Competency and Competence

Marvin L. Birnbaum, MD, PhD;[1] Elaine K. Daily, RN, BS, FAHA, FCCM[2]

He was capable of imagining all, of arranging all and of doing everything.

Voltaire,
Works, Precis de Siecle de Louis XV

They can because they think they can.

Vergil,
Aeneid, Bk, v, 1. 231

Substantial discussions continue regarding the issues of competence and credentialing in Disaster Health. The discussions center on how one becomes competent in the practice of Disaster Health and who determines whether or not a person is competent. If one becomes "competent" to practice as a disaster responder, manager, and/or planner, how is such competence professed?

Competence is defined as the state or quality of being adequately or well qualified;[1] the state of being competent.[2] For a person to be *competent*, s/he must be adequately qualified or capable; effective;[2] properly or sufficiently qualified; capable; adequate for the purpose.[3] *Competence* is based on the acquisition of a set of competencies. A *competency* is a knowledge, skill, or attitude that enables one to effectively perform the activities of a given occupation or function to the expected standards of an occupation (www.roi-learning.com/guides/terms.htm). Competencies are based on an accepted standard or are used to define a standard. A standard usually is achieved by acquiring a set of competencies.

Education and training are the methods by which competencies are acquired. In order to successfully complete an educational or training program, certain competencies are tested by an examination (written or oral), by observations by experts, or by a combination of these forms of assessments.

For most of us, achieving competence in any skill begins at a very early age when we begin to meet certain developmental standards. Walking and talking are examples of competencies, and the standards are that one should be able to walk and talk. This process of achieving standards through the attainment of competencies continues throughout life. We develop competency after competency in order to meet the standards that are set by others or by a society.

This process extends into our professional lives. After becoming competent in the knowledge and skills that are compatible with the society in which we live, we move on to develop specific competencies to meet the standards for employment or proceed to higher education. The acquisition of these requisite competencies is tested at every step of the journey. Much of our learning is directed at the achievement of competencies.

Similarly, the health professions, regardless of the discipline, require evidence of the attainment of certain competencies and knowledge in order for an individual to practice in his/her profession. This is true whether the standards are established by the American College of Surgeons, the Royal College of Surgeons, or the Society for Critical Care Medicine (physicians, nurses, respiratory therapists, pharmacists, etc.). If one meets the professed standards of these professional organizations by demonstrating the knowledge, the ability to apply this knowledge, and the essential skills, these august bodies certify an individual's competence and provide the appropriate credentials that allow that person to apply such knowledge and skills to the care of patients.

The difficulty in applying this same process to the discipline of Disaster Health is related to the broad scope of Disaster Health. Disaster Health is truly multidisciplinary and is dependent and interdependent not only on/with other branches of health care, but with other functional systems within the society of which Disaster Health is a part. It is unlike most other disciplines in the health profession. For example, surgeons have established their own respective practice standards and competencies specific to their specialty; critical care nurses have their specific practice standards and competencies; forensic pathologists have their specific standards; Masters of Public Health workers have theirs, and so on. Given the variety and levels of professionals involved in Disaster Health, how do we establish standards and their respective competencies for the practice of Disaster Health?

Many organizations have promulgated competencies for Disaster Health and several models are evolving. The groundbreaking work of Dr. Kristine Gebbie *et al* in identifying individual competencies for several practice levels of public health workers was seminal in assuring that public health performance standards were met.[4] This work, subsequently, has formed the basis of work done by and for other healthcare practitioners. Ed Hsu and his colleagues from Johns Hopkins Department of Emergency Medicine identified seven, cross-cutting competencies for the disaster training of hospital healthcare workers with comprehensive terminal objectives for the testing of each competency.[5] The most important concept advanced by the work of this group is that these core performance competencies in Disaster Health are the same for all responders, regardless of their profession. They suggest that these competencies are universal and that all hospital healthcare professionals should possess the same set of competencies. Another set of Disaster and Public Health competencies has been generated by a group of experts in association with the American Medical Association and several of the apparent stakeholder organizations.[6] This group identified seven competency "domains" with core compe-

tencies within each domain. Importantly, this group defined a set of core competencies specific to each of three levels of disaster participation: (1) the informed workers/students; (2) the practitioners; and (3) the leaders. Similar to the work by Hsu *et al*, they did not distinguish between the specific professions from which these personnel originated. The proposed competencies increase in depth of knowledge and skills as one progresses from level 1 (informed workers/students) to level 3 (leaders). The core competencies defined for each of the domains could be assessed readily. Based on this model, it is anticipated that regardless of his/her background or discipline, any health professional could be educated and trained to develop these competencies for at least one of the levels of function, and that their respective competence could be assessed and, potentially, even certified. This could lead to the credentialing of disaster personnel to be competent to perform at one or more of the three specified levels.

The concept that persons, even non-healthcare persons, can be trained to function for specific tasks is reinforced by three of the articles published in PDM. Heng *et al* found that non-doctors can be educated and trained to provide appropriate surgery on victims with trauma-induced injuries.[7] Ireland *et al* demonstrated the development of competence in the application of extrication cervical collars by first responders,[8] and Sztajnkrycer demonstrated that it is possible to train law-enforcement personnel to perform a needle thoracostomy when indicated.[9] Dr. Knut Ole Sundnes, the past President of the WADEM, currently is involved in a project in Afghanistan to train non-physicians to deliver anesthesia in a setting in which anesthetists/anesthesiologists are needed, but are not available.[7]

Given that appropriate education and training are possible, the numbers and capabilities of persons that can respond in times of disaster could be expanded. However, what are not clear from the literature expounding certain competencies, are the specific practice standards these competencies address. Unfortunately, addressing only the competencies required for professional performance, the standards to which they apply get overlooked.

In an effort to increase the disaster response workforce, some influential organizations have pushed for the development of courses of instruction in Disaster Health without defining either the standards or competencies upon which to develop such courses. Others are attempting to develop credentialing based on opinion or experience, rather than on defined standards. However, it is shortsighted and superficial to continue to develop courses of instruction in Disaster Health without knowing the practice standards that the course is addressing. The suggestions that there be three levels of competence as part of Disaster Health have not been substantiated, nor have any of the proposed competencies been validated. For those who profess to offer educational courses in Disaster Health, it is essential that they document the practice standards and performance competencies to which they are educating and training. Without these, we will create a hodge-podge of professionals who will believe that they are qualified to operate within disaster-stricken areas.

In lieu of evidence-based standards of practice in the relatively young discipline of Disaster Health, which encompasses multiple professions and levels of involvement, education and training may need to be based on clearly defined, expected competencies. Assessing the practices and outcomes of exemplar professionals in a certain area may identify some performance competencies. What is essential, however, is that there be consensus regarding these competencies and that these competencies undergo a validation process. In an attempt to begin a consensus process, the Nursing Section of the WADEM has initiated a review and analysis of all published competencies in Disaster Health.

Lacking the evidence to support performance standards, specific competencies are used to educate and train professionals in Disaster Health. Such competencies may lead to the development of standards. And, while cultural issues may impact competencies and be context specific, the standards must be context free and uniform worldwide.

Importantly each competency must be able to be objectively tested; this, in turn, will lead to the credentialing of one as being competent. Only those with external testament to their competence to perform at a specific level, at a specific time, in a specific setting, should be allowed to provide assistance in a disaster area. The practices of medicine, nursing, psychology, etc. are certified by professional certifying bodies worldwide; the same should apply to the practice of disaster health. After all, we are pledged to do no harm.

The heart to conceive, the understanding to direct, or the hand to execute.

Junius,
Letters, Letter 37, 19 March 1770

As we advance in life, we learn the limits of our abilities.

JA Froude,
Short Studies: Education

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[1]Editor-in-Chief, *Prehospital and Disaster Medicine*
[2]President, Nursing Section, World Association for Disaster and Emergency Medicine