

The Role of Nurses in Disaster Readiness and Experience

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With 19 years of teaching experience, Ms. Lopez is dedicated to fostering a dynamic and student-centered learning environment. She integrates innovative teaching strategies and technology-enhanced instruction to promote critical thinking, clinical competence, and professional growth among nursing students. She is also actively engaged in research and evidence-based practice, contributing to academic development through conference presentations and scholarly work.

In addition to her teaching responsibilities, she participates in faculty development, curriculum evaluation, and accreditation processes. She is a member of the Philippine Nurses Association and continuously updates her knowledge through seminars and professional training.

Ms. Lopez remains committed to shaping future nurses through mentorship, excellence in education, and the promotion of patient-centered, evidence-based care.

Introduction

This definition of disaster readiness refers to the preparation and education that healthcare professionals, including nurses, receive to respond adequately to predictable disasters (such as natural disasters, pandemics, and mass-casualty situations). This aspect of healthcare is essential for ensuring patient and community safety and well-being during times of crisis. The importance of disaster preparedness in the healthcare system cannot be overstated. Disaster preparedness equips nurses with the skills needed to care for patients, even when the surrounding environment resembles a movie set. Since nurses are frequently the first responders to emergencies, their preparedness is an essential factor in determining the overall impact of a disaster on health outcomes.

Until recently, there has been increased recognition of the need to include some form of formalized disaster preparedness training in nursing school curricula, because nurses are frequently the initial providers of healthcare services to patients during emergencies. The delivery of patient care by nurses who provide competent care during emergencies can save lives. In addition, continuing disaster preparedness through training and repeated simulation exercises assists nurses in developing the competencies needed to deliver competent patient care during actual disasters.

A review of the history of nursing's contributions to and evolution of disaster preparedness provides insight into how nurses have become key players in the administration of disaster response and in the development of policies, procedures, and standards to support the delivery of quality patient care. In addition to valuable insight into the evolution of disaster preparedness processes throughout the history of nursing, historical information on how nursing has responded to disasters is an excellent starting point for discussions of how nursing will continue to evolve in disaster response to meet patients' needs in the future.

The Past History of Nursing and Disasters

The nurse was called to respond to disasters over time and to show resilience in overcoming obstacles or adapting to disasters. Nursing has been occurring since time began, but it began to have a more defined and established role in the time of the Crimean War 1850's when Florence Nightingale began showing how the care of sick and injured soldiers needed to include more than just immediate treatment for the injury; she demonstrated the importance of cleanliness and sanitary practices. This change in how nursing was viewed helped create the belief that emergency medical assistance should be provided by someone knowledgeable and skilled in nursing.

The Spanish Flu pandemic of 1918 provided additional evidence that nurses are instrumental in providing the necessary care to manage patient loads that exceed the limitations of the currently available resources. Additionally, these two examples of nursing's involvement during disasters demonstrate the need for a defined protocol or structure for nurse's use in disasters.

As nursing has continued to evolve through the 19th and 20th centuries, knowledge gained from previous disasters has more effectively shaped how nursing prepares for training and disaster preparedness. Because of this increased training and education surrounding disasters, responses to natural disasters, such as Hurricane Katrina in 2005, included the development of Disaster Response Teams and expanded nursing care beyond traditional patient care to community support systems and health education.

The historical implications of nursing in relation to disasters show that nursing experiences in this area continue to shape how nurses improve their disaster responses. Currently, the established base built by historical nurses supports the ongoing development of practical nursing education and nursing practice, expanding nursing's ability to adequately respond to the disasters nurses will face as a result of continued evolution.

Up-to-Date Trends in Disaster Preparation

The ongoing evolution of disaster preparedness for nurses is driven by a growing number of new technologies and collaborative care delivery processes in a crisis. Evidence from studies conducted during 2022 through 2026 indicates that the use of digital health technologies (e.g., mobile health apps, telehealth, etc.) by nurses will allow for quick and effective responses during disasters through improved communication in real-time, enabling nurses to provide coordinated care and exchange critical information regarding patient care during the disaster.

The use of Artificial Intelligence as a significant tool to support disaster response efforts, in part through predictive analytics and data mining to identify potential health hazards or issues at a given location, is becoming increasingly prevalent.

Also, the trend toward using interdisciplinary team approaches to prepare nurses for disaster management continues to evolve. The incorporation of other health care professionals into disaster drills enhances nurses' knowledge of the overall disaster management process. Collaborative approaches help create teams that will work together to implement a coordinated response to the situation (Taryudi et al.). Nurses who have participated in drills with physicians or first responders report a better understanding of how they will function during a disaster, resulting in improved patient outcomes.

The increased emphasis on improving nursing education by adding a disaster management curriculum will equip future nurses with the skills to effectively use technology and work within multidisciplinary teams during disasters. Adding these types of content directly into nursing curricula will create a strong foundation for nurses to build from as they face unpredictable challenges in their healthcare environments. The COVID-19 pandemic has drastically changed nursing practice and posed many additional challenges for all healthcare workers, especially nurses, who are the first and most visible responders to COVID-19 in a variety of settings (Alpay et al., 2022; Ahmed, 2020).

Training and Education for Nurses

Disaster preparedness training and education equip nurses with the skills and knowledge needed to respond appropriately in a crisis. The development of curricula to prepare nursing students for the many possible scenarios they may face during an emergency is essential; therefore, simulation training is an essential component of the curriculum because it gives

nurses the opportunity to practice their responses in a safe and controlled environment. Simulation allows nurses to practice using realistic scenarios that will develop their decision-making abilities and foster their teamwork skills in a stressful environment. Practicing these real-life scenarios will increase nurses' confidence in managing the chaos often created by an emergency (Zhao et al., 2023).

Continuing education is crucial for nurses as it enables them to learn about new protocols and technology being developed for use in the event of a disaster. Participating in regular training supports ongoing knowledge reinforcement and the introduction of new information that may assist in providing patient care during disasters. Continuing professional development is critical to ensuring that nurses do not rely on out-of-date practices and to adjusting to the ever-changing landscape of healthcare.

While nurses are pursuing their education, they will also face psychological challenges. The emotions and stress associated with handling high-risk patients can affect nurses' ability to perform their job and their mental health. Psychological preparedness is crucial for nurses and directly affects their ability to deliver patient care during a crisis. Providing mental health support as part of the training programs of first responders and other emergency personnel improves their overall resilience and ability to respond effectively to disasters (Zhao et al., 2023).

Nurses' educational and training experiences significantly influence their professional development and ability to provide effective care to patients in a crisis; this is similar to their roles in providing care for and rehabilitating stroke patients.

Psychological Preparedness of Nurses

Psychological preparedness is a key component of disaster readiness for nurses, especially during difficult times such as pandemics. Nurses are frequently subjected to extensive emotional and psychological stress, which can negatively affect their emotional and psychological well-being and result in negative effects on their level of performance. As such, nurses must use effective stress management techniques to maintain their psychological health while providing patients with the highest-quality services when they need them most. The use of mental health support, such as providing access to counseling and peer support groups, helps nurses who are struggling with anxiety or burnout due to COVID-19 pandemic stressors process their traumatic or other stressful experiences and develop resilience so they can perform in a high-stress environment. (Mathkur et al., 2024).

In addition to individual mental health support, implementing support systems within the healthcare environment contributes to nurses' psychological preparedness. Establishing a culture of open communication among staff members and mutual support can reduce feelings of isolation that many nurses experience. Further, consistent training that incorporates mental

health awareness will enhance all nurses' ability to identify their own stressors. The challenges that nurses are confronted with have been compounded by the psychological toll of this pandemic, which has been exacerbated by external barriers stemming from resource shortages and overwhelming patient volume. This emphasizes the need for training to provide mental health support in addition to technical skill development. By fostering psychological preparedness, nurses can improve their ability to manage crises in healthcare systems. Understanding the psychological aspects of nursing has laid the foundation for exploring actual case studies of nurses using these attributes to create positive outcomes in crisis situations, emphasizing their ability to persevere in the face of adversity.

Further, an ongoing study on the preparedness and experiences of Healthcare Workers during the COVID-19 pandemic continues to identify the challenges nurses face, which impact their ability to provide comprehensive care due to a lack of training/resources to effectively navigate these challenges.

Nurses as First Responders in Crisis

The use of case studies highlights the various ways nurses have responded to disasters and their remarkable flexibility and commitment to patient care during times of crisis. An example of this is the immediate care provided by nurses in Haiti after the 2010 earthquake. Upon arrival, the nursing staff had to set up makeshift clinics to triage and provide basic care while utilizing the limited resources available. These actions not only addressed patients' acute medical needs but also provided emotional support to distraught families. The case of the Haiti earthquake illustrates how nurses can prioritize patient care amid chaos while providing timely and effective care.

Another example is the critical role nurses played in providing care during the COVID-19 pandemic, through their participation and collaboration with other healthcare professionals to develop and implement protocols for patient management and vaccination. Nurses helped maintain continuity of care for patients during this pandemic by using telehealth to assess patient needs and by providing education and information on safety measures. The adaptability and quick thinking demonstrated by nurses during this crisis helped minimize its negative impact on patient health outcomes. One study highlighted the role of nurses as educators in teaching patients basic safety measures, underscoring nursing's importance as a component of public health education in disaster and emergency situations.

Conclusion

In conclusion, nurses play a major role before, during, and after natural disasters, and their experiences across a range of events highlight a clear need for ongoing preparation for these events. This paper has examined the history of nurses' participation in disaster preparedness and response, the historical impact of technology in supporting disaster responses, and the training and education necessary for nurses to meet emergency preparedness and disaster response needs.

The psychological impact that responding to disasters creates on nurses and the challenges that nurses will experience while providing a response to the needs of patients and communities, such as providing resources to perform their job successfully, also reinforces the significance of nurses being prepared.

Preparation to respond to disasters must remain a focus for healthcare providers, as the number of natural-disaster-related events and health issues is rising globally. To accomplish this task, advocates for the nursing profession must be given preference. It is also important that nurses are empowered to express their needs and experiences through public engagement and to influence policy to improve their education, resources, and levels of support in emergency response. The collaboration among all healthcare providers and other stakeholders should be promoted and supported to increase the efficiency and effectiveness of crisis response efforts.

Going forward, continued research is needed to identify best-practice methods for nursing involvement in disaster scenarios. Continued research in each of these areas will help build a foundation for a resilient healthcare delivery system that supports nurses and improves patient outcomes during disaster scenarios. The intent of this call to action is to encourage stakeholders to commit to building a culture of preparedness and, in turn, to save lives and improve the health of the communities served during disasters.

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