

Core Competencies in Global Emergency Management: The Role of the Nurse in Community Emergency Preparedness and Response

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Abstract

One of the greatest challenges in building capacity for disaster preparedness is not the rising number, complexity or sources of our disasters. Rather, it deals with the perception and execution of training professionals in community preparedness. A vital component of the myriad of professions involved in global emergency management is the nurse and his/her role in communities. Efforts to have community members prepare themselves and their families have been less than successful, especially in the US. Besides serving in the traditional medical environment, nurses serve a pivotal role in helping prepare communities and loved ones for times of crisis and confusion and being leaders when other systems fail. It is important that the role of the nurse in communities be included as an integral part of core competencies for the nursing profession in the US and countries around the world.

The International Council of Nurses (ICN) represents more than 130 nations and national nurse associations. Of their 10 global disaster management competencies for nurses, three relate specifically to care of the community, care of individuals and families, and care of vulnerable populations. Expectations range far beyond the hospital and professional medicine environment. During and following disaster, resilience means that communities must have plans and enlist residents with emergency management and professional skills. Not only are nurses expected to expand skill sets and test them in exercises, but they have an obligation to take responsibility for the safety and well-being of families and their communities.

This work explores the expanding understanding of community preparedness and the importance of educating and training nurses in core competencies of emergency management. These are foundational competencies needed all those who will be called on as leaders in their communities in times of disaster. Basic components of this aspect of training are examined internationally, as well as proposed strategies for their application in the communities where nurses live and work.

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History and role of nurses in disaster

The nurse continues to play a crucial role in disaster preparedness, response, and recovery the world over in the health care continuum. The nurse is not only the symbol of caring in our hospitals, clinics, long term care communities, and for all of us with serious medical problems, but it is posited that he or she must play a community role before and during disasters. Dinc and Gastmans (2013) reviewed 34 articles, international in scope, and examined the trust relationship between nurse and patient. They found that patients have a generalized trust of the nurse as a professional. Hall and Navar (2014) studied the more common bond of trust that developed between pediatric patient and nurse after traumatic accident or disaster. The first steps relied on the “awarded trust” given to the nurse because of his/her profession. As reported by the Wisconsin Nurses Association (2012) and the 2013 poll (<http://www.nursingworld.org/FunctionalMenuCategories/MediaResources/PressReleases/Nurses-Most-Ethical-Profession.pdf>), for 14 of 15 years the trust question has been asked, nurses have been the “most trusted” profession second only in 2011 when firefighters were more highly ranked after the 2011 terrorist attacks. It is incredibly comforting when someone is injured to have a nurse present to direct activities and determine what must immediately be accomplished. This level of trust results in the nurse being deemed the “incident commander” in many disaster situations until someone else with more experience arrives (Knebel, Ann R.; Toomey, Lauren; Libby, Mark, 2012).

This perception and the oath taken by nurses in the US place a responsibility not only on the nurses, but on those who educate them in pursuit of their degrees and chosen profession. It is our task to better educate them on how their role will change in times of disaster and in environments outside of the hospital and medical care community. This is especially important in vulnerable populations due to the lack of general medical care and their high risk should a disaster occur.

Around the globe today, nations and especially their vulnerable populations endure hardship and attempt recovery from an increasing number of severe natural and man-made disasters (Kahn, 2005; Block, 2008; Independent Evaluation Group, 2010). It is suggested by the Intergovernmental Panel on Climate Change (Scheffran and Battaglini, 2011) and others that both intensity and frequency of severe weather events and associated disasters will continue to increase worldwide. It is axiomatic that as more toxic, poisonous, and radioactive materials are in motion using various transportation systems, the risk of accidental or man-made spills increases as well. In the United States, one only needs to watch placards on train cars to see the wide range of hazards passing around and through our major urban areas at any point in time. This would also be true of our trucking system and water transportation as materials move back and forth through inter-modal hubs. The topic of community preparedness and resiliency in this world of risk has become a focal point for discussion, conferences, international collaboration, and research

Importance of nurses in community preparation and resilience of communities

Hazards from an increasingly unstable environment and man-made materials are ever-present. Man-made substances pose complex types of hazards (Chemical, Biological, Radiologic, Nuclear, and Explosive - CBRNE) that make our community preparedness and response plans equally complex. Although government, some non-profit agencies and large corporations have made great strides in preparation, the general population, especially in the United States, has not done enough to prepare itself. Despite billions of dollars spent in disaster readiness and response capacity, Jones (2013) stated that “virtually every poll and survey shows that the US public remains woefully unprepared.” Our belief that it is government’s job to protect us, and that responsibility for our safety and protection lies somewhere outside of our realm of control, is a dangerous and potentially lethal supposition. Even community-based planning is viewed from the role of how hospital-based nurses interact with patients, not through their role in the community. This paper focuses on the importance of community preparedness and how nurses must play a vital role in this arena outside of the medical environment.

Another aspect of communities to remember, especially in more remote areas and in other countries, is the wealth of indigenous knowledge that exists within the community and its residents (Hagen. 2011). Nurses from those communities will have both the ability and trust to help residents and their governments take advantage of that knowledge in planning and preparation. They will also be in a position to make sure that more modern governmental structures and plans do not fail to be aware of, and recognize, the importance of that embedded knowledge. Much work has been done to document and expand the awareness of this deep source of information (International Strategy for Disaster Reduction, 2008). One important resource for collection of this Transferable Indigenous Knowledge is the Disaster Reduction Hyperbase (<http://drh.edm.bosai.go.jp>). However, collecting, categorizing, and disseminating this information is a daunting task. Sithhole (2007) explored the difficulties in documenting and preserving this information in African libraries and information centers. Much of the knowledge is both deeply embedded into community structure as well as being oral based only.

International nurse education on community involvement during disasters

Examining the literature to find types of international education on the role of nurses in disaster outside of the hospital environment can be disappointing. A general look at international experiences in nursing education focuses on examining diverse patient populations, viewing differing medical problems in other countries, and experiencing other healthcare systems. Most literature that does examine disaster education and training (Kulbok, Mitchell, Glick, and Greiner, 2012) focuses on disaster nursing in the medical/hospital environment. In other words, it looks at enhancing the medical skills and competencies but does not directly address the role that nurses play before and after disasters in the communities themselves. It is leadership and direct community involvement that will make the most difference in our ability to effectively respond and recover from disaster.

In recent years, and in the emergency management community, there has been an increasing interest in better understanding the important roles nurses may play in the greater community before and during disasters. The areas in which they possess invaluable knowledge and ability (Luo et al., 2013; Li and Robinson, 2009; Rowney and Barton, 2005; Lichterman, 2000, Jakeway et al, 2008) include:

- familiarity of the local area in terms of residents, businesses and other resources
- connection to the community as a place where they and loved ones live
- having knowledge of areas in which training and education is most needed
- help in designing and performing exercises, and in
- organizing the community in preparedness awareness and knowledge

There has been important work in China to examine these additional roles and how nurses can best be trained to assume them (Luo et al., 2013, Luo et al., 2010). In his 2000 paper on the role of the community in disaster, Lichterman contended that communities need to take a proactive role in being a resource rather than a liability when disaster strikes. As the “built environment” becomes more extensive, expensive, complicated and dense, there is a great deal to destroy within relatively small areas. He described how the human resources part of soft mitigation is an important area that communities might focus on. This is in contrast to hard mitigation where hard physical resources are strengthened. A vital element of this effort is the citizen disaster preparedness programs, especially the Certified Emergency Response Training (CERT) Program and other similar community training programs. It is surprising that the untapped resource of nurses within the community (current or former, active or retired) were not specifically called out as individuals to seek out for their efforts.

As in the United States, China has viewed the nurse as a hospital resource to be trained for work in disaster medicine (Liu and Robinson, 2009). However, recently there has been an effort to more clearly define what competencies nurses might possess or be trained for within the communities. There needed to be a more clear understanding of what needed to be done to better utilize their wide range of talents and abilities (Liu et al, 2010).

Another effort to take advantage of nursing skills within the community, although again related to clinical skills more than other competencies, has been the Medical Reserve Corps (MRC). This effort began in 2002 and was meant to reinforce public health activities in communities. It is a national effort out of the Surgeon General’s Office (<http://www.medicalreservecorps.gov>). This effort has been well accepted in some areas of the country, but is not very active in others. It serves to support local public health initiatives that can include many non-disaster related activities, including improving health literacy, assisting in prophylaxis, helping local hospital and health departments, but can also be called to help in times of disaster. The nurse can play a pivotal role in helping to understand and promote what is most needed in their communities prior to, during, and following disasters. Culley (20) describes a collaborative relationship between a school of nursing and a university health service to create a Medical Reserve Corps. This provided a platform for more extensive training and experiential learning

about disasters and community involvement that the students might otherwise not have had.

It has been suggested (Luo et al., 2013) that as nurses gain more experience in the nursing profession, their knowledge evolves from procedural to more reflective and strategic abilities. They confirmed that important in contributing to development of disaster response and management ability were age, formal education, and participation in disaster training. Although this knowledge has not yet been leveraged, great potential exists for expanding on existing knowledge and ability with the communities themselves.

In 2009, the International Council of Nurses in association with the World Health Organization published the ICN Framework of disaster nursing competencies (2009). In that report, it is stated that Shri Anil Sinha, Head of the India National Center for Disaster Management told the Trained Nurses Association of India that nurses “can contribute significantly in educating and creating awareness in the community on Disaster Awareness. Additional roles identified by ICN included:

1. educating the community on disasters,
2. working to reduce hazards in the workplace, homes and communities,
3. contributing to the development, implementation, and evaluation of community readiness,
4. participating in and evaluating disaster drills,
5. coordinating and working with community organizations, and
6. in the workplace, where disaster planning is absent or fragmented, nurses have a leadership and advocacy role in developing disaster plans and exercises.

In reviewing these roles, it is strongly suggested that this disaster planning and advocacy are as important in the community as in the workplace, and might even be considered a moral obligation of those professionals who have the skills and abilities. It is that environment that we, our families and our loved ones live and must survive during times of disaster.

A Position Statement by the Association of Women’s Health, Obstetric and Neonatal Nursing (AWHONN, 2012) also advocates the important role of the nurse preparing communities and individuals before a disaster to mitigate effects, especially vulnerable populations.

Perceived lack of competencies

It is not surprising that in a world of exponentially expanding medical knowledge and competencies that nurse education is already overcrowded with little time for additional information and training. There is a perception that internationally nurses do not have needed competencies to deal with disasters. In China, Luo et al. (2010) and Luo et al., (2013) concluded that disaster-related knowledge of medical students in medical colleges and such knowledge in community nurses might not be sufficient. A 2013 study in rural communities in Texas (Baack and Alfred) found that most nurses were not confident in

their abilities in the face of a major disaster. Although research is lacking in nursing preparedness, Twedell (2009) expressed the belief that nurses in most states are unprepared to respond and manage disaster situations.

In a recent study of Hong Kong nurses and their perception of competencies for disaster nursing (Loke and Fung, 2014), it was highlighted that nurses were not aware of their roles in preparing either the community or vulnerable populations for disasters. They suggested a tailor made or even community specific education to assist in their roles within the community. It is also important that ethical and legal competencies are also viewed as grossly inadequate. There is now a concerted effort to include these important aspects of disaster management in nurse training and education in the United States, although there needs to be standardization of necessary components.

Role of nurses in community preparation through HITECH and use of Electronic Health Records

With Health Care Reform has come a new era of the use not only of Electronic Medical Records (EMR), but also of Electronic Health Records (EHR) during disaster. With the impetus of the attacks of September 11, 2001, and with support of the Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009 (Public Law 111-5), many states have made significant advances in developing secure, accessible, and interoperable systems, although much remains to be done to make them as valuable as they can be in disaster situations. Today's nurse can serve a major role in understanding and using not only the importance of Electronic Medical Records, but also how Electronic Health Records interface with that system, and how they serve a major role in a disaster scenario. Of vital importance is the understanding that the medical community must not only have reliable, safe, and well-coordinated care not only in day-to-day operations, but that this expectation also holds true for emergency/disaster situations as well (Abir et al., 2014). It is well documented that in 2005, after Katrina, loss of medical records was a major problem (Bower, 2005). This situation was not repeated after the Joplin tornado in 2011, when the EHR was used to help those in need following the disaster as described by a nurse administrator (Atwal, 2011). Horahan et al (2014) described the use and importance of the beneficial use of the EHR following Hurricane Sandy in 2012. Using the New Jersey Urban Area Security Initiative (UASI), a project was funded to create a Mobile Satellite Emergency Department (MSED) to give remote access to the EHR system. Through extensive collaboration and cooperation, the MSED has become the "centerpiece" of a comprehensive surge capacity program.

Communications and reliable linkages are critical to successful use of the EMR. Following the Great East Japan Earthquake of March 2011, a cloud-based EHR was used based on a web-based EHR that had been developed in 2005. Japanese Medical Association Teams (JMATS) sent from Fukuoka to Shinchi-town were able to implement a cloud-based EHR for response. It was suggested that there needed to be a nation-wide cloud based EHR system developed in which health care professionals should be trained. As in many Asian countries, the vast majority of hospitals in Japan now use EHR. Nurses with a community perspective and roots in the community should play a major

role in assuring that EHR information is collected and is appreciated for its practical application in disaster scenarios.

As the Accountable Care Act unfolds with all of its new forms of patient care and its new emphasis on wellness and population health, there is a desire to explore what this will all mean to the residents in a time of disaster. In theory, easier access to health records, a healthier population, and an increased emphasis on taking care of ourselves and our families will involve being better prepared for times of crisis and disaster. It is a renewed belief in self-reliance. As we convert over time to a more self-sufficient population, as risk is shifted to providers and health care staff as well as patients, it behooves all of us to make sure that wellness includes being educated and trained for what is in being prepared. Nurses will play a major role in this arena, both in the professional environment and in their personal lives and communities.

Final observations and recommendations: Strategies for application in communities

There is very little research or data concerning the role of the nurse outside of the hospital or health care facility, and very little to the importance of the nurse outside of clinical work within those communities. Even though recognized as a potent source of influence in preparedness and response in their homes and communities, little has been done in the way of training or recognition of this importance. In a critical position paper for the Association of State and Territorial Directors of Nursing, Jakeway (Jakeway et al., 2008) describes 12 competencies for public health nurses. I would contend that these are roles and responsibilities for all registered nurses, especially those with leadership functions, and are critical for those in a profession of great trust, advanced knowledge training, and respect.

Magnaye et al (2011) performed a study of nurses in which they were asked about their perceived preparedness to participate in times of disaster. It was found that nurses were very much equipped with knowledge, skills, and attitude to act these disasters and should be ready to be of greater health in communities. Baack and Alfred (2013), to the contrary found that nurses in Texas were not confident of their abilities to respond to disaster events. Part of this was ascribed to awareness due the increased natural and human-induced disasters. Education, mock drills and exercises were recommended. A position statement by the Association of Women's Health, Obstetric and Neonatal nurses (AWHONN, 2012) stressed the importance of nurses in this profession to make sure that they and their families had emergency plans. Because they care for primarily women and infants, they should pay particular attention to that vulnerable population before and after disasters as well.

Health care providers, especially nurses, hold in their hands not only the respect, but the safety of their communities during disaster. Strategies proposed for enhancing the ability of nurses to better serve their communities and those they care for include:

1. Provide systematic training of nurses in community disaster management and leadership in community settings

2. Assist communities to organize drills and exercises
3. Assure that family members and the most vulnerable in their communities are prepared for most likely disasters, personal and family preparedness
4. Design and provide curriculum and continuing education on leadership roles of the nurse in their communities and assure a more clear understanding of their roles within the health care environment in times of disaster
5. Provide didactic and practical education on what makes a community resilient and how this possibility can be enhanced.
6. Engage the nurses in more extensive training on post-trauma activities both in the hospital and in their communities an extension of their work in the regular health care environment, community organization for preparedness and recovery, basic concepts of community resilience.
7. Involve the nurses in design and execution of exercises and international experiences in which they can demonstrate their leadership abilities in the hospital as well as in the community in times of disaster.

In times of crisis and disaster, we turn to those we respect and trust to help guide us through the frightening and hard times that follow. In holding the public's trust, the nursing profession must be prepared to train our nurses in how they might use that influence to prepare, respond, and recover within the communities themselves. The need is great, as well as the opportunities for us to best prepare today's nurse.

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