



# ICN Framework of Disaster Nursing Competencies



International Council of Nurses



World Health  
Organization

Western Pacific Region



# ICN Framework of Disaster Nursing Competencies



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## Forward

Disasters occur daily throughout the world, posing severe public health threats and resulting in tremendous impact in terms of deaths, injuries, infrastructure and facility damage and destruction, suffering, and loss of livelihoods. Developing nations and lesser-resourced countries and communities are particularly vulnerable to the impact of disasters on health systems and health care and overall social and economic functioning.

Nurses, as the largest group of committed health personnel, often working in difficult situations with limited resources, play vital roles when disasters strike, serving as first responders, triage officers and care providers, coordinators of care and services, providers of information or education, and counsellors. However, health systems and health care delivery in disaster situations are only successful when nurses have the fundamental disaster competencies or abilities to rapidly and effectively respond.

The International Council of Nurses and the World Health Organization, in support of Member States and nurses, recognize the urgent need for acceleration of efforts to build capacities of nurses at all levels to safeguard populations, limit injuries and deaths, and maintain health system functioning and community well-being, in the midst of continued health threats and disasters.

This publication signifies continued partnerships between the International Council of Nurses, the World Health Organization and the populations we serve in strengthening the essential capacities of nurses to deliver disaster and emergency services within an ever-changing world with ongoing health threats and disasters.

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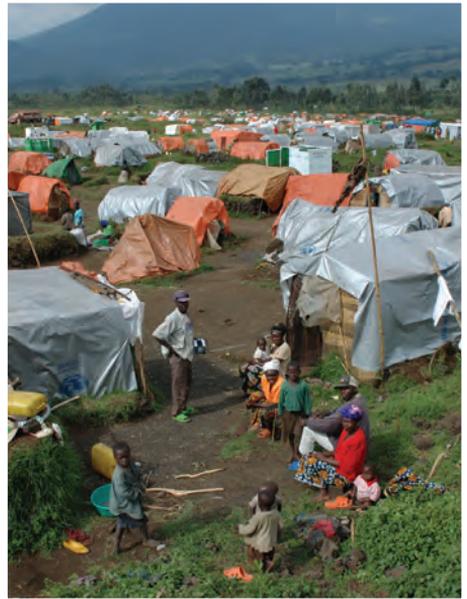
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*Chapter One:*  
***Background***

## Chapter One: *Background*

Disasters occur every day somewhere in the world with dramatic impact on individuals, families and communities. Whether the disaster is a single-family house fire or a tsunami that devastates a community, the quality of life is threatened. *World Disasters Report 2007* reported a 60% increase in disasters in the last decade (1997–2006) over the previous decade (1987–1996). Additionally, the number of reported deaths grew from 600 000 to over 1.2 million. At the same time, the number of people affected rose from 230 million to 270 million, a 17% increase (Klyman, Kouppari & Mukheir, 2007).

Developing nations are particularly vulnerable due to the lack of funding for disaster preparedness and the impact of disasters on the health care, economic and social infrastructure of the affected region and subsequently, the country. Disasters can change the face of a developing nation in seconds, wiping out years of development. Nations with greater resources are usually able to move more quickly to restore the infrastructure and economy. However, no matter where the disaster happens, the impact on the population and community can be devastating, leaving no nation, region or community immune.

“According to the United Nation’s Bureau of Crisis Prevention and Recovery, some 75 percent of the world’s population live in areas that have been affected at least once by either an earthquake, a tropical cyclone, flooding or drought between 1980 and 2000” (IRIN, 2007, p. 3). Natural disasters have been increasing over the last 50 years, with the greatest increase in the last decade (Birnbaum, 2002). “On average during 2000–2006, 116.3 countries were hit by disasters each year, but in 2007 it was 133” (Scheuren et al., 2008, p. 6). As in 2006, Asia was most affected by disasters in both the number of deaths and the number of disasters in 2007 (Hoyois, Schauren, Below & Guha-Sapir, 2007; Scheuren et al., 2008). These statistics amplify the importance of sound disaster planning and mitigation

efforts. Included in these efforts is the preparation of a workforce that is able to respond effectively in the time of a disaster.

There is no single agreed-upon definition of disaster and multiple definitions of disaster are found in the literature. Governments, humanitarian groups and other organizations tend to define a disaster as it reflects the mission, organization and needs of the entity. But regardless of the specific definition, all definitions address the concepts of widespread destruction of the environment, the economic, social and health care infrastructure, as well as loss of life, overwhelming the ability of individuals and the community to respond using their own resources. The following definitions from the International Strategy for Disaster Reduction (ISDR), the International Federation of Red Cross and Red Crescent Societies (IFRC) and the World Health Organization are examples of how various organizations define disaster.

- “A serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources” (ISDR, 2004, p. 9; World Health Organization, 2007, page 7).
- “A sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community’s or society’s ability to cope using its own resources. Though often caused by nature, disasters can have human origins” (International Federation of Red Cross and Red Crescent Societies, 2005, p. 1).

Disasters are classified as “natural” and “technological” (i.e. man-made). Natural disasters include storms, such as hurricanes and cyclones,

floods, earthquakes, extreme heat and cold emergencies, tsunamis, volcanic eruptions, pandemics and famine. Technological disasters include transportation chemical, biological and radiological accidents as well as acts of terrorism. Disasters complicated by war or internal conflict that have led to a breakdown of social, political and economic structures are classified as complex emergencies or complex disasters. There has been a noticeable increase in complex disasters over the last decade. When coupled with natural or technological disasters, complex disasters make the needs of the survivors and the work of those helping more challenging (Food and Agriculture Organization of the United Nations, 1999).

Regardless of how a disaster is defined, natural or man-made, disasters disrupt a community's infrastructure for water, transportation, communication, electricity, public health services and health care and increase direct and indirect financial costs, resulting in substantial alterations in financing structures. Disasters often overwhelm services including social services, hospital care and emergency services, e.g. police, fire. In addition, the normal routine of the community is disrupted. Many people are unable to work, health facilities are inundated, the economic stability of the community is shaken, and family life is disrupted. Communities may take years to recover from a disaster. In some cases, communities never return, especially those with few economic resources.

Disasters take a physical and psychological toll on individuals. Experience has demonstrated that rapid intervention is necessary to address physical and psychological issues. Failure to intervene can lead to long-term physical conditions or mental health problems. Some individuals—people with pre-existing health conditions, medical disabilities, mental health or psychological problems as well as the frail, women, older people and the very young—are more vulnerable and at risk. Moreover, an individual's ability to cope with

a disaster and the recovery process are directly affected by the individual's culture, the support system available and the person's gender, experience with disaster, education and psychological status. The process of intervention can be difficult, requiring a delicate balance of assistance and encouragement in the face of incomprehensible losses. However, the lack of sufficient numbers of health personnel and facilities make dealing with these immediate needs difficult. Assisting the survivors to rebuild their lives is critical to a nation's recovery.

The need for qualified individuals ready to respond to disasters and to participate in preparedness and disaster recovery activities is well documented. However, training is often fragmented or not available. Over the last several years, organizations and groups have begun to address the issue by developing competencies to describe the role of the responders and by developing specialized education and training programmes. Competencies have been developed for public health workers, health care workers, emergency workers, mental health providers, emergency nurses and emergency managers. As the largest group of health care providers, nurses need to develop competence in disaster response and recovery. Therefore, disaster education for all nurses is vital.

The fundamental attributes of nursing practice consist of providing nursing care to the injured and ill, assisting individuals and families to deal with physical and emotional issues, and working to improve communities. As stated by Dr Eric Laroche, WHO Assistant Director General for Health Action in Crises (WHO, 2008):

*“Nurses are often the first medical personnel on site after disaster strikes. In these situations where resources are scarce, nurses are called upon to take roles as first responder, direct care*

*provider, on-site coordinator of care, information provider or educator, mental health counsellor and triage officer.”*

Nurses have demonstrated their value in numerous disaster situations because they possess the knowledge, skills and abilities that support the humanitarian efforts and positively contribute to a disaster response. However, the challenges faced in dealing with the complexity of disasters requires that “...each nurse acquire a knowledge base and minimum set of skills to enable them to plan for and respond to a disaster in a timely and appropriate manner” (Veenema, 2007a, p. 17). Even if one patient cannot access care because a nurse lacks the competence to respond effectively, it is one too many.

For more than 100 years, the International Council of Nurses (ICN) has worked to advance nurses and nursing, and bring nursing together worldwide (ICN, 2007). ICN has acted in a leadership role to support quality nursing care and education throughout the world. In that role, ICN has identified disaster preparedness and response as essential to providing adequate health care and addressing the humanitarian challenges of disasters. In 2001, ICN published a position statement, which was revised in 2006, entitled *Nurses and Disaster Preparedness*. The document emphasizes, “Disaster preparedness, including risk assessment and multi-disciplinary management strategies at all system levels, is critical to the delivery of effective responses to the short, medium, and long-term needs of a disaster-stricken population. It is also important for sustainable and continued development” (ICN, 2006, p. 1).

The ICN believes, “Nurses with their technical skills and knowledge of epidemiology, physiology, pharmacology, cultural-familial structures, and psychological issues can assist in disaster preparedness programmes, as well as during disasters” (ICN, 2006, p. 13). To support nurses in disaster

preparedness and response, ICN launched the International Disaster Response Network for Nurses in 2007, a forum for nurses to exchange information and dialogue about disaster nursing issues. In an editorial published in the *International Nursing Review*, Dr Hiroko Minami, ICN President, urged “nurses and NNAs [national nursing associations] in every nation to assume a leadership role in efforts to prepare their countries and regions in the event that disaster strikes” (Minami, 2007, p. 2). The opportunity to exchange information and ideas, on a global perspective, will foster increased knowledge regarding the many roles of nurses in disaster preparedness and response.

The ICN expects that disaster nursing competencies for the generalist nurse will help clarify the role of the nurse in disasters and assist in the development of disaster training and education. The global nature of disasters makes it imperative that nurses are equipped with similar competencies in order to work together in providing for the health needs of disaster populations.

The ICN Framework of Disaster Nursing Competencies (ICN Disaster Nursing Competencies) builds on the ICN Framework of Competencies for the Generalist Nurse (ICN Competencies). The ICN Disaster Nursing Competencies do not address the additional competencies required for nurses in advanced practice or specialty areas such as emergency, paediatric or psychiatric nursing. However, they do serve as an underpinning for developing additional advanced competencies. The ICN insists on in-country discussions and interpretation of the competencies to ensure that they reflect the nation’s needs and requirements for the disaster nursing workforce. Due to the rapidly changing disaster environment, increased research and changing technology, the competencies must be reviewed and revised regularly.





*Chapter Two:  
Impetus for the Development  
of the Framework of Disaster  
Nursing Competencies*

## *Chapter Two: Impetus for the Development of the Framework of Disaster Nursing Competencies*

This chapter considers some of the factors that have influenced the need for disaster nursing competencies. It discusses the need for nurses, worldwide, to be actively involved in the disaster management continuum; the roles of nurses; the gaps in knowledge; the barriers; and the dilemmas in disaster nursing education.

The humanitarian and health system impacts of disaster are staggering. From 1998 to 2008, nearly 1 million people lost their lives to disasters, 3.3 million were injured and 2 billion were affected (data extrapolated from EM-DAT: The OFDA/CRED International Database, 2008). Health systems, including human resources and physical infrastructures though essential for population survival are very vulnerable to major emergencies and disasters. After the 2004 Indian Ocean tsunami in Sri Lanka alone, many health personnel, including medical officers, nurses, midwives and support staff were lost, in addition to large numbers being injured, traumatized or displaced and thereby not able to assist affected communities and populations (Asian Development Bank, Japan Bank for International Cooperation and the World Bank, 2005; WHO, 2007).

The situation is predicted to continue worsening. Factors such as climate change, increased building in areas prone to disaster, unplanned urban growth, loss of natural barriers, lack of warning systems and lack of systems to move populations to safe areas contribute to the increased risk. The risks are intensified for poorer populations who tend to live in areas more prone to disasters and in buildings less able to provide protection from a disaster (IRIN, 2007). Technological events are occurring more frequently in part due to poor regulations, lack of supervision, an aging infrastructure, rapid growth and lack of training. Experts agree that disaster preparedness and mitigation are essential in reducing the impact of disasters.

## International Efforts

Worldwide efforts through the leadership of the United Nations and the World Health Organization (WHO) have begun to address issues of disaster mitigation and preparedness. In January 2005, 168 governments adopted the *Hyogo Framework for Action*, which is a 10-year blueprint for disaster risk reduction. The goal is to reduce not only the lives lost in a disaster, but also the damage to economic, social and environmental resources of the community. Included in the five priorities is the need to strengthen disaster preparedness for effective response (ProVention Consortium, 2007). An effective response includes well-trained personnel with appropriate skills who understand their roles as well as the roles of others.

To enhance the implementation of the Hyogo Framework, the United Nations created the *Global Platform for Disaster Risk Reduction* to serve as a forum for all parties involved in disaster risk reduction. The Global Platform expands the parties involved in risk reduction beyond governments and United Nations' agencies to include the private sector, scientific and academic communities, international financial institutions and other groups involved in disaster. The intent is to increase the recognition that solutions to disaster risk reduction are multifaceted and the business of everyone. Governments retain the principal responsibility for risk reduction, albeit supported by a network of stakeholders. Without a multi-stakeholder approach, progress on the Hyogo Framework will be slow. The Global Platform also provides for information sharing and the provision of practical guidance to reduce disaster risk (*Global Platform for Disaster Risk Reduction*, 2001).

WHO, as the lead agency for addressing the health aspects of emergency preparedness and response, plays a pivotal role in meeting the humanitarian challenges of emergencies, crises and disasters. Subsequent to the extreme

consequences of the 26 December 2004 earthquakes and tsunamis affecting citizens of over 30 countries, in 2005, the World Health Assembly (WHA) passed a resolution (WHA 58.1) calling on the Organization to intensify technical guidance and support to countries building their emergency response capacities, stressing a multisectoral and comprehensive approach (WHO, 2005), which focused on the following four WHO functions in emergencies:

- (1) Measure ill-health and promptly assess health needs of populations affected by crises, identifying priority causes of ill-health and death.
- (2) Support Member States in coordinating action for health.
- (3) Ensure that critical gaps in health response are rapidly identified and filled.
- (4) Revitalize and build capacity of health systems for preparedness and response.

These functions directed the work of the Organization from 2005 to 2008. In its *Medium-term strategic plan 2008–2013*, WHO outlines its strategic objectives, one of which is “to reduce the health consequences of emergencies, disasters, crises and conflicts, and to minimize their social and economic impact” (2008, p. 45). Through its global network, WHO supports countries in developing self-sufficiency in emergency preparedness and response. In addition, WHO is working with countries to develop strategic direction for reducing mortality, morbidity and disability in disasters and reducing risk factors impacting on the health of the people.

In 2006, another resolution (WHA 59.22) called on Member States to further strengthen and integrate their response programmes, particularly at community level and through interagency cooperation. Resolutions WHA58.1 and WHA59.22 resulted in a number of specific and collaborative actions by Member States and WHO to strengthen the capacity, predictability, timeliness,

effectiveness and accountability of international humanitarian action (WHO, 2007).

Building the preparedness and response capacities of countries and communities is foundational to achieving agreed-upon aims to save lives and reduce suffering due to the effects of disasters. In a recent survey, WHO found that the most urgent need is for human resources. The lack of trained personnel, both in country and throughout the Region, presents enormous challenges for response, transition and recovery. WHO views nurses and midwives as essential in disaster response, but considers their lack of disaster training as a major gap in disaster and emergency response. In November 2006, a Consultation on Nursing and Midwifery in Emergencies brought together experts in disaster nursing and midwifery. The consultation focused on the roles of nurses and midwives in disaster and the competencies needed to be effective (WHO, 2007). In response to the increasing number of people affected by emergencies and disasters, WHO nursing and emergency and humanitarian action officers in the Western Pacific and South-East Asia Regions, recognizing the importance of a functioning biregional emergency and disaster nursing network, convened a Joint Asia Pacific Informal Meeting of Health Emergency Partners and Nursing Stakeholders, in collaboration with the International Organization for Migration (IOM) in October 2007 in Bangkok, Thailand. The Asia Pacific Emergency and Disaster Nursing Network (APEDNN) was established during the meeting; its mission is to promote nursing's ability to reduce the impact of emergencies and disasters on the health of communities (WHO Regional Office for the Western Pacific, 2007).

The Sphere Project was created in 1997 by a group of humanitarian nongovernmental organizations and the Red Cross and Red Crescent movement. "Sphere is based on two core beliefs: first, that all possible steps

should be taken to alleviate human suffering arising out of calamity and conflict, and second, that those affected by disaster have a right to life with dignity and therefore a right to assistance” (Sphere Project, 2006a, p. 1). A major initiative of the Sphere Project is the *Sphere Handbook*, which establishes minimum standards for disaster response and defines what people affected by disasters have a right to expect from humanitarian assistance. In the introduction to the chapter on health services, the *Sphere Handbook* states: “Health care is a critical determinant for survival in the initial stages of a disaster” (Sphere Project, 2006b, p 254). Without qualified nurses to address the health care needs of disaster-affected communities and people, the ability to alleviate human suffering is severely limited.

Major disasters in the last few years have further highlighted the gaps in disaster planning and readiness. These disasters caused widespread human and economic losses that overwhelmed the humanitarian efforts. The experiences demonstrated the lack of disaster and emergency preparedness, including the need for trained volunteers, communication systems, collaboration among organizations and education of the population in disaster preparedness. The lack of qualified personnel including health workers, along with inadequate planning and resources, severely hampered the initial response to these disasters. These events made it clear that continuing development in the areas of disaster planning and management was necessary to reduce losses due to a disaster.

The final report of the Select Bipartisan Committee to investigate the preparation for and response to Hurricane Katrina, *A Failure of Initiative*, provides a glimpse at an inadequate preparedness and response. The report concluded that the failure was not an individual failure but rather a collective failure. Everyone was doing their best, but it was not enough. Among the many areas evaluated was the medical response. Overall, the medical response

was adequate and lives were saved; however, it is estimated that at least 215 people lost their lives in nursing homes and hospitals during the hurricane as a result of failed health facility evacuation plans in Louisiana. In addition, the number of health personnel on the ground, initially, was inadequate to meet the needs.

Disasters can pose serious public health threats to any nation. Death, trauma, injuries, worsening of chronic diseases, infections, spread of disease and mental health problems are just a few of the potential public health consequences of a disaster. Health care must be available if risks to life are going to be reduced. A nation's capacity to respond to a disaster event successfully depends in part on the ability of the health care professionals to rapidly assess, communicate and manage effectively during an event (Cox and Briggs, 2004). The preparation of nurses and other health professionals must be a priority.

## **The Role of Nurses**

Undeniably, nurses are key players in disaster and crisis situations. Throughout history, nurses have been called upon to respond to the needs of individuals, groups and communities in times of crisis. Nurses are sought out because of their broad care-giving skills (e.g. provision of treatment, prevention of illness), creativity and adaptability, leadership and a wide range of skills that can be applied in a variety of disaster settings and situations. The ICN (2006, p. 13) describes the value of nurse involvement in disasters as:

*“Nurses with their technical skills and knowledge of epidemiology, physiology, pharmacology, cultural-familial structures, and psychosocial issues can assist in disaster preparedness programmes, as well as during disasters. Nurses, as*

*team members, can play a strategic role cooperating with health and social disciplines, government bodies, community groups, and non-governmental agencies, including humanitarian organizations.”*

Throughout the disaster management continuum, nurses fill an array of roles. The roles most often associated with disaster nursing are visible during the response phase of a disaster, when preservation of life and maintenance of health are priorities. However, Davies and Moran (2005) point out that nurses are indispensable not just during the immediate response to the disaster, but from disaster preparedness and response to long-term recovery in order to deal with the health consequences of an event.

Disaster nursing requires the application of basic nursing knowledge and skills in difficult environments with scarce resources and changing conditions. Nurses must be able to adapt nursing practices to the specific disaster situation while working to minimize health hazards and life-threatening damage caused by the disaster (Gebbie and Qureshi, 2002; Jennings-Sanders, Frisch and Wing, 2005). Nurses must work collaboratively with other health professionals, disaster responders, nongovernmental organizations and governments. Nurses must be capable of shifting focus of care from one patient to large numbers of patients. As the focus of the disaster operation changes from lifesaving and emergency care to public health, nurses must possess the knowledge and skills to adapt to the change in focus of care. Nurses also must understand their own competence and be able to adapt their competencies for the disaster context and situation. In addition, nurses are expected to work within the parameters of practice laws of the nation, region or state where they are working.

The health needs of the population and the ability to provide care differ according to the type of disaster, the economic and political situation of the

affected area, and the degree to which the health infrastructure is developed and available. With an understanding of the epidemiology of disasters, nurses can anticipate certain health consequences and delivery issues depending on the type of disaster event. For example, with earthquakes, one can expect many deaths and severe injuries as well as damaged and destroyed health facilities. On the other hand, a slow rising flood will produce far fewer deaths and injuries with less damage to the health infrastructure (Pan American Health Organization, 1999). Using data from epidemiologic studies of disasters, nurses are better prepared to address the challenges of providing care in different types of disasters and under different conditions.

Preparedness and mitigation activities have become a worldwide priority (Prevention Web, 2008). These activities reduce the risk and impact of disasters on the population and community and therefore save lives. Nurses who have an understanding of health issues in the community play a major role in disaster planning, programme development, mitigation, training and education at the community, state, national and international level. Their knowledge of community resources, populations at risk, vulnerable individuals, workforce issues, supply needs and nursing roles and practices are crucial contributions to disaster planning.

Shri Anil Sinha, Head of the India National Centre 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 preparedness" (Seda, 2002, p. 1). Nurses play an important role in disaster preparedness by: educating the community on disasters; working to reduce hazards in the workplace, homes and communities; contributing to the development, implementation and evaluation of community readiness; participating in and evaluating disaster drills; and coordinating and working with community organizations. In the workplace, where disaster planning

is absent or fragmented, nurses have a leadership and advocacy role in developing disaster plans and exercises.

In the response phase of a disaster, nurses provide care in a variety of areas, including trauma, triage, emergency care, acute care, first aid, infection control, supportive and palliative care, and public health. Hospitals, emergency aid stations, shelters, homes, mass immunization sites, mortuaries and makeshift clinics are examples of where nurses may be required to practice. Nurses manage both the physical and psychological impacts. They make decisions regarding the delegation of care to volunteers and other health care workers to maximize resources. Nurses also function in leadership roles, managing and coordinating health care and caregivers. Nurses can also be found assuming responsibility for management of the other aspects of the disaster response, such as sheltering and health centres.

As the disaster situation transitions to the long-term recovery phase, nurses take on the role of managing the ongoing health threats to individuals, families and the community, as well as the continuing care needs of those with injuries, illnesses, chronic disease and disability. Vulnerable groups at increased risk, such as women, children, disabled individuals, older people and the disadvantaged, continue to be susceptible to life-threatening illness requiring continued nursing monitoring and care. Identification of those with mental health needs, provision of psychological support and counselling, and mental health education are roles that take on additional urgency as the disaster moves to recovery. Nurses also begin to focus on re-establishing health and mental health services that will serve the entire community.

During the reconstruction and rehabilitation phase of a disaster, nursing functions related to coordination of care and health services in the affected or re-settlement area, such as case management; the identification and

implementation of appropriate referrals, including those for social resources are critical as the community begins to return to its customary activities. Assuring continued care for those in need is a fundamental role of nursing. Additional roles include public health surveillance, screening, and community education. The role of liaison between resources and the community is vital as necessary lifelines are re-established. In situations where the health infrastructure has been comprised, nurses are essential in providing expertise in the reconstruction of the health infrastructure and support networks.

## **Impact of Gaps in Knowledge**

The lack of accepted competencies and gaps in education has contributed to the difficulty in recruiting nurses prepared to respond to a disaster and provide assistance in an effective manner. Although some nurses have experience working in disasters and have developed expertise in disaster response, too few meet the need. These nurses are usually associated with organizations specializing in disaster relief and humanitarian aid. Responding as part of an organization increases the effectiveness of the nurse because there is clear direction and support. Organizations such as the Red Cross and Red Crescent Societies recruit nurses from the local to the international level. Many community groups that respond to disasters require nurse volunteers. Unfortunately, many nurses are unaware of the opportunities in these organizations or believe they have little to contribute. Without understanding their role in disaster, nurses may have little motivation to become involved before a disaster strikes.

Experience has demonstrated that people want to help in disasters and other crisis events. Nurses are no exception. The devastation of a disaster prompts nurses to come to the scene with the intent of helping. Nurses have a moral sense of duty to respond, but many arrive without the benefit of

training, knowledge of the situation or an understanding of the specific needs of the population. As spontaneous volunteers, their role is unclear and they are unprepared to use their skills and knowledge effectively in the disaster situation. They endanger themselves and others, and risk becoming a burden on other workers at a time of hardship and stress. The outcome, even with the best intentions, leads to additional chaos in an already chaotic situation.

Disasters are unlike any other situation where a nurse may work. Many nurses and other health professionals arrive at the disaster site ready to help, but they expect to provide care in the same manner they do at home. This is clearly not the case. To further illustrate the point, a study by Jennings-Saunders, Frisch and Wing (2007) evaluated nursing students' perceptions about disaster nursing. Students perceived that emergency and critical care nurses would have the most active role in disaster and focused on the caregiving roles of all nurses. They failed to appreciate the other significant roles nurses play in disaster. In reality, the nursing role is far broader than the expectations of many nurses, going beyond traditional clinical roles. For example, nurses may have to establish a clinical site, which would include procuring equipment and medical supplies, establishing procedures, and managing care. Working in an environment that is less than ideal with a variety of health care challenges, scarce resources, fragile security, and people facing hardship conditions cannot be compared to the day-to-day work of any health care provider.

The transition from the daily activities of nursing practice to a disaster operation is challenging, but for nurses without disaster training or education, it is even more difficult. Providing care in a field hospital, administering first aid in a corner store, working in an unfamiliar community hospital, and managing the health needs of a large population in a shelter under less-than-ideal conditions can be difficult for any nurse, especially those without knowledge of

disaster nursing. Communication may be fragmented or difficult. As a result, pertinent information about the disaster situation is not always passed from the nurse on duty to the relief nurse, making the situation more difficult. Frequent confusion with procedures are sometimes complicated by security issues. The 2004 Sumatra-Andaman Earthquake and Tsunami provided a glimpse at what Australian nurses experienced when responding to the disaster. As told by Arbon et al (2006, p. 176), the nurses will be:

*“required to work in difficult, disorganized and poorly resourced situations where health services are provided with whatever equipment and personnel are available. In this context nurses will be exposed to injuries and illnesses that they rarely encountered in Australian health care environments, will have the traditional limits on their scope of practice challenged and will be required to draw not only on their clinical skills but also in the relatively unique skills of the nursing profession in the re-establishment and management of health care settings such as hospitals.”*

It is not unusual for nurses to express feelings of surprise, confusion and frustration when the expectations do not match the reality of the situation. In the words of one nurse assigned to work in a special needs shelter during Hurricane Katrina, “What do I know about special needs? I’m a cardiology nurse with a 4 or 5:1 ratio not 40:1 in a large gym!!!” (Bless, 2005, p. 5). Disaster assignments can become easily overwhelming, especially when one has no idea what to expect.

Lessons learnt from previous disasters, such as the Pakistan Earthquake, Hurricane Katrina and the Sumatra-Andaman Earthquake and Tsunami of 2004, amplify the importance of disaster training prior to responding for

nurses and other responders. The ability to be flexible was hampered by a lack of understanding of the situation. Communicating was frustrating because of language issues and the lack of communication tools. Teamwork was hindered by the lack of understanding of the various roles of responders. In addition, nurses often made personal sacrifices to assist in the disasters, which adversely impacted the disaster operation, as well as the nurse. Failure to understand the structure and organization of disaster response diminished the ability of nurses to be effective and led to high levels of frustration.

During Hurricane Katrina, some nurses were arriving with their own equipment and setting up clinics or appearing at health care facilities ready to work, only to be turned away. This created more anger and frustration. In addition, a failure to understand the prevailing laws and regulations placed the nurse and the patients in jeopardy.

Two studies that examined health needs in shelters revealed the challenges in providing care during a disaster. At a shelter in Austin, Texas, where Hurricane Katrina victims were transferred, more than 50% of the victims arrived with symptoms of acute illness. At least 59% of the people reported at least one chronic illness. Other risk factors identified included mental illness and disorders, lack of medications, physical limitations, substance abuse, and special diet requirements (Vest and Valadez, 2006). A study of health issues of the population in the Astrodome in Houston, Texas, found uncontrolled hypertension, dermatitis and other skin conditions, respiratory infections and gastrointestinal infections. Chronic conditions such as diabetes and asthma were also present. A large number of older people and children required special actions to ensure safety. In addition, there were individuals with immediate care needs, acute mental health problems, and potentially serious psychiatric conditions (*Medical News Today*, 2006). These studies illustrate the importance of a community assessment that includes

an evaluation of pre-existing health conditions and the knowledge of the epidemiology of disasters.

Managing multiple health problems in shelter conditions is extremely demanding. The ability to assess the situation quickly and adapt standards of care as required can be very challenging even for the experienced disaster nurse. Some nurses have experienced a lack of confidence in their ability to provide care in a disaster situation. A basic understanding of what to expect when working in a shelter and how to manage the large number of residents is imperative.

The Iranian earthquake of 2003 was powerful, killing more than 43 000 people, injuring 20 000 and leaving more than 60 000 people homeless. The city of Bam, including the health infrastructure, was destroyed. A study was designed to investigate the experiences of 13 registered nurses during the disaster relief efforts of the Bam earthquake. It revealed that the nurses were ill-prepared. Nurses arriving first at the scene of the disaster expressed confusion and disappointment with the absence of protocols. They were left to work in the dark. Protocols guide nurses in making sound practice decisions, particularly in unusual situations. The nurses felt a general lack of knowledge in every situation they confronted. They had difficulty dealing with priorities of care, the heavy workload and lack of resources. Poor teamwork in managing care by all medical personnel was noted. A lack of coordination among responders resulted in the duplication of efforts. The working situation was extremely stressful. Nurses felt dissatisfaction with the situation, leading to a feeling of hopelessness. The study found a need for protocols, teamwork and education in disaster nursing (Nasrabadi, Naji, Mirzabeigi and Dadbakhs, 2007). This situation illustrates how the gaps in knowledge of disaster nursing impact adversely on the ability of the nurse and how critical it is to have experienced nurse leaders.

Disaster survivors experience a wide range of emotional and psychological responses. In a study of survivors of the 2000 flood disaster in Tokai, Japan, 70% of the respondents complained of mood disorders immediately after the flood (Sakai, 2006). Nurses must be prepared to provide emotional and psychological support for survivors and responders, and make appropriate referrals where necessary. In a study of Swedish nursing students who had completed a basic disaster nursing course, Suserud (2003) found that the students failed to recognize the need to address mental health issues and focused only on the physical injuries. Still today, too many nurses respond to disasters expecting that their role will be focused on the physical injuries and illnesses of the survivors. While mental health issues are a major concern, many nurses lack sufficient knowledge to recognize the potential for mental health consequences in a disaster. Failure to identify normal stress reactions to a disaster, failure to provide appropriate psychological care and failure to recognize the need for additional mental health care may delay or complicate an individual's recovery. All nurses must be competent to provide psychological support and possess the knowledge necessary to address mental health issues.

Physical and psychological needs are also experienced by disaster relief workers. As with disaster survivors, mental health needs are often overlooked. Many of the workers have never been exposed to the suffering and devastation of a disaster. They tend to work long hours and get little rest. They may also be dealing with an unfamiliar culture and political tensions. All of these factors put them at risk for injury, illness or psychological problems. Psychological problems are often first observed as behaviour changes, which impact not only on the individual but also on the relief operation. Nurses must be able to identify psychological needs and implement supportive nursing interventions to assure the well-being of health workers by meeting their basic human needs during such stressful times.

## Issues of Ethics and Cultural Competency

The ICN Code of Ethics (2006) stresses respect for human rights, sensitivity to values and customs, dignity, fairness and justice. Nurses are expected to practise in accordance with these tenets in disasters and modify their practice as required to meet the needs of the disaster environment (Deeny, Davies, Gillespie and Spencer 2007). Provision of assistance requires attention to customs and culture and assurance of individual dignity and confidentiality. There is potential for these values to be diminished in face of the great need for assistance.

Disasters require nurses to make difficult, ethical choices in the face of scarce resources. Decisions are often made for the greater good rather than the individual. This shift of focus from caring for the individual to providing optimal health services at the community level does not come naturally for many nurses. For example, during a disaster, a nurse working in triage may need to choose between two patients requiring surgery, one critically injured with a small chance of survival and the other with serious injuries but a good chance of recovery. During non-disaster times, the critically injured patient would be sent to surgery first, but in a disaster with limited resources, the patient with the greatest chance of survival would go first. In another situation, a nurse may need to provide immunizations with limited vaccine available. Who takes priority? These kinds of decisions can be agonizing for a nurse. The nursing workforce must be aware of the ethical practice issues in disasters in order to be a valued and effective participant in disaster response.

During Hurricane Katrina, shortcomings in cultural competence were identified. Upon her arrival at a shelter in Louisiana, Dr Jennifer Brown found nurses who were angry that the largely African-American population was still in the shelter. She further noted that staff did not understand that Government

checks had not been cashed because the evacuees did not have checking accounts or that they used the money to buy items considered nonessential by the staff. Failure to understand the culture and norms of the population created a sense that the staff did not care about the evacuees. The cultural gap created a very difficult helping environment (Clemens, 2006).

When working internationally, nurses face similar issues when they are unable to accept the culture and values of the community. Nurses are expected to display respect and promote dignity within the cultural norms of the individual, group and community. Nurses who become so involved in the mechanics of the disaster response can easily disregard respect, dignity and cultural norms. Nurses must strive to be culturally competent in order to provide the required care and assistance as effectively as possible within the circumstances of the disaster.

## **Barriers to Nurse Involvement**

The Sumatra-Andaman Earthquake and Tsunami of 2004 and Hurricane Katrina of 2005 are two examples of disasters that emphasize the importance of a prepared and ready-to-respond health care workforce to provide disaster relief. The increasing worldwide impact, scope and complexity of disasters have made it imperative that health care professionals play a role in disaster mitigation and are prepared to respond when needed. Without a prepared workforce many more lives may be lost during catastrophic events. Emergency preparedness relies on the ability and willingness of the health care workforce to report to work in the event of an emergency or disaster. As key members of the disaster response team, nurses must be prepared to report to work in all kinds of conditions and in some cases for long periods of time. Recent events, including the outbreaks of severe acute respiratory syndrome (SARS) and, more recently, the threat of pandemic influenza, underscore the importance of addressing those

factors that will help to ensure that nurses are willing to respond.

Understanding the factors that influence the ability and willingness to report to work in a disaster is vital in order to ensure an adequate workforce. A number of studies have investigated the ability and willingness of health care workers to report to work in an emergency or disaster situation. Dr Kristine Qureshi and others (2005) found that factors influencing one's ability to report during a disaster included: transportation issues, personal health concerns, child care, elder care responsibilities, and pet care. Factors impacting the willingness to work in a disaster event included: fear and concern for self and family, personal health problems, child care and elder care.

One survey of 1500 employees revealed that caregiver responsibilities were a major predictor of a health care worker's willingness to report in a disaster (Rosenfeld et al., 2007). A study of Japanese nurses asked to respond to the Great Hanshin-Awaji Earthquake of 1995 found that home responsibilities were a common issue in determining whether to volunteer for the disaster (Mitani, Kuboyama and Shirakawa, 2003). Lack of disaster knowledge was also found to be a deterrent for recruiting nurses.

The type of disaster also impacts on the willingness to work. Fear and concern are higher in disasters involving chemical, biological, radiological nuclear agents and those related to disease and illness. A review of the literature on willingness to work in disaster response completed by Erin Smith (2007) found that threats of infection dramatically impacted on the response to a disaster. In addition, she noted that the literature suggests that the longer an event lasts, the harder it is to sustain the workforce.

The results of these studies highlight the need for adequate disaster education and preparedness. Nurses must be able to analyse the risk and make

informed decisions regarding their participation. For example, implications of types of disasters on individuals and family, safety measures, personal protective equipment, and role expectations are basic knowledge requirements for mitigating fear and concern in a disaster situation. Nurses must understand their role in preparedness, especially individual and family preparedness. Being prepared for disasters or emergencies is crucial to individual and family safety. Nurses have a responsibility to prepare in advance in order to be available in a time of need. Education in the area of preparedness is essential in order to reduce barriers that hinder response to a disaster. Health systems and society in general may have a responsibility to provide support and care of health workers' dependents if the call to respond is to be heeded. The measures needed must be identified and planned in advance for maximum security to be ensured.

## **Disaster Nursing Education**

The complexity of disasters seen today requires an educated health care workforce capable of working in all areas of the disaster continuum. At the 2006 American Public Health Association Meeting, Dr Frederick Slone (2006) emphasized the importance of having a health workforce prepared to respond quickly in the time of a catastrophic event, making disaster education a national priority. Recent disasters have demonstrated that the lack of knowledge in disaster response and management creates confusion among the responders and delays effective humanitarian response.

The sporadic nature of disaster nursing education has resulted in a workforce with limited capability to respond in the event of a disaster, develop policy, educate or accept leadership roles. As the largest sector of the health care workforce, nursing's inability to actively participate in a knowledgeable manner throughout the disaster continuum would place the population at risk.

The risk is further increased by hesitancy to respond as a result of a lack of knowledge.

In the United States of America, disaster nursing education was included in most nursing education curricula until the early 1970s. The content was limited, but it provided nursing students with basic information about disasters and the nursing role. Then, in the late 1990s, interest was renewed for including disaster preparedness education in the curriculum as the need for nurses to respond to disasters increased. The impact of natural disasters was affecting more people and communities due to a shift in building and population growth. The terrorist event of 9/11 further demonstrated the need for disaster nursing education. An electronic survey developed by the Nursing Emergency Preparedness Education Coalition (formerly International Nursing Coalition for Mass Casualty Education) was sent to all levels of nursing programmes in the United States prior to September 11, 2001 and during the following two academic years to determine the level of disaster education included in the curriculum. A total of 348 nursing programmes completed the survey. During the 2000-2001 academic year, about one-third of respondents (32.7 per cent) indicated coverage of disaster preparedness content in their curricula. Though more schools were including preparedness content in their curricula by 2002-2003, the rate amounted to slightly over half (53 per cent) of respondents. Only about four hours of content in disaster preparedness was provided, which did not change significantly from academic years 2000-2001. Additionally, 75% of respondents reported that nurse faculty were inadequately prepared in the area of disaster preparedness (Weiner, Irwin, Trangenstein and Gordon, 2005).

In other parts of the world, disaster nursing education follows a similar pattern as that of the United States despite a renewed interest in disaster nursing. Istanbul University, Hadassah Hebrew University and the University

of the West Indies are examples of schools that have incorporated disaster education in their curricula. Overall, however, too few programmes are preparing new nurses for disaster situations. In Japan, 60% of the nursing education programmes had no disaster nursing course and had no intention of adding a course in the future (Yamamoto and Watanabe, 2006).

With the increased demands on curriculum, the lack of standard competencies to underpin curriculum development, a lack of teaching tools, inadequate budgets, limited disaster experience and few champions, disaster nursing education has not been a priority. There is also a lack of confidence among faculty who feel unprepared to teach disaster nursing. Research and therefore the evidence base for disaster nursing are sparse. These factors contribute to the lack of inclusion of disaster education in nursing curricula.

According Dr Hiroko Minami, ICN President, “It is critically important that nurses are educated at all levels in regard to disasters” (ICN, 2007, p. 213). Graduate programmes have been developed in the United States, Europe and Asia to prepare nurses as experts in disaster, dealing with issues such as leadership, education and policy roles. However, more programmes are needed to prepare and sustain an international workforce of nurses to undertake the education and leadership roles.

The lack of formal education has created a workforce with little or no competency in disaster nursing. As a result, many nurses do not view disaster response as a priority or lack the confidence to respond when needed. For example, 70% of the school nurses in a three county area of north-eastern Ohio, United States, responding to a survey on disaster education felt they needed additional education related to emergency response in order to respond effectively (Mosca, Sweeney and Brenner, 2005). Specialized training

programmes are needed to fill the knowledge gap and increase the willingness of nurses to respond.

It is important to note that continuing education in disaster preparedness and response is not required in many countries and what is available varies greatly. Although nurses have demonstrated an interest in disaster education, their level of interest generally drops as the time following an emergency event increases. Offerings are needed both in the classroom and online to assure access to disaster education. Standard competences are required to support programmes that will address the basic requirements for the role of the nurse in disasters.





*Chapter Three:  
Development of the ICN Disaster  
Nursing Competencies*

## Chapter Three: *Development of the ICN Disaster Nursing Competencies*

This chapter focuses on the process used to develop the ICN Disaster Nursing Competencies for the Generalist Nurse. The process included identifying an organizing structure for the competencies, determining the advantages and limitations of the competencies, obtaining input from experts, and reviewing current literature.

### **Definition of Competence and Competencies**

“Competence” is a frequently used word that is defined inconsistently in the literature (Fleming and Holmes, 2005). In the health professions, “competence” is used to describe the knowledge that enables a practitioner to perform activities consistently in a safe manner. It is the major determinant of performance. There is general agreement in nursing that “competence” reflects the following:

- knowledge, understanding and judgment;
- a range of skills cognitive, technical or psychomotor and interpersonal; and
- a range of personal attributes and attitudes” (Alexander and Runciman, 2003, p. 16).

The ICN (1997, p. 44) defines competence as “a level of performance demonstrating the effective application of knowledge, skill and judgment”. It is this definition that is used as the underpinning for the ICN Competencies and for the ICN Disaster Nursing Competencies.

The ability to perform according to predefined standards or competencies is gained through work experience, education, mentors and training (Kak, Burkhalter and Cooper, 2001). Gebbie and Gill (2004) define “competencies” as the applied skills and knowledge that enable people

to do their work. They are the descriptive statements that are observable and allow for measurement of competence. Competencies are valuable to describe the expected activities of the profession when carrying out a specific job. Nursing competencies are used to describe general nursing practice, specialized roles (such as disaster nursing) and specialty practice (Hird, 1995).

## **Need for Competencies in Disaster Nursing**

The scope and complexities of disasters require that nurses have a common set of competencies in disaster nursing. From a global perspective, few models exist that focus on disaster nursing (Wynd, 2006). Nurses must be able to work internationally, in a variety of settings with nurses and health care providers from all parts of the world. To assure a global nursing workforce ready to respond in the event of a disaster, competencies are essential.

Competencies:

- facilitate deployment of nurses globally;
- create consistency in the care given;
- facilitate communication;
- build confidence;
- facilitate a more professional approach;
- promote shared aims;
- allow for a unified approach;
- enhance the ability of nurses to work effectively within the organizational structure; and
- assist nurses to function successfully as members of the multidisciplinary team.

Competencies support learning and assessment. They serve as a guide or resource for curriculum development and review, continuing education and training programmes. Competencies encourage consistency in what knowledge and skills are taught and expected on the job. They allow for the assessment of an individual’s knowledge and skills and identification of additional training needs. At the time of a disaster, the ability to identify gaps in knowledge and skills and provide specific training related to the identified gaps is critical. Systematic application of competencies minimizes the risks related to disaster response.

Competencies serve as the foundation for research, evidenced-based practice and standards development. They are also important tools in creating job descriptions and orientation programmes. Most important is the ability for an individual to use the competencies for self-assessment of knowledge, skills and abilities. Understanding limitations allows an individual to make appropriate decisions about work assignments and additional education needs.

## Literature Review

To assure a broad assessment of information related to disaster, nursing and competence, an initial search of the literature was performed by using key databases, namely ERIC, PubMed, MEDLINE, and CINAHL. Internet search engines—Google, Yahoo, AltaVista and Excite—were used for additional searches.

Key words used to search resources included: “disaster”, “disasters”, “nursing”, “public health”, “competencies”, “competence”, “ethics”, “nursing role”, “training”, “education”, “disaster management”, “disaster organization”, “disaster statistics”, “World Health Organization”, “United Nations”, “international disaster relief”, “International Red Cross”, “Red

Cross”, “nursing organizations”, “Homeland Security”, “CDC”, “FEMA”, and combinations of the aforementioned terms. Relevant articles were identified and obtained. Additional references were found by reviewing pertinent reference lists. Also reviewed were specific competency documents related to health professionals, disaster management, disaster personnel and disaster.

Competency documents that contributed to the development of the disaster nursing competencies were: Core Competencies for All Public Health Workers (Gebbie, 2001), Core Competencies for Nursing and Midwifery in Emergencies (WHO, 2006), APRN Emergency Preparedness and All Hazards Response (2007), Emergency and Disaster Preparedness: Core Competencies for Nurses (Gebbie and Qureshi, 2002), Mental Health Competencies (Iowa Department of Health, 2006) and Health Care Worker Competencies for Disaster Training (Hsu et al., 2006).

## **Key Documents**

A review of several key documents—aside from the aforementioned competency documents—contributed to the development of ICN Disaster Competencies. The ICN Code of Ethics (2006) and the ICN Competencies (2003), for example, served as the underpinning for the competencies.

The ICN Code of Ethics describes the principles of conduct and shared moral values of nursing. Ethics is an essential element of decision-making and nursing practice. Disaster nursing is no exception. Underlying the ICN Disaster Nursing Competencies are the principles and moral values of the ICN Code of Ethics.

The ICN Competencies serve as the foundation for nursing practice. They are the basic expectations for performance for any nurse, regardless

of practice area. The competencies are divided into three categories: (1) professional, ethical and legal practice; (2) care provision and management; and (3) professional development. The ICN Disaster Nursing Competencies are a subset of the ICN Competencies, reflecting the specialized role and activities of nurses in disaster. It is expected that nurses will demonstrate the basic nursing competencies as well as the disaster nursing competencies when working in disaster situations.

The Educational Competencies for Registered Nurses Responding to Mass Casualty Incidents (Stanley, 2003), developed by the Nursing Emergency Preparedness Education Coalition, was one of the first set of competencies developed for disaster nurses. The competencies focus on knowledge and skills needed to respond to a mass casualty events including chemical, explosive, nuclear, biological and radiological. The competencies were designed to apply to all nurses working in any venue. The competencies fall into three areas: (1) core competencies, (2) core knowledge, and (3) professional role development. The 1998 Essentials of Baccalaureate Education for Professional Nursing Practice was used as the framework to delineate competencies (Stanley, 2003). These competencies focus on the response phase of the mass casualty incident.

In Japan, the 21st Century Center of Excellence for Disaster Nursing in a Ubiquitous Society developed Core Competencies Required for Disaster Nursing, also known as COE Competencies (Yamamoto, 2004). The competencies were designed as basic disaster nursing competencies. Five domains were identified: Fundamental attitudes toward disaster nursing; Systematic assessment and provision of disaster nursing care; Care provision for vulnerable people and their families; Care management in disaster situations; and Professional judgment. From these domains specific competencies were identified (Minami et al., 2006). These competencies were written incorporating a broad view of disaster nursing activities.

## The Disaster Management Continuum

Disasters cannot be thought of as a point-in-time event, but rather distinct phases, all of which require action in order to decrease the impact of a disaster. The disaster phases are pre-incident, incident and post incident. The pre-incident phase includes activities designed to prevent or mitigate the potential impact of a disaster as well as prepare the community and population for a disaster or emergency. All the activities involved in the response to the disaster or emergency is the incident phase. Recovery and rehabilitation form the post-incident phase. Nurses have invaluable roles in all phases.

The approach that has been developed and refined over the last 30 years to more effectively deal with disasters is the disaster management continuum. It is defined as “the body of policy and administrative decisions and operational activities which pertain to the various stages of disaster at all levels” (Church World Service Emergency Response Program, 2008, p. 2). The disaster management continuum is an integrated continuous process relating to each phase of a disaster. It is a continuous chain of activities that includes mitigation/prevention, preparedness, response, recovery/rehabilitation.

The disaster management continuum is accepted worldwide as the method for addressing all aspects related to a disaster. Although there is some variation in the terminology used to describe the various stages and activities, all describe a system that is continuous with connected activities, some of which occur simultaneously (Wisner and Adams, 2002). In nursing, two models were found in the literature: (1) Jennings Disaster Nursing Management Model (2004), and (2) The Disaster Nursing Timeline by Veenema (2007a, p. 8). Both of these models reflect the concept of a disaster management continuum. The Jennings Model describes four phases; pre-disaster, disaster occurs, after

the disaster, and client/population outcomes. It was designed as a tool for public health nurses. Veenema's model uses similar terminology but combines the activities in three categories as related to a timeline of a disaster.

**Figure 1. Disaster Management Continuum**



Figure 1 describes the model of the disaster management continuum used in the development of the disaster nursing competencies. It does not matter which model is used by a community or county. Some models combine activities where others separate out activities. What is important to understand is that the process is continuous, and designed to decrease the harm to populations, infrastructure and development, and build community resilience (WHO, 1999). It is also important to note that the phases of a disaster do not occur in sequence, but may overlap or occur simultaneously. The length of each phase varies depending on the individual disaster and may not, necessarily, occur in the precise order illustrated. All models take an all hazards approach, meaning that planning is done to prepare for all types of disasters, threats and dangers and creating procedures and policies that apply to any situation. The disaster management continuum requires the involvement of groups, organizations and individuals, including but not limited to; government, non-government organizations, business and industry,

community leaders, health care professionals, planners, and the public. Integrated throughout the disaster management continuum is the role of the nurse. Saving lives and meeting the humanitarian needs of survivors while assisting communities to endure requires nursing involvement throughout the disaster management continuum.

### ***Prevention/Mitigation***

Prevention/mitigation is the process designed to prevent or minimize the risks related to disaster. Identifying risk and taking appropriate action may prevent a disaster altogether or reduce the effects of the disaster. It encompasses a variety of activities to reduce the loss of life and property. Lessons learnt from actual incidents, training and exercises contribute to the development of action plans that describe what actions should be taken to reduce or eliminate long-term risks to human life and safeguard the community or reduce the potential effects of a disaster.

Prevention/mitigation can incorporate, for example, technological solutions, such as flame-retardant shingles or sprinkler systems in homes in fire-prone areas, structural changes in infrastructure or engineering solutions such as the building of dams to control water flow. In Bangladesh, early warning systems that direct residents to evacuate to shelters have been improved. The approach can involve policy development or legislative activities. Examples include legislation that prohibits building in flood-prone areas, requirements for immunizations, safety codes, building codes to make buildings safer and public education. There is also a role for the general public in reducing risks to self and property by taking measures that prevent or mitigate the impact of disaster. In many areas, the public is urged to create disaster kits containing items such as water, food, clothing, blankets and medications for use in an emergency.

The nurse's role in prevention and mitigation begins with identifying risks both at the community and individual level. The nurse works with other health professionals to determine major disease risks, collaborates on developing plans to reduce identified risk, and assists in the development of surveillance systems related to disease outbreaks. Nurses perform community needs assessments to determine the pre-existing prevalence of disease, the susceptibility of health facilities and identification of vulnerable populations, such as those with chronic disease, mental health problems, or disability. This information provides valuable data for the disaster plan. The nurse collaborates in developing plans for alternative housing and other interventions designed to reduce the vulnerability of these populations. Participation in risk reduction activities in health care facilities to create safe and sustainable environments for care or identifying alternative sites for care following a disaster is another activity that requires the expertise of the nurse. Working in partnership with other health care providers and community leaders, the nurse helps to plan for the evacuation of health facilities and relocation of patients as required.

Helping to shape public policy that will decrease the consequences or potential effects of a disaster is an important role because of the nurse's knowledge of the community and the areas of vulnerability. Working with policy-makers to identify hazards, the risk such hazards pose to the population, and health infrastructure to develop solutions that reduce the risk are all part of nursing's role. Ongoing community education related to identification and elimination of health and safety risks in the home or community is another area where nurses bring expertise.

### ***Preparedness***

Preparedness is perhaps the most critical phase in the disaster management continuum. Current events have demonstrated that the focus on

preparedness has been inadequate. Recent disasters further underscore the need for preparedness planning. The inadequacy of preparedness planning in these disasters created chaotic situations, increasing the suffering of survivors and loss of life.

Preparedness is the phase of disaster management where planning and readiness are a priority. The goal is to achieve a satisfactory level of readiness to respond to any emergency situation (Warfield, 2007). The ISDR defines preparedness as “activities and measures taken in advance to ensure effective response to the impact of hazards, including the issuance of timely and effective early warnings and the temporary evacuation of people and property from threatened locations” (ISDR, 2004, p. 30). It includes a variety of measures to insure that a community is prepared to react to any emergency. Elements of preparedness include: recruiting volunteers, planning, training, equipping, public education, exercising and evaluating. Preparedness is a continuous process that requires periodic review and revision based on changes in the environment, staff changes, new information and technology. Building activities that sustain and improve the capacity to respond is the essential element of preparedness. This includes building a nursing workforce ready to respond in time of need. Creating databases of prepared nurses, planning recruitment and retention activities and training and exercising are all activities required to prepare a nursing workforce.

Nurses play a key role in preparedness activities. The creation of policy related to response and recovery requires nursing input. Policies related to use of unlicensed personnel including health care providers from outside the disaster jurisdiction or alteration of standards of care cannot be created without full involvement of nursing. Nurses provide assessments of community needs and resources related to health and medical care which contribute to the planning activities. Planning activities such as communication, coordination and collaboration, equipment and supply needs, training, sheltering, first aid

stations, and emergency transport all require nursing expertise. Nurses develop and provide training to other nurses and health professionals, as well as the community. Capacity-building through recruitment and maintenance of a ready disaster nursing workforce is also part of nursing's role. In addition, nurses are involved in leadership roles, planning, participating in, and evaluation of readiness exercises to assure that the community, and the nursing workforce itself, is prepared in the time of an emergency or disaster. Collaboration with planners, organizations involved in disaster relief, government agencies, health care professionals and community groups to develop the preparedness plan is vital.

## ***Response***

The response phase encompasses the immediate action taken in the face of a disaster. It includes the mobilization of responders to the disaster area. In the response phase, the objective is to save as many lives as possible, provide for meeting the immediate needs of the survivors and reduce the longer-term health impact of the disaster. This phase may last a few days to several weeks depending on the magnitude of the disaster.

The role of nurses in the response phase is providing both physical and mental health care. Care is provided in a variety of settings under challenging conditions that require a knowledgeable, skilled and creative workforce. Managing scarce resources, coordinating care, determining if standards of care must be altered, making appropriate referrals, triage, assessment, infection control and evaluation are just a few of the skills a nurse uses in the response phase. Identifying individuals with chronic disease or disability is a critical responsibility. With health care access and mobility limited, these individuals are at great risk because of heat, humidity and cold issues, and difficulty in maintaining appropriate diets. Post Traumatic Stress Disorder, depression

and anxiety are frequently seen in the aftermath of a disaster. The nurse must continually monitor survivors for signs of mental health issues, must provide care and must make referrals, as necessary.

Roles include advocacy for patients and survivors, teaching, and leadership and management. Nurses must monitor responders to assure that mental health or physical care is not needed. Additionally, nurses provide onsite training to other nurses and health care workers and volunteers. In this phase, nurses often work as part of a health care team and collaboratively with other responders to provide assistance to as many survivors as possible. During the response, nurses use their skills in epidemiology to identify patterns of illness to detect any threat of communicable disease or other health hazards. They also collect data on injuries and illnesses seen during the disaster, which are later communicated to epidemiologists for analysis.

### ***Recovery/Rehabilitation***

Once immediate needs are met, the recovery phase can begin. In this phase, work is concentrated on assisting the community and the affected population recovers from the impact of the disaster. Recovery includes restoring vital services, rebuilding infrastructure and housing, and meeting the needs of the population while assisting them to restore their lives. Recovery is a long-term process that requires both short-term and long-term goals for rehabilitation, reconstruction and sustainable development.

Nurses continue in the role of providing care and support to those with physical and mental health needs. Those injured or ill or those with chronic disease, mental health illness, or disability must be monitored to reduce the risk of complications. Referrals must be made to appropriate health care providers, government or relief agencies for housing, food, medications, medical

equipment, specialized care, long-term medical or mental health needs, or financial assistance for meeting the cost of care. Nurses also follow up with survivors to assure all needs have been met.

Nurses have a role in the recovery of the health care infrastructure. Without the health care infrastructure, the community will struggle to survive. Temporary medical services must be transitioned back to permanent facilities. The nurse must provide leadership in planning and reconstruction activities to assure that patient needs can be met. There may also be a need for additional services as a result of the disaster. The nurse is the one who can identify and advocate for patient needs. The advocacy role is particularly important during the recovery phase to assure that all of the needs are being met.

During the recovery and rehabilitation phase the nurse evaluates the disaster plan and champions required changes to improve the management of the disaster and the disaster's impact on the population. Evaluation is a critical component in mitigating the effects of future disasters. Nurses have a responsibility for providing documentation and evaluating the process while actively participating in follow-up activities that include community planning and development.



*Chapter Four:  
The ICN Framework of the Disaster  
Nursing Competencies*

## Chapter Four: *The ICN Framework of the Disaster Nursing Competencies*

The ICN Disaster Nursing Competencies were developed after an analysis of existing competency frameworks in the area of public health, mental health, health care workers, emergency managers, nursing and disaster nursing. Training materials and curricula were examined to understand the intended outcomes of the programmes. Important to the development of the competencies were two disaster nursing competency documents: (1) Educational Competencies for Registered Nurses Responding to Mass Casualty Incidents (Stanley, 2003), and (2) Core Competencies Required for Disaster Nursing (Yamamoto, 2004). All efforts were made to incorporate the concepts from these two documents into the competencies.

The focus of the ICN Disaster Nursing Competencies is the generalist nurse. All nurses are expected to be able to demonstrate these competencies. Competencies related to specialty nursing such as emergency nursing, paediatric nursing and public health nursing were not specifically incorporated into the document. It is anticipated that competencies of specialty practice nurses would be integrated with core competencies of the ICN Framework of Competencies for the Generalist Nurse. It should not be forgotten that the ICN generalist nurse competencies serve as the foundation of the ICN Disaster Nursing Competencies. Disaster nursing involves systematic application of basic nursing competencies and disaster nursing competencies specific to the disaster situation.

In developing the competencies, an organizing structure was identified to ensure that all aspects of disaster nursing were included in the competencies. The “disaster management continuum” was selected as the organization structure for several reasons:

- it is a process recognized throughout the world;
- nursing roles are integrated throughout it;
- it provides a consistent way to organize the competences; and

- it enhances the ability to develop educational curriculum that integrates the disaster management continuum with the competencies.

The competencies were organized under four areas:

- mitigation/prevention competencies;
- preparedness competencies;
- response competencies; and
- recovery/rehabilitation competencies.

Within the four areas, 10 domains were identified: (1) risk reduction, disease prevention and health promotion; (2) policy development and planning; (3) ethical practice, legal practice and accountability; (4) communication and information sharing; (5) education and preparedness; (6) care of the community; (7) care of individuals and families; (8) psychological care; (9) care of vulnerable populations; and (10) long-term recovery of individuals, families and communities. Numbering of the competencies is only for the ease of reading and does not indicate priority.

**Figure 2. ICN Framework of Disaster Nursing Competencies\***



\* COE: Center of Excellence; ICN, International Council of Nurses; NEPEC, Nursing Emergency Preparedness Education Coalition.

## 1. Risk Reduction, Disease Prevention and Health Promotion

### 1.1 Risk Reduction and Disease Prevention

- (1) Using epidemiological data evaluates the risks and effects of specific disasters on the community and the population and determines the implications for nursing.
- (2) Collaborates with other health care professionals, community organizations, government and community leaders to develop risk reduction measures to reduce the vulnerability of the populations.
- (3) Participates in planning to meet health care needs in a disaster.
- (4) Identifies challenges to the health care system and works with the multidisciplinary team to mitigate the challenges.
- (5) Identifies vulnerable populations and coordinates activities to reduce risk.
- (6) Understands the principles and process of isolation, quarantine, containment and decontamination and assists in developing a plan for implementation in the community.
- (7) Collaborates with organizations and governments to build the capacity of the community to prepare for and respond to a disaster.

### 1.2 Health Promotion

- (1) Participates in community education activities related to disaster preparedness.
- (2) Assesses the community to determine pre-existing health issues, prevalence of disease, chronic illness and disability and the health care resources in the community.

- (3) Partners with others to implement measures that will reduce risks related to person-to-person transmission of disease, sanitation and foodborne illness.
- (4) Participates in planning to meet the health care needs of the community such as, mass immunization and medication administration programmes.
- (5) Works with the community to strengthen the health care system's ability to respond to and recover from a disaster.

## **2. Policy Development and Planning**

- (1) Demonstrates an understanding of relevant disaster terminology.
- (2) Describes the phases of disaster management continuum: prevention/mitigation, preparedness, response and recovery/rehabilitation.
- (3) Describes the role of government and organizations in disaster planning and response.
- (4) Understands the community disaster plan and how it relates to the national and international response plans.
- (5) Recognizes the disaster plan in the workplace and one's role in the workplace at the time of a disaster.
- (6) Participates in disaster planning and policy development.
- (7) Contributes to the development, evaluation and modification of the community disaster plan.
- (8) Ensures that the needs of vulnerable populations are included in the community disaster plan (including children, women, pregnant women, individuals with mental or physical disabilities, older people and other vulnerable persons/households).
- (9) Interprets role(s) of nurses in relation to other members of the team.

- (10) Participates politically and legislatively in the development of policies related to disaster preparedness and response.
- (11) Describes the role of public health in disaster and how it relates to the nurse's role.

### **3. Ethical Practice, Legal Practice and Accountability**

#### **3.1 Ethical Practice**

- (1) Collaborates with others to identify and address ethical challenges.
- (2) Applies the national approved ethical framework to support decision-making and prioritizing.
- (3) Protects the rights, values and dignity of individuals and communities.
- (4) Practises in accordance with the cultural, social and spiritual beliefs of individuals and communities.
- (5) Maintains confidentiality in communication and documentation.
- (6) Understands one's own personal beliefs and how those beliefs impact on disaster response.
- (7) Describes how security issues and ethics may conflict.

#### **3.2 Legal Practice**

- (1) Practises in accordance with local, state, national and international applicable laws.
- (2) Understands how laws and regulations specific to disaster impact on nursing practices and disaster survivors.
- (3) Recognizes the legal role of public health to protect the community in a disaster.
- (4) Understands the legal implications of disasters and emergency

events (e.g. security, maintaining evidence, confidentiality).

- (5) Describes the legal and regulatory issues related to issues such as:
  - working as a volunteer;
  - roles and responsibilities of volunteers;
  - abandonment of patients;
  - adaptation of standards of care;
  - role and responsibility to an employer; and
  - delegation.

### **3.3 Accountability**

- (1) Accepts accountability and responsibility for one's own actions.
- (2) Delegates to others in accordance with professional practice, applicable laws and regulations and the disaster situation.
- (3) Identifies the limits of one's own knowledge, skills and abilities in disaster and practises in accordance with them.
- (4) Practises in accordance with the laws and regulations governing nurses and nursing practice.
- (5) Advocates for the provision of safe and appropriate care.

## **4. Communication and Information Sharing**

- (1) Describes the chain of command and the nurse's role within the system.
- (2) Communicates in a manner that reflects sensitivity to the diversity of the population.
- (3) Describes the principles of crisis communication in crisis intervention and risk management.
- (4) Identifies and communicates important information immediately to appropriate authorities.

- (5) Utilizes a variety of communication tools to reduce language barriers.
- (6) Coordinates information with other members of the disaster response team.
- (7) Provides up-to-date information to the disaster response team regarding the health care issues and resource needs.
- (8) Works with the disaster response team to determine the nurse's role in working with the media and others interested in the disaster.
- (9) Understands the process of health information management in a disaster.
- (10) Demonstrates an ability to use specialized communication equipment.
- (11) Maintains records and documentation and provides reports as required.
- (12) Communicates identified or suspected health and/or environment risks to appropriate authorities (i.e. Public Health).

## 5. Education and Preparedness

- (1) Maintains knowledge in areas relevant to disaster and disaster nursing.
- (2) Participates in drills in the workplace and community.
- (3) Seeks to acquire new knowledge and maintain expertise in disaster nursing.
- (4) Facilitates research in disaster.
- (5) Evaluates the need for additional training and obtains required training.
- (6) Develops and maintains a personal and family preparedness plan.
- (7) Describes the nurse's role in various disaster assignments (e.g. shelters, emergency care sites, temporary health care settings,

disaster coordination and management units).

- (8) Maintains a personal disaster/emergency kit (e.g. identification card, appropriate clothing, insect repellent, water bottle) in the event of deployment to a disaster.
- (9) Implements preparedness activities as part of a multidisciplinary team.
- (10) Assists in developing systems to address nursing and health care personnel capacity-building for disaster response.
- (11) Takes on a leadership role in the development and implementation of training programmes for nurses and other health care providers.
- (12) Evaluates community readiness and takes actions to increase readiness where needed.

## **6. Care of Communities**

- (1) Describes the phases of community response to disaster and the implications for nursing interventions.
- (2) Collects data regarding injuries and illnesses as required.
- (3) Evaluates health needs and available resources in the disaster-affected area to meet basic needs of the population.
- (4) Collaborates with the disaster response team to reduce hazards and risks in the disaster-affected area.
- (5) Understands how to prioritize care and manage multiple situations.
- (6) Participates in preventive strategies such as mass immunization activities.
- (7) Collaborates with relief organizations to address basic needs of the community (e.g. shelter, food, water, health care).
- (8) Provides community-based education regarding health implications of the disaster.
- (9) Evaluates the impact of nursing interventions on different

populations and cultures and uses evaluation results to make evidence-based decisions.

- (10) Manages resources and supplies required to provide care in the community.
- (11) Effectively participates as part of a multidisciplinary team.

## **7. Care of Individuals and Families**

### **7.1 Assessment**

- (1) Performs a rapid assessment of the disaster situation and nursing care needs.
- (2) Conducts a health history and age appropriate assessment that includes physical and psychological responses to the disaster.
- (3) Recognizes symptoms of communicable disease and takes measures to reduce exposure to survivors.
- (4) Describes the signs and symptoms of exposure to chemical, biological, radiological, nuclear and explosive agents.
- (5) Identifies unusual patterns or clustering of illnesses and injuries that may indicate exposure to biological or other substances related to the disaster.
- (6) Determines need for decontamination, isolation or quarantine and takes appropriate action.
- (7) Recognizes health and mental health needs of responders and makes appropriate referrals.

### **7.2 Implementation**

- (1) Implements appropriate nursing interventions including emergency and trauma care in accordance with accepted scientific principles.

- (2) Applies critical, flexible and creative thinking to create solutions in providing nursing care to meet the identified and anticipated patient care needs resulting from the disaster.
- (3) Applies accepted triage principles when establishing care based on the disaster situation and available resources.
- (4) Adapts standards of nursing practice, as required, based on resources available and patient care needs.
- (5) Creates a safe patient care environment.
- (6) Prepares patients for transport and provides for patient safety during transport.
- (7) Demonstrates safe administration of medication, vaccines and immunizations.
- (8) Implements principles of infection control to prevent the spread of disease.
- (9) Evaluates outcomes of nursing actions and revises care as required.
- (10) Provides care in a non-judgmental manner.
- (11) Maintains personal safety and the safety of others at the scene of a disaster
- (12) Documents care in accordance with disaster procedures.
- (13) Provides care in a manner that reflects cultural, social, spiritual and diverse background of the individual.
- (14) Manages the care of the deceased in a manner that respects the cultural, social and spiritual beliefs of the population as situation permits.
- (15) Manages health care activities provided by others.
- (16) Works with appropriate individuals and agencies to assist survivors in reconnecting with family members and loved ones.
- (17) Advocates for survivors and responders to assure access to care.
- (18) Refers survivors to other groups or agencies as needed.

## 8. Psychological Care

- (1) Describes the phases of psychological response to disaster and expected behavioural responses.
- (2) Understands the psychological impact of disasters on adults, children, families, vulnerable populations and communities.
- (3) Provides appropriate psychological support for survivors and responders.
- (4) Uses therapeutic relationships effectively in a disaster situation.
- (5) Identifies an individual's behavioural responses to the disaster and provides appropriate interventions as required (e.g. psychological first aid).
- (6) Differentiates between adaptive responses to the disaster and maladaptive responses.
- (7) Applies appropriate mental health interventions and initiates referrals as required.
- (8) Identifies appropriate coping strategies for survivors, families and responders.
- (9) Identifies survivors and responders requiring additional mental health nursing support and refers to appropriate resources.

## 9. Care of Vulnerable Populations (Special Needs Populations)

- (1) Describes vulnerable populations at risk as a result of a disaster (e.g. older persons, pregnant women, children, and individuals with a disability or chronic conditions requiring continued care) and identifies implications for nursing, including:
  - (a) physical and psychological responses to the disaster of vulnerable populations; and

- (b) unique needs and high risks of vulnerable populations associated with the disaster.
- (2) Creates living environments that allow vulnerable populations to function as independently as possible.
- (3) Advocates for the needs of the vulnerable populations.
- (4) Identifies available resources, makes appropriate referrals and collaborates with organizations serving vulnerable populations in meeting resource needs.
- (5) Implements nursing care that reflects the needs of vulnerable populations impacted by a disaster.
- (6) Consults with members of the health care team to assure continued care in meeting special care needs.

## **10. Long-term Care Needs**

### **10.1 Individual and Family Recovery**

- (1) Develops plans to meet short- and long-term physical and psychological nursing needs of survivors.
- (2) Identifies the changing needs of survivors and revises plan of care as required.
- (3) Refers survivors with additional needs to appropriate organizations or specialists.
- (4) Teaches survivors strategies for prevention of disease and injury.
- (5) Assists local health care facilities in recovery.
- (6) Collaborates with the existing health care community for health maintenance and health care.
- (7) Serves as an advocate for survivors in meeting long-term needs.

## 10.2 Community Recovery

- (1) Collects data related to the disaster response for evaluation.
- (2) Evaluates nursing response and practices during the disaster and collaborates with nursing organizations to resolve issues and improve response.
- (3) Participates in analysis of data focusing on improvement of response.
- (4) Identifies areas of needed improvement and communicates those areas to appropriate personnel.
- (5) Assists the community in transitioning from the response phase of the disaster/emergency through recovery and rehabilitation to normal functions.
- (6) Shares information about referral sources and resources used in the disaster.
- (7) Assists in developing recovery strategies that improve the quality of life for the community.
- (8) Collaborates with appropriate groups and agencies to re-establish health care services within the community.



*Chapter Five:*  
***Recommendations***

## Chapter Five: *Recommendations*

The increased impact of disasters on individuals and communities requires continued development of competent nurses to fill the need for health care providers to respond to complex human emergencies. Disasters with a global impact cannot be handled by a single community or nation. They often require a multitude of resources and people with different backgrounds and education working together to save lives. In nursing, this mandates a workforce with similar competencies, i.e. nurses who understand the work to be done and how to implement the work regardless of language, education and experience. The ICN Disaster Nursing Competencies presented in Chapter Four is a first step toward creating such a workforce.

With the growth of knowledge about disasters, disaster response and disaster nursing, the competencies must be viewed as a living document that requires regular review, clarification and revision. Recommendations are presented below for use of the ICN Disaster Nursing Competencies and for additional activities related to the competencies.

- (1) These competencies are not intended to replace competencies already developed in a country. They are designed to serve as an international consensus model. In countries where competencies are in place, the national nursing association and responsible authorities may wish to review their competencies against the ICN competencies to:
  - (a) determine if any additions to their competencies are needed;
  - (b) harmonize their disaster competencies with the ICN Disaster Nursing Competencies; or
  - (c) take no action.
  
- (2) In countries where competencies are being developed or have yet to be developed, the ICN Disaster Nursing Competencies provide

guidance in the development of the national disaster nursing competencies.

- (3) The competencies are written in straightforward language to assure understanding and ease of use by all audiences. Some of the competencies can be combined and organized to create comprehensive competencies, decreasing the overall number. This may be useful when crafting disaster competencies for educational purposes.
- (4) ICN Disaster Nursing Competencies describe the expected competencies of the generalist nurse working in a disaster, making the competencies a valuable tool in determining if a nurse has the knowledge, skills and abilities to function safely in a disaster situation. Gaps in knowledge can be identified. Training programmes can then be developed to address any knowledge deficits of the nurses.
- (5) The ICN Disaster Nursing Competencies assume the generalist nurse possesses the basic skills in emergency and trauma care, including: respiratory and airway assessment, pain management, cardiovascular assessment, management of hypovolemia and fluid replacement, burn assessment, haemorrhage management, mental status assessment, eye lavage, and management of crush injuries and fractures (Veenema, 2007b, pp. 206–207). If these skills are not part of the basic nursing programme, or if the nurse cannot demonstrate competency in these skills, educational programmes should be developed to address the gaps in knowledge.
- (6) The ICN Disaster Nursing Competencies provide a basis for the development of assessment tools. The tools can be used:
  - (a) by individual nurses to assess their own education needs;
  - (b) for the development of training programmes;

- (c) for assessment of onsite disaster nurses' competencies; or
  - (d) to create evaluation processes.
- (7) International disaster nursing resources are needed. The competencies set the framework for the development of such materials. International resources that integrate the knowledge and skills reflected in the competencies would enhance the ability of nurses to work together in disaster situations.
- (8) Inclusion of disaster nursing education in basic nursing programmes is a priority. The competencies provide the basis for curriculum development. All nurses completing a basic nursing education programme should possess the knowledge and skills to demonstrate the competencies. Nursing programmes should incorporate disaster nursing education knowledge and skills within the nursing curriculum.
- (9) Development of continuing education programmes and in-service education is a necessity. The majority of nurses know very little about disaster nursing. Lack of knowledge has been identified as a barrier to response in disaster. Education is one of the keys to building a disaster nursing workforce. Use of the competencies in the development of training programmes will help harmonize the knowledge and skills of nurse responders.
- (10) The ICN Disaster Nursing Competencies were developed for the generalist nurse. Competencies are needed at the graduate level for the specialist in disaster nursing.
- (11) Specialty nursing organizations that represent emergency nurses, paediatric nurses, midwives and nurse practitioners should build on the competencies to create additional competencies that reflect the specialized knowledge and skills of their practice and its contribution to disaster nursing.

- (12) Specialty areas such as informatics, logistics management, and workforce management provide support to nursing in disaster situations. Competencies should be developed specific to their role in disaster.
- (13) Graduate programmes in informatics, nursing administration, education, and policy should include content on disaster preparedness, planning and response related to their role in disaster.
- (14) Nursing research in disaster and disaster nursing is necessary in order to provide information to make evidenced-based decisions regarding practice, education and policy. Better understanding of the impact and long-term effects of disasters on people and communities, increased knowledge regarding effective nursing practice models are two examples of the type of research needed.
- (15) More nurses need to become involved in policy development. It is crucial that the voice of nurses is heard when policy is created. The competencies help to establish expectations regarding the roles nurses can play in a disaster. It is important that nurses interpret the competencies and roles of nurses during the policy development process.
- (16) It is critical that countries and health care facilities develop plans to release nursing staff educated in disaster nursing, especially nurse managers, to work at the disaster site with their normal positions filled by other nurses. This will help to assure that the more expert nurses are available for throughout the disaster response as needed.
- (17) Workforce planning and readiness is essential to assure an effective workforce to respond to disasters. Nursing leadership in regions, countries and states should develop workforce systems that include policy development, databases of prepared nurses, recruitment and retention strategies, and training programmes. Attention needs

to be given to measures providing support to health workers (e.g. care of dependents, transportation and protective equipment). Discussions on health professionals' duty to care will better prepare nurses to respond rapidly in disaster situations.

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