Nurses: Are We Ready for a Disaster?

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Abstract:
Disasters challenge nurses at all levels and specialties to examine their level of knowledge, skills, and preparedness. The momentum for nursing to be better prepared for disasters has accelerated in recent years with the occurrence of catastrophic disasters. However, nursing has a long way to go for the profession to be better prepared through education, research, management and practice. The paper describes recent disasters, comments on areas for better disaster preparation, and offers practical resources to assist disaster nursing development.

Keywords: disaster nursing, disaster preparation, disaster management

Greetings from Japan to all readers of the Journal of Nursing Sciences. I hope that what I have to say in this editorial stimulates some ongoing thoughts and action in disaster nursing preparation in Thailand and elsewhere in nursing management, practice, education, and research activity.

All of us concerned with the health of populations around the globe cannot help but be troubled by what seems to be an increasing number of disasters, small and large, that kill or injure humans and animals, and destroy properties and environments. Such disasters, whether natural or man-made, leave long legacies of pain and suffering: physical, emotional, social, economic, cultural, and spiritual. Whole communities may be dislocated or eradicated.

Some recent disasters
In 2009-2010 a wide variety of disasters occurred globally: train disasters, avalanches of mud or snow, earthquakes, tsunamis, typhoons/cyclones/hurricanes, flooding, train, plane and multi-vehicle crashes, as well as the disasters of wartime, terrorism, and multiple and random shootings. The latest disaster has been catastrophic. On January 12 2010, Haiti in the Caribbean suffered a magnitude-7 earthquake, the strongest in 200 years, followed by many aftershocks. By January 15, the United Nations (UN) said there was no way that the numbers of dead, trapped, missing, homeless, or wounded could be counted. Fifteen days after the quake the Haitian President Rene Preval announced that 150,000 bodies had been counted, and some survivors were still being pulled from the rubble. There were severe delays in providing much needed food and clean water supplies, especially in Port-au-Prince where clean drinking water was at a critical level even before the disaster. Long delays also occurred in airlifting out those suffering severe trauma, in burying the dead, and providing shelter to the estimated 1.5 million homeless.

In short, a disaster of this magnitude in a very poor country has called for unprecedented aid from the international community. Extreme difficulties were encountered by aid workers, health professionals, government and non-government workers, and the military due to damaged airfields, political controversy, a lack of infrastructure and resources in the country, and the sheer size of the earthquake damage. The UN commented that the earthquake had severely disrupted transportation, communication, and the activities of the government, and required a host of organizations to support those already working in Haiti. It was also enormously challenging to receive and distribute aid, and medical supplies. By January 31 up to one million people were estimated to be displaced and some commentators believed that it will take at least 10 years for reconstruction to be effective.
For those of us who live in Asia, we know only too well the impact of disasters resulting from severe flooding, typhoons, earthquakes, landslides, food shortages, volcanic eruption, mining disasters, and infectious pandemics. Examples fresh in our minds include the 8.3-magnitude earthquake triggering a tsunami in the South Pacific in September 2009; and the 9+-magnitude Sumatra-Andaman earthquake of December 26, 2004. This caused one of deadliest natural disasters in recorded history from tsunamis across the Indian Ocean, and aftershocks and earthquakes. Indonesia, Sri Lanka, India, and Thailand were the hardest hit, and around 250,000 people died. Another recent disaster occurred on the afternoon of May 12, 2008, when a 7.9-magnitude earthquake hit Sichuan Province, a mountainous region in Western China. This killed about 70,000 people and left over 18,000 missing. Over 15 million people lived in the affected area, including almost 4 million in the city of Chengdu.

Here in Japan where I live, earthquakes, typhoons, and heavy rains are an active danger. In other parts of Asia, including Thailand, severe flooding is a reoccurring problem. From my earliest childhood days in the Australian countryside, the likelihood of a bushfire during our hot dry summer has always been a dreaded possibility. The deaths and destruction from Victorian bushfires of February 2009 will live in the Australian psyche for many years to come. When the death toll from the 2008 Cyclone Nargis in Myanmar rose above 130,000, people repeatedly asked the same questions that were asked after the Indian Ocean tsunami claimed 250,000 lives in 2004: ‘Why were no systems in place to alert coastal residents of the incoming threats? Could nothing have prevented the loss of so many lives?’ Global attention caused by these mega-disasters is now driving many governments into improving early warning systems for natural hazards. It has also created an international sense of urgency for health professionals around the world to be better prepared for the future.

Nursing preparing for disasters

Nurses, just like other health professionals, have a critical role to play to make sure they are prepared to play an active role in disasters, both in the early stages, and in the short- and long-term recovery of communities. Since the inception of modern nurse training by Florence Nightingale in 1860, nurses across the world have been involved in disasters, particularly in times of war. As a young nurse in Australia I was taught that ‘Nursing was born in the church and bred in the army’. Military nurses are often an untapped resource of knowledge and skills for those of us working in civilian settings. They have to be in a constant state of readiness for wartime and other disasters, so it makes good sense that nurses in many settings have good dialogues with them when learning about disaster preparedness.

In a number of countries there are increasing efforts to improve the education and training of nurses regarding disaster preparation. However for the most part I argue that our training and education as nurses often has not prepared us for working in emergencies beyond the walls of hospitals where there are many resources at our disposal. What happens if our hospital is destroyed or badly damaged? Or suddenly we are faced with a calamity in our district that is outside of the scope of usual practice? Clearly we need to interrogate our nursing curricula and our practices to ensure that all nurses have better knowledge and skills in disaster preparation and mobilization. The recently developed World Health Organization (WHO) International Council of Nurses (ICN) Disaster Nursing Competencies should help because they provide a clear framework for the work of nurses in disasters and would be useful in programs and short courses in nursing and midwifery.

The recent disaster in Haiti highlights the critical need for mobilization of aid, for early warning systems, and advanced planning across a wide range of instrumentalities, government and non-government, especially in countries that are poor where available infrastructure and resources are likely to be less in times of disaster. These include adequate emergency response teams, clean water supplies, equipment for treating and transporting the injured, and plans for recovery and rehabilitation. Mental health nurses should be involved in short- and long-term mental health counseling and support for the injured, the emotionally distraught, the bereaved, and the dislocated. Post traumatic stress disorder is likely to be an ongoing health issue for surviving adults and children. Pediatric nurses and school nurses have a special role to play in caring for children in disasters, especially when they are orphaned or without natural family supports. Midwives too have a special role in supporting women before during and after childbirth, and to help those who have had...
miscarriages through trauma and shock or lost their children. Since health systems are less likely to be well developed or resourced in poorer countries, I believe the international world of nursing can do a lot to assist colleagues across borders, before disasters occur, to help them ensure a better state of readiness.

It is also critical to remember that nurses and midwives and their families may themselves be the victims of disasters. High anxiety states in health professionals may occur when disasters strike, such as that we have seen occur in the 2002-3 SARS pandemic of the disaster when many nurses were infected or died from the virus, or had colleagues or families affected.10

As Arbon11 has observed, surgical and emergency care response to disasters have only a limited impact on the health and recovery of affected communities, except, of course, at the level of those fortunate enough to receive life-saving treatment in a timely way. He contended that the real work to prepare for and recover from disasters needs to be undertaken by community members and health practitioners working in communities. Hence, primary health care and health promotion activities to prepare communities to mobilize resources for potential disasters is critical.

The role of nurse leaders and administrators

Nurse leaders and administrators in hospital and community settings, academic, and professional organizations have the great responsibility of leading and managing during times of crisis and disaster. Their role includes keeping open lines of communication, trying to maintain good patient care, providing education, influencing policy and financial decisions. During disasters clinical leaders have the difficult job of providing security and safe environments for staff, patients and families.12 Nurse leaders in academic settings are often an untapped resource that can be utilized during disasters since they have well educated and trained staff, and many students of nursing and midwifery at their disposal. Before disasters happen nurse leaders from all of these settings need to collaborate together and communicate with other stakeholders to make careful plans for utilizing resources during disasters. Clearly they need to ensure that they and their staff are educated and in a state of readiness, and can identify potential resources that can be utilized when disaster strikes.

Research in disaster nursing

The amount of international research being undertaken in disaster nursing is still in its infancy but growing, as evidenced by the number of publications found in journals around the world and presented at conferences. For example here in Japan, the WHO Collaborating Centre for Nursing in Disasters and Health Emergency Management13 has been established at Hyogo University, following the foundation work by Dr Hiroko Minami, the former President of ICN. Over the last 15 years disaster nursing conferences have started to be held and the ICN has included a formal workshop at its quadrennial congress and established an international network on disaster nursing. However, much more research is needed into disaster preparedness, the role of the nurse and midwife in disasters, and in evaluating the effectiveness of nursing responses.

Resources for disaster nursing

Below I have listed some resources and actions that might be useful for nurses preparing curricula for disaster nursing, for nurse managers, policy makers, clinical nurses in hospitals and communities, researchers, and students. There are also free resources and networks to join on the Internet.

1. Do a WWW Google search to find articles. On the Google site click on ‘Advanced Search’ and then on ‘Google Scholar’. Type in key words like ‘disaster nursing’ or ‘disaster management’. You will find references to a growing number of research and practice articles, and textbooks;

2. Do a Google search for powerpoint presentations that you can learn from. In English simply type in ‘powerpoint presentations on disaster nursing’ on the Google site (or some other search engine). See especially the WHO/ICN powerpoint entitled Disaster Nursing Competencies by Donna M. Dawson at the following website: http://www.icn.ch/congress2009/presentations/M23_DORSEY_HALL1A/M23_DORSEY_HALL1A.swf This powerpoint gives you the background and overview to the important competencies that were released last year, through the collaboration of WHO and ICN;

3. Join the Asia Pacific Emergency and Disaster Network: http://www.apednn.org/default.aspx

4. Access full content of disaster articles for free from the December 2009 issue of the international Journal of Nursing Science
Journal, Nursing & Health Sciences, see website http://www.wiley.com/bw/journal.asp?ref=1441-0745&site=1 and click on 'Content online'.

5. Do a search of the ICN website (http://www.icn.ch/) using the keywords 'disaster nursing'. You can also look at the ICN Disaster Nursing References List of March 2009 at http://www.icn.ch/Disaster_Nursing_March_2009_refs.pdf

6. Join the online ICN Nursing Network for Disaster Preparedness available at: http://www.icn.ch/disasterprep.htm This Network aims to help communication and share resources around the world. It also lists relevant conferences and courses; and


In conclusion, scientists around the globe warn us that with environmental warming the likelihood of disasters will only increase. We need to keep reminding ourselves that the East and South of Asia and the Pacific Islands have the highest number of disasters than any other region of the world. Our state of readiness should therefore be based on that proposition that disasters will happen, as much as we would hope that they would not. The critical question for us as professionals and individuals is: Are we ready for a disaster?

References