

Role of Nurses in the Disaster Management

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Abstract:

Disaster is an event that destroy the important things of survival such as home, property and lives. Disaster or emergency create severe challenges for the lives of countless citizens in different areas and communities. These communities demand for the appropriate and operative preparation for upcoming future by emergency rescue healthcare professionals and team members. The challenges for health care professionals like Public health nurses (PHNs) are engaged in disaster management. For managing the disaster settings, nurses should be well trained and have high skill. Ten domains and four themes are consisted by International Council for Nurses (ICN) frameworks of calamity nursing capabilities. These domains and themes are used to tabularize the professed skills for calamity nursing. This paper represents the role of nurses with the principles in disaster setting. In disaster situations, it is necessary to follow the codes of ethics and legal challenges by the nurses.

Keywords: Disaster, PHN, Competencies

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Introduction

Patient surge is referred to as sudden, unanticipated demand for health services in case of Disaster events. During a disaster, capacity to respond is increased by the demand for care and the acceptable patterns of institutions for care are disturbed to provide the service for crisis standards for care. Emergency system response plan (ESRP) of hospital is activated that generate an incident command system (ICS) structure for the leadership decision-making. A wealth research includes the evidence based approaches and resources that should be available to nurse leaders for the preparation, responding, mitigations and recovery from the disasters. In case of making decision and engaging in ICS for critical situation, Nurse should have Universal or at minimum, widely tested and accepted knowledge sets and competencies. In the field of disaster response, new concept was application of competency-based leadership, decision-making and education. For the identification of those leadership competencies that are associated with better disaster outcomes, evidence must be used. For this, the lists of competencies and recommendations have been generated by many experts and organizations for the clinicians and public health professionals who works in disaster. During disaster, the standardization of nurse training and expectations of nurse leader competencies do not exist.

Center for Research on the Epidemiology of Disasters (CRED) defines Disaster as “a situation/event, which overpowers the local capacity, compelling a request to a national or international level for external help; an unanticipated and habitually sudden event that causes great damage, devastation and human distress”. An event or situation in which all essential services like house, transportation sanitation and communication, water and health disrupt is considered as disaster. The main features of disaster are unpredictability, unfamiliarity, speed, uncertainty, urgency and threat. Disaster is classified as Natural, biological, hydrological, meteorological, climatological and techno-logical. An example of natural disaster are earthquake in Haiti in 2010 followed by a tsunami and the nuclear catastrophe in Japan in 2011 are the example of mixed natural and manmade disaster. In last 20 years, more than five million people have been affected by the different types of disaster within the countries of Western Europe. In that timeframe, 38,643 people were killed and 8,835 people were injured.

It is necessary to have well trained first-response personal and volunteers for helping a huge number of affected people due to a disaster within a short period. Here, nurses play an essential role for integrating communicating efforts through these protagonists and they have role competencies in disaster preparation. For responding to a mass casualty event or disaster, nurses may be called outside from the hospitals at some time in future. Hence, there is a need of well trained and prepared nurses on a national as well as international levels. Four strengths of nurses are defined in the USA that are the key to a central role in disaster awareness and management including emergency response. These are as follows:

1. In disaster situation, nurses are team performers who work effectively in interdisciplinary teams.
2. In disaster prevention, preparedness, response, recovery, and evaluation, nurses can play a key roles defines that nurses have been advocates for primary, secondary and tertiary prevention.
3. With psychological needs of patients/clients, nurses generally also give them the social support, psychological support, and family-oriented traits of care.
4. Nurses are accessible and practice through the spectrum of health care delivery system settings and the training is given rapidly if necessary.

Goals of Nurses in Disaster

The main goal of nurses in disaster, called disaster nursing is to attain the finest level of health for people and community who are engaged in disaster. There are some other objectives of disaster nursing:

- To provide the basis things which are important for survival like water, food, shelter and security to the population affected by disasters.
- The identification of possibilities of second disaster.
- In environment, both risks and resources should be evaluated.
- It should be ensure that health care and appropriate resources are being provide with equality.

- Their own health should be considered during the participation in disaster nursing.
- In all health promotion activities, religious, cultural, and lingual diversity in persons and families should be handled with respect.
- The highest attainable quality of life should be promoted for survivors or fighters.

Other than these goals, one goal regarding the disaster alertness is to make sure that suitable systems, procedure, and means should be available for providing the effective support to disaster victims. This goal includes all activities that should be taken place before the disaster to ensure that the activities of disaster response run smoothly.

Ideologies of Disaster Treatment

During an emergency and disaster condition, the basic principles of nursing are:

1. There is need for quick valuation of situation and nursing treatment.
2. Triage is a place where a right person is sent for receiving the right level of care.
3. Life saving measures should be initiated first.
4. The use of essential nursing interventions should be based on selection.
5. Nonessential nursing activities should be eliminated.
6. Necessary nursing skill should be adapted for disaster management and other emergency situations.
7. During the dealing with a deficiency of goods, apparatus and workers, the nurse must use their imagination and resourcefulness.
8. Environment evaluation and exclusion of any health hazard.
9. Anticipation from any further illness or injury.
10. During the crisis time, leadership is done for organizing patient triage, care and transport.
11. The training, administration, and application of supplementary medical workers and volunteers.
12. Provision of understanding, sympathy, and passionate support to all the victims and their families.

Nursing process's linking components with Disaster Cycle

The relationship between nursing phases and practice of a disaster is clarified as: how nursing process takes place with disaster cycle. The probable role of public health nurses in disaster setting is taught to students, nurses, colleagues, and partners.

Disaster Phases

Prevention (Mitigation): - Disaster or emergency are prevented to reduce the risks before they occur and vulnerability is minimized under the influence of event. A group of senior citizens is assessed in the terms of their alertness to prevent the heat stroke. The increment in awareness is done by the development of community education. Then, these community education activities are conducted and evaluated.

Preparedness: The capacity is assured for responding to the disasters and emergencies in an effective way. During the disasters, the population is assessed at risk for special needs. The care of special needs has a plan during the disaster. In this care of special need person, training, drill and exercises are conducted, after that the plans are evaluated for serving people with special requirements.

Response: In this phase, sustenance is provided to individuals and communities which are affected by emergencies and disasters. Response crew works to regulate the impact level and specific health needs of hurricane survivors and triage victims. For the rotation of staff who work as a response team, plans are developed to avoid anxiety and burnout among responders. According to the local and state emergency response plans, staff organize to shelters after a hurricane. Response team participate in post facto reviews to estimate the class of health services which are delivered.

Recovery: In this phase, schemes are restored to the functional level. For assessing the community potential and assets, the team help for the recapture from a recent flood. Team work together in order to plan long term recovery concerns after a flood. The team also contribute in the reestablishment of public services after flood. In last, the evaluation is done for finding the long term effect on person which is evacuated by the flood.

Framework of International Council of Nurses (ICN) for Disaster Nursing Competencies

Four broad areas of competencies also called disaster phase (Mitigation and prevention, preparedness, recovery/rehabilitation and response) contain all ICN disaster nursing competencies. These competency domains are:

1. Reduction in the risk, Prevention from health and disease advancement.
2. Planning and Development of the policies.
3. Legal practice, ethical practice and accountability.
4. Communication and sharing of the information.
5. Education and awareness.
6. Community care.
7. Individual and family/community care
8. Psychological or Psychosomatic care
9. Vulnerable population care
10. Long term recovery of persons, families and communities.

Ethics in Disaster Nursing

According to the code of principles, nurses practice in many countries around the world. While most of these countries follow their own code of principles (developed by them) for their nursing training. Worldwide, a code of principles applicable for nurses which was developed by the International Council of Nurses (ICN). A standard is provided by code of ethics through which nurses conduct themselves and for their practice, provide quality care and observe ethical obligations of the professional. A code of principles must be understood, internalized and used by nurses in all facets of their work for achieving its purpose. This statement shows that all the nurses must follow a code of principles in their practice irrespective of the setting and context. In disaster setting, nurses face a challenge as the skill to observe a code of principles as they practice every day.

Subjects of ethics arise in the disaster set up are multilayered and these issues relate with many issues like appropriate triage, allocation of resources and treatment priorities, dealing with the scope and scale

of a disaster situation, lack of privacy, working autonomously, and obtaining informed consent. With respect to time, place and extent, disaster vary. 'One size fits to all' is not true for all the principles that do arise. With code of principles framework, it is necessary to detect legal necessities for nurses in their daily practice.

The possibility of practice are governed by law in which work can be done by nurses and local, national and international legislation inform the nurses. These legislation are rooted within present professional codes such as the professional conduct and code of ethic. For everyday nursing practice, legal and ethical responsibilities are very essential. While, challenge to nurses arise because of the ethical and legal issues regarding their ability to form a decision and practice in a safe and proficient manner.

Review of Literature

Putra, Petpichetchian and Maneewat (2011) proposed that the preparedness, response and recovery phase are essential for appropriate disaster management. A large number of disciplines are used to support the disaster management in which nurses are considered as one of those healthcare professionals, who possess high knowledge and are well prepared to face the challenges in disaster management. Hence, Nurses should be highly aware especially public health nurses (PHNs) who work in high risk area in disaster.

Aliakbari et al., (2014) discussed about the legal and ethical issues that affect Iranian nurses in disaster setting. This study highpoints the requirement to apply these ethics into nursing. Nurses should be aware of how they can practice and manage the disaster setting by living in an ethical boundaries. Lawful standards of justice, care, equity, patient autonomy and informed consent, expanding scope of practice in disaster nursing, and the moral responsibilities of nurses are some issues during the care for those who are struck by the disaster. There is a necessity of designing the courses in this in a better way by which nurses could be prepared for working in disaster situations.

Seroney, (2014) stated that a reasonable knowledge on disaster and its management have been achieved by nurses at Kapsabet district hospital. These nurses believed that their hospital can be a next target of disaster and they need to be prepared. They also said that regular updating of disaster management is very

necessary. In spite of having good knowledge in disaster management, their practices in the terms of frequency of ongoing and regularly plan updating's frequency is insufficient. Kapsabet District Hospital (KDH) management requires more attention on disaster management. Hence, nurses need more training on disaster management, performance of drills. With the training, the updating of plan is also necessary.

Ayuba *et al.*, (2015) concluded that disaster preparedness help in maximizing the safe circumstance, decreasing the vulnerability and minimizing the threat to individuals when they are confronted with hazard events. The nurses take stock of hospital infrastructures show the role of nurses which is a dominant in emergency alertness.

Alshehri (2016) Studied on the disaster preparedness of emergency nursing working in health care services in (Kingdom of Saudi Arabia) KSA. The data were collected form two hospitals in Riyadh to identify the level of confidence, knowledge, training and experience. After the study, they concluded that most respondents understood their role after reading the disaster plan. A statistically significant difference in confidence and perception is seen between those who have disaster training and who do not have any training regarding mass disaster. While there is no significant difference in confidence between those who had attended a real disaster and those who had not any experience.

Alzahrani and Kyratsis (2016) in their study, they highlight the role though not capacity. Emergency nurse play a major role in disaster preparation during the Hajj MG. The result of this study suggests that despite the considerable experience gained through clinical engagement in prior MGs, there is a worrying shortage in knowledge of the Major Incident Plans for ENs working in public hospitals in Mecca. Nurses who are called to make decisions for the patients struck by panic, trauma and stress at the time of disaster, should have essential skills. A special focus on disaster response for Hajj should be included by hospital, online and university –based training courses as well as workshops.

According to Grochtdreis *et al.*, (2016) nurses are the key players in emergency conditions. So, the

clear role should be explained according to the professional education of the nurses. For enhancing the availability of nurses in disaster setting, each nurse should have their role as in the form of personal duties in the family and community. Role of nurses should be decided according to the different types of disaster's characteristics and special attention to disease influenza and biological terrorism. The differentiation between the roles of physicians and nurses during the disaster are required for defining the medical task of nurses clearly.

Veenema *et al.*, (2017) stated that nurses are very important in managing the disasters. They also discussed about the future in which there is a need to focus on the identification and building agreement around those critical concepts and competencies which are involved in disaster nursing leadership. The validation of identified concepts and competencies which are specific to disaster nursing leadership. In future research, both qualitative study of behaviors of nurse leaders at the time of disaster event and quantitative evaluations of the impact of crisis nursing leadership decisions upon patient and organization outcomes should be included.

Conclusion

This paper discussed about the role of Nurses in the disaster events. For managing the disaster setting, nurses play a vital role. Nurses should be well prepared and have high skill to face the challenges in disaster setting. Nurses help those people who were affected by the disaster event. Without complete knowledge and training, they are not able to handle the situation. The four disaster phases with ten domains explain the complete role of the nurses in disaster management. In spite of engaging in the disaster setting, many researcher showed that the knowledge of nurse for disaster setting is not sufficient. So, there is a need of more education by which nurses can handle the situation individually. More training center should be created in which nurses can learn about the situation of affect people in both sense mentally and physically, and cure them.



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