



Multiple Roles of Pharmacists in Disaster Management

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ABSTRACT

In the past years, the professionalism figure of pharmacists has shown a developmental progress of their roles, duties, and obligations. Their roles were basically "product based", "patient-counselling" and chiefly comprised in administering prescribed treatments, in the 10 years it progressed towards being patient and services management. Other types of duties offered by the pharmacists is slowly growing toward a non-strictly pharmaceutical areas, offering a wide range of non-pharmaceutical services. This review was to understand the role of pharmacist, past, present, and future in disaster management and to outline different in handling them and to come up with a plan in dealing with emergencies with the prospected team of specialists. Pharmacy professionals can convey different roles in disasters, crisis circumstances, conflicts, wars, and infection outbreak as a part of the humanitarian aid associations or being a part of the wellbeing offices of the affected region.

Keywords: Pharmacist, Disaster, Crisis, Management, Roles, and Responsibilities

Introduction:

"A disaster is the sudden occurrence of a calamitous, usually violent, event resulting in substantial material damage, considerable displacement of people, a large number of victims and/or significant social disruption or a combination thereof"¹. United Nations of International Strategy for Disaster Reduction (UN/ISDR) defines a disaster as "calamity" or a "catastrophic" event that causes serious destruction in the functioning of a community or society with widespread human, material, economic, and/or environmental loss.² Many healthcare providers mainly doctors and nurses contribute during the catastrophe. Unfortunately, the role of pharmacist remains unclear so far, the involvement of pharmacists in this issue seems to be almost none. Contribution of pharmacist's expertise should be there, as in most disasters, drugs are being used regularly and the counselling during such event almost not exist. Pharmacists are interestingly situated during disasters to provide medical services and the continuity of medication management for a healthier community. It has been recognized that drug specialists are the most generally dispersed medical care proficient, being more available than grocery stores, banks, or clinical centres. However, pharmacists' roles in disasters both formal and informal are currently undefined or acknowledged. Disasters can affect health both acutely and chronically, with vulnerable populations such as elderly and children being disproportionately affected.² Pharmacists in both the community and hospital setting ensure continuity of medication management services. To prevent disruptions to the essential services provided by pharmacists during disasters, it is important that pharmacists across all practice settings are prepared.

Role of Pharmacist in Disaster Management

Pharmacy service set up during the event usually consist of Mobile pharmacy and temporary pharmacy related services, Distribution of drugs and related medical care, Educate the community on health, hygiene, and wellbeing, Mental health assessment and community characteristic and Cooperation to support sustainable health sector. Pharmacist can do a lot for the community in various disasters. They can provide essential services such as:

- **Preventing and mitigating the spread of diseases** by educating the public on hygiene and social distancing, delivering face masks and hand sanitizer, and performing screening and testing for COVID-19.
- **Responding to the disaster** by focusing on the pharmaceutical supply chain, ensuring the availability, quality, and safety of drugs and medical supplies, managing drug shortages, and preventing prescription errors
- **Ensuring the continuity and quality of pharmaceutical care** by administering or distributing medications, counselling patients, identifying drug interactions, managing drug shortages, and preventing prescription errors.
- **Supporting the vaccination efforts** by educating the public about the benefits and safety of vaccines, facilitating their distribution to other healthcare providers, and administering vaccines to eligible people.

- **Providing patient care** by administering or distributing medications, counselling patients, identifying drug interactions, managing drug therapy, and supporting the vaccination efforts
- **Devising hazard relief strategies** as preventive measures in the pre-disaster phase, such as preparing emergency kits, stocking up on essential drugs, and coordinating with other stakeholders
- **Working closely with healthcare teams** to provide optimal care to patients during a disaster, by sharing their expertise in patient care, logistics, governance, and public health.
- **Mental health support:** Pharmacists can play an important role in providing support to disaster survivors who may be suffering from psychological distress, such as anxiety or depression.

These are some of the ways that a pharmacist can help the community in different types of disasters. They are often the first point of contact for people who need medical assistance during a crisis. They also have a vital role in ensuring the safety and efficacy of drugs and medical supplies. They can help reduce the risk of disease outbreaks, infections, and complications caused by improper use of medications. They can also educate and empower people to take care of their health and well-being during and after a disaster. Pharmacists are essential members of the healthcare system who can make a difference in saving lives and improving health outcomes during a disaster. They deserve our respect and appreciation for their dedication and professionalism. A much bigger roles of pharmacists in the disaster management could be found in other countries. For example, a guideline published by the National Association of Board of Pharmacy in 2006. It was stated that the role of pharmacists is divided into four stages, namely Early Preparation for Emergency or Disaster, Immediate Response to Emergency or Disaster, Short-term Response in 72 hours after the disaster, and Long-term Response within 72 hours up to 30 days (or longer) after a disaster. In each stage, the role of pharmacists is needed and there is collaboration between other health workers or related stakeholders⁶.

The International Pharmaceutical Federation (FIP) has published a document called Responding to disasters: Guidelines for pharmacy 2016. This document provides a comprehensive overview of the four phases of an emergency: prevention, preparation, response, and recovery. It also poses the questions that should be considered at the national, regional, and individual pharmacy levels during each phase. The American Journal of Health-System Pharmacy has published an article titled Pharmacist readiness roles for emergency preparedness. This article defines the pharmacist's role during a disaster and provides examples of how pharmacists can contribute to disaster readiness in different settings. The Australian Journal of Emergency Management has published an article titled Development of pharmacy emergency management guidelines. This article describes the process and outcomes of developing a set of guidelines for pharmacists in Australia to prepare for and respond to disasters. International Journal of Pharmacy Practice has published a systematic literature review titled Disaster preparedness amongst pharmacists and pharmacy students: a systematic literature review. This review explores pharmacists' and pharmacy students' preparedness for disasters and the factors that affect their preparedness. The Pharmacy Info Line website has published a practical guide titled Role of Pharmacist in Disaster Management: Social Pharmacy Practical. This guide summarizes the role of pharmacists in disaster management and provides some frequently asked questions and answers on this topic.

Steps to be taken by the pharmacist to address different disasters depend on the type and phase of the disaster:

Prevention: This phase involves reducing the risk of disasters and mitigating their impact. [Some steps for pharmacists in this phase are:](#)

- Conducting a risk assessment of the pharmacy and its surroundings to identify potential hazards and vulnerabilities.
- Developing a disaster plan that includes emergency contacts, backup power sources, alternative communication methods, inventory management, security measures, and evacuation procedures.
- Educating the public and other health professionals about disaster preparedness, such as having a personal emergency kit, storing medications properly, and disposing of expired or damaged drugs.
- Participating in disaster drills and exercises to test the readiness of the pharmacy and its staff.

Preparedness: This phase involves enhancing the capacity and capability of the pharmacy to respond to disasters. Some steps for pharmacists in this phase are:

- Updating the disaster plan regularly and ensuring that all staff are familiar with it.
- Stocking up on essential medications, supplies, and equipment that may be needed in a disaster, such as antibiotics, analgesics, antiseptics, wound dressings, syringes, and generators.
- Establishing a network with other pharmacies, health facilities, and disaster agencies to coordinate the delivery and distribution of medications and resources.
- Training the staff on disaster response skills, such as first aid, triage, infection control, and mental health support.

Response: This phase involves providing immediate assistance to the affected population during a disaster. Some steps for pharmacists in this phase are:

- Activating the disaster plan and following the instructions of the authorities.
- Assessing the situation and identifying the needs and priorities of the patients and the community.

- Dispensing medications and providing pharmaceutical care to the patients, such as counselling, monitoring, screening, and referral.
- Collaborating with other health professionals and disaster responders to ensure optimal patient outcomes and avoid duplication of services.
- Documenting all activities and reporting any issues or challenges to the relevant authorities.

Recovery: This phase involves restoring normalcy and improving resilience after a disaster. Some steps for pharmacists in this phase are:

- Evaluating the impact of the disaster on the pharmacy operations, staff, patients, and community.
- Restoring the pharmacy services and replenishing the inventory as soon as possible.
- Providing ongoing support and follow-up care to the patients, especially those with chronic conditions or mental health problems.
- Participating in post-disaster reviews and lessons learned sessions to identify strengths and weaknesses of the pharmacy response and improve future preparedness.

Some of these roles are more relevant to floods than others. For example, pharmacists may need to provide emergency medication supplies to patients who have lost their prescriptions or medications due to flooding. They may also need to assess and prescribe medications for common flood-related conditions such as infections, injuries, or mental stress. Additionally, pharmacists may need to educate the public on how to store and dispose of medications that have been exposed to water or extreme temperatures. Pharmacists are often the first point of contact for many people in a disaster situation. They can provide valuable services and support to the affected communities and contribute to the overall disaster response. However, pharmacists may also face challenges and barriers in fulfilling their roles in disasters, such as lack of training, resources, communication, or legal authority. Therefore, it is important for pharmacists to be prepared and equipped with the necessary skills and knowledge to perform their roles effectively and safely in a disaster scenario.⁷ During emergency situations all team members, regardless of their training or background, have a clear understanding of their collective roles and responsibilities, so they can work together to efficiently address all health threats that arise. For pharmacists and their supporting personnel, the delivery of pharmaceuticals and medical supplies is generally accorded highest priority following an emergency event, along with interventions to ensure appropriate use of products that are scarce in supply. However, given the findings in the studies cited above, it appears that pharmacists, and by extension other pharmacy personnel, stand to benefit more substantially from training that allows them to articulate their roles and responsibilities more clearly as they relate to general emergency management.⁸

Conclusion:

In conclusion, pharmacists play a vital role in disaster management. They must be prepared, quick-thinking, adaptable, and able to collaborate effectively with other healthcare teams. By working together, we can ensure that those affected by natural disasters receive the care and medications they need to recover and rebuild their lives. Given the perceived increasing number of disasters occurring around the world, it is far better to be even a little prepared to respond in an effective and efficient manner, than to be totally unprepared. Potential risks should be identified and mitigated as soon as, and as best as, possible. Development and dissemination of the FIP Pharmacy Emergency Management Guidelines helps ensure efficiency and effectiveness both in responding to and recovering from disasters and subsequent emergencies. It will also enable emergency response organisations around the world to reduce time and resources by not having to 're-invent the wheel'.

Conflict of interest:

The authors have declared that they have no conflicts of interest.

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