentations were published in April 2015 as a supplement to *PDM (Volume 30, Supplement 1)*.

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Linking Competency with Training Needs: Session Summary on Disaster Studies and Evaluation, Session BO-17

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Abbreviations:

ATLS: Advanced Trauma Life Support
ICN: International Council of Nurses
ONSD: optic nerve sheath diameter
PHTLS: Prehospital Trauma Life Support

Introduction

This report summarizes findings from the nine papers presented at the World Congress on Disaster and Emergency Medicine (Session: BO-17).

Issues Raised

The main issues discussed in the session could be divided broadly into four themes: studies on (1) competency; (2) competence; (3) other factors relating to competence/competency; and (4) educational program evaluation.

Theme 1: Competency—Competency is a knowledge, skill, or attitude that enables the person to perform up to a required standard.¹ In this session, three studies examined the concept of competency. One study conducted an integrative review on the use of the term on disaster preparedness in global settings,² whereas the other two adopted the International Council of Nurses (ICN; Geneva, Switzerland) framework of disaster nursing competencies³ to examine nurses' educational needs in disaster relief training⁴ and to identify hospital nurses' competencies in disaster situations.⁵

Theme 2: Competence—As competence is the state of being competent or adequately qualified with the acquisition of a set of competencies,¹ two studies focused on how competent health care workers are in educational and clinical settings: one analyzed the ability of the Prehospital Trauma Life Support (PHTLS) and Advanced Trauma Life Support (ATLS) providers to use the mnemonic "ABCDE" to perform triage in a simulated mass-casualty incident,⁶ while the other study compared the precision and accuracy of sonographic optic nerve sheath diameter (ONSD) measurements among ultrasound fellowship-trained and resident emergency medicine physicians by means of inter-rater reliability in an emergency department.⁷

Theme 3: Other Factors Relating to Competence/Competency—The scope of discussion on competence or competency was extended to two other factors. The development of a training program targeting inter-cultural competency for civil protection providers⁸ was presented, while another study examined nurses' perception of the disaster environment on their responses.⁹

Theme 4: Educational Program Evaluation—Two educational programs with different training modes (a 6-month online course in disaster and medical humanitarian response,¹⁰ and a five half-day community first-aid training program¹¹) were evaluated.

Principal Findings

Theme 1: Competency—No global consensus was achieved for defining competency pertaining to disasters, and the use of non-standardized definitions and competencies in disaster research was common.² A similar conclusion was drawn from a recent systematic review¹² of more than a thousand references: there is no agreement for defining core competencies in disaster management and humanitarian assistance. With reference to the ICN disaster competency framework, Taiwanese nurses considered themselves competent in disaster nursing,⁴ whereas Brazilian nurses mapped out 17 competencies that are required specifically in disaster situations.⁵

Theme 2: Competence—Using mnemonics as an educational tool to enhance competence among PHLTS and ATLS providers in a simulated environment, no statistical significance during pre-test and post-test assessment was noted.⁶ Physicians trained in ultrasound fellowship were found to be more precise than the resident emergency medicine colleagues in measuring sonographic ONSD with resident emergency medicine physicians lacking both precision and accuracy.⁷

Theme 3: Other Factors Relating to Competence/Competency—Preliminary qualitative results indicated that nurses with prior disaster deployment experience are not prepared for the austere environmental conditions of disasters, which may have altered their performance in that setting.⁹ Environmental stress also was observed with abrupt transitions of environment.⁹ With regards to cultural aspect, a pilot modular cultural competence training program, including intercultural stress in emergency responses,

illustrated that the training provided was acceptable to migrant participants who were affected previously by emergencies.⁸ Qualitative data indicated that more specific, practical applications should be included.⁸

Theme 4: Educational Program Evaluation—Positive preliminary results were found in the pilot community first-aid educational program.¹¹ Hands-on first-aid skills including Basic Life Support and fracture stabilization were included, and the interest in acquiring these first-aid skills was high.¹¹ The completion rate for the online disaster and medical humanitarian response training course among the first cohort of 1,075 participants was approximately 20% with more than 80% of the course participants indicating fulfillment of their learning expectations.¹⁰

Implications for Best Practices

Broader Sense of Competency—Despite the lack of a universally agreed upon definition of competency in disasters,² cultural⁸ and environmental⁹ perspectives are important aspects to consider in the consensus of the definition, and subsequent development of educational and training programs, especially in terms of cultural competence⁸ and environmental stress among nurses.⁹

Disaster Competency-based Training—Since adequately qualified and competent health care workers are essential in disaster and emergency responses, tailored design of training curriculum⁶ and specialized training programs⁷ may be useful in building relevant competencies. In addition, future disaster-related education and training needs to be competency-based and targeted on understanding the relationship between the cultural and environmental factors and the corresponding core competencies.¹³

Mode of Training—As for educational and training program evaluation, a community program on first aid for high-school and college-level citizens,¹¹ as well as an online educational program on disaster and medical humanitarian responses,¹⁰ were feasible, financially viable, and have demonstrated potential for further development. Disaster education and training can no longer be confined to classroom settings. However, longer-term and in-depth research is required, as most of the positive findings presented in this session were pilot^{4,8,9,11} studies or with relatively smaller sample sizes.

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