

## 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 a serious challenges for the lives of many citizens in different areas and communities. These communities demand for the appropriate and effective preparation for future by emergency rescue team members and healthcare professionals. The challenges for health care professionals like Public health nurses (PHNs) are involved in disaster management. For managing the disaster settings, nurses should be well trained and have high skill. Four themes and ten domains are consisted by International Council for Nurses (ICN) frameworks of disaster nursing competencies. These themes and domains are used to tabulate the perceived skills for disaster 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 or event, which overwhelms local capacity, necessitating a request to a national or international level for external assistance; an unforeseen and often sudden event that causes great damage, destruction and human suffering”. 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 players and 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 the psychological, social support, and family-oriented aspects of care.
4. Nurses are available 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 best level of health for people and community who are involved in disaster. There are some other goals 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 consider during the participation in disaster nursing.
- In all health promotion activities, cultural, lingual, and religious diversity in individuals and families should be handled with respect.
- The highest achievable quality of life should be promoted for survivors.

Other than these goals, one goal regarding the disaster preparedness is to ensure that appropriate systems,

procedure, and resources should be available for providing the effective support to disaster victims. This goal includes all activities that should be take place before the disaster to ensure that the activities of disaster response run smoothly.

### Principles of Disaster Nursing

During special events and disaster condition, the basic principles of nursing are:

1. There is need for rapid assessment of situation and nursing care.
2. Triage -place a right person at a right place for receiving the right level 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 lack of supplies, equipment and personnel, the nurse must use imagination and resourcefulness.
8. Environment evaluation and removal of any health hazard.
9. Prevention from any further injury or illness.
10. During the crisis time, leadership is done for organizing patient triage, care and transport.
11. The teaching, supervision, and utilization of auxiliary medical personnel and volunteers.
12. Provision of understanding, compassion, and emotional support to all victims and their families.

### Nursing process's linking components with Disaster Cycle

The relationship between nursing practice and phases of a disaster is clarified as: how nursing process is take place with disaster cycle. The potential 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 the effects of event. A

group of elderly citizens is assessed in the terms of their awareness to prevent the heat stroke. The increment in awareness is done by the develop community education. Then, these community education activities are conducted and evaluated.

**Preparedness:** The capacity is assured for responding 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 have a plans during the disaster. In this care of special need person, training, drill and exercises are conducted, after that the plans are evaluated for serving populations with special needs.

**Response:** In this phase, support is provided to persons and communities which are affected by disasters and emergencies. Response team works to determine the impact extent 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 prevent stress 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 evaluate the quality of health services which are provided.

**Recovery:** In this phase, systems are restored to the functional level. For assessing the community assets and potential, the team help for the recovery form a recent flood. Team work together for planning long term recovery priorities after a flood. The team also participate in the restoration of community services after flood. In last, the evaluation is done for finding the long term impact on person which is displaced by a 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 disease and health promotion.
2. Development and Planning of the policies.
3. Ethical practice, legal practice and accountability.
4. Communication and sharing the information.
5. Education and preparedness.
6. Community care

7. Individual and family care
8. Psychological care
9. Vulnerable population care
10. Long term recovery of individuals, families and communities.

### Ethics in disaster Nursing

According to the code of ethics, Nurses practice in many countries around the world. While many countries follow their own code of ethics (developed by them) for nursing practice. Worldwide, a code of ethics 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 their practice, provide quality care and observe ethical obligations of the professional. A code of ethics must be understood, internalized and used by nurses in all aspects of their work for achieving its purpose. This statement shows that all nurses must follow a code of ethics in their practice irrespective of the setting and context. In disaster setting, nurses face a challenge as the ability to observe a code of ethics as they practice every day.

Issues of ethics arise in the disaster setting are multilayered and these issues relate with many issues like allocation of resources, appropriate triage 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 the ethics that do arise. With code of ethics framework, it is necessary to observe legal requirements for nurses in their everyday practice.

The scope 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 embedded within existing professional codes such as the code of ethics and professional conduct. For everyday nursing practice, legal and ethical responsibilities are very important. While, challenge to nurses arise because of the legal and ethical issues regarding their ability to form a decisions and practice in a safe and competent manner.

### Review of Literature

**Putra, Petpichetchian and Maneewat (2011)** proposed that the preparedness, response and recovery phase are essential for appropriate disaster management. Many disciplines are used to support the disaster management in which nurses consider as one of the healthcare professionals, with high knowledge

and 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 ethical and legal issues that affect Iranian nurses in disaster setting. This study highlights 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. Legal standards of care, justice and equity, informed consent and patient autonomy, expanding scope of practice in disaster nursing, and the ethical responsibilities of nurses are some issues during the care for those who are affected by disaster. There is a need 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 risk to individuals when they are confronted with hazard events. The nurses take stock of hospital infrastructures show the role of nurses which is a central in emergency preparedness.

**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 preparedness during the Hajj MG. The result of this study suggest that despite the substantial experience gained through clinical engagement in prior MGs, there is a worrying deficit 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 affected by stress, panic and trauma at the time disaster, should have an essential skills. A specific focus on disaster response for Hajj should be included by hospital, online and university –based training courses and workshops.

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