

A Narrative Review of the Role of Pharmacists in Humanitarian Crises: Supporting Public Health and Ensuring Medication Access

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Abstract

Pharmacists play a crucial role in healthcare, particularly during humanitarian crises where access to essential medicines and healthcare services is severely disrupted. This paper highlights the evolving role of pharmacists in addressing healthcare needs in emergencies. It emphasizes their responsibilities in medication management, patient education, and integration within healthcare teams. From conflict zones to global pandemics, pharmacists have demonstrated adaptability and resilience, ensured the availability of essential medicines and provided critical support to affected populations. Their contributions to public health and patient safety underscore their importance in both developed and developing countries.

Keywords

Pharmacists, Humanitarian Crises, Healthcare, Medication Management, Patient Education, Emergency Response, Public Health, Drug Access, Disaster Preparedness, Pharmaceutical Care, Crisis Management.

Introduction

In December 1988, the World Health Organization convened a consultative group meeting in New Delhi at its Regional Office for South-East Asia to evaluate and enhance the role of pharmacists in healthcare systems. The meeting aimed to define the body of knowledge and expertise underpinning pharmacists' contributions, review their roles in drug acquisition, control, distribution, and rational use, and propose strategies for optimizing their impact. Key proposals included improvements in pharmacy education at all levels—undergraduate, postgraduate, and continuing education—along with training for supportive staff. Additionally, the group recommended actionable steps to maximize the integration of pharmacists within healthcare systems and suggested frameworks for monitoring these developments to ensure sustained progress.

Nowhere is the need for this infrastructure more evident in the day-to-day management of patients than in the provision of essential drugs. Indeed, effective medicine can be practiced only where there is efficient drug management. This is an axiom that applies with equal validity to both developed and developing countries. Yet, time and again, in less affluent settings, inadequacies in the provision of primary health care are attributable to shortcomings within the drug distribution chain.

Only when the pharmacist has been accepted as a vital member of the health care team can the necessary supporting services be organized with the professionalism that they demand. In highly industrialized countries, acceptance of the need for professionalism in the supply and dispensing of drugs and health appliances has long since been indispensable because of the complexity of modern health care technology. Recently, however, a striving for economy engendered by the ever-burgeoning costs of health care within the public sector has lent much credence and immediacy to arguments that a redefinition of the role of the pharmacist could serve the interests of both individual patients and the public at large (WHO, 1988).

The focus of profession of pharmacy has shifted from technical, product oriented, functions to patient oriented, health outcomes counseling information and professional services. This shift, generally referred to as “Pharmaceutical Care”, embarrasses the nation that pharmacist, working in collaboration with other health care providers, undertake responsibility for patient outcomes with respect to their drug therapy. The principal task of the modern pharmacist is to identify, resolve and prevent drug-related problems. Some important aspects of health care are outline in the report of the international conference on primary health care held in Sept. 1978 at Alma Ata to achieve the goal “Health for by 2000A.D.” are: Education concerning prevailing health problems and methods of identifying, preventing and controlling them, Promotion of food supply and proper nutrition, Prevention and controlled of locally Epidemic nutrition, Provision of essential diseases, Immunization against the major infection diseases, Availability of health professional, Availability of health professionals and National health policies (Kokane, J. V., 2016).

The other domain is academia where a pharmacist can be involved in teaching and academic related activities. Finally, the domain of community pharmacy which, at the moment is booming in developing countries like India and Pakistan. (Ayesha Javeed et.al, 2012). A community pharmacist, also coined as retail pharmacist, dispensing pharmacist, is a person who counsel, dispense, manage the patients care plan. As the community pharmacists are in direct contact with patient so they have number of responsibilities which can help to enhance the vision of their profession and their need in this health care system setting. If they have knowledge so they can build the confidence among patients and it would be a key source by which patients start to adhere to their therapy and start to trust them. He is also involved in reducing patient's cost and give a safe and effective therapy. Thus, a community pharmacist plays an important role in healthcare system. (Logan K, 1983)

The community pharmacist renders such great professional services in the society without booking appointment and high consultation charges. Because of these highlighted services offered by the community pharmacist he is known to be highly appreciated by the patient and the physician. For this reason, the role and the services offered by a community pharmacist is impossible to be neglected or denied in the modern society (Michael D, 1991).

Background:

A humanitarian crisis is understood as a situation in which there is a widespread threat to human life, safety, health and well-being. Each humanitarian crisis is caused by exceptional factors that are specific to the affected region. Main drivers of humanitarian crises are natural disasters, conflicts, epidemics or complex emergencies¹. Crises across the world exhibit complex characteristics; where conflict coincides with multiple additional factors such as environmental,

economic and social instabilities. This coincides with already existing vulnerabilities such as poverty, inequality and lack of access to basic services, which exacerbates the destructive impacts of disasters and conflicts. On the other hand, conflicts and disasters can create other instabilities and new vulnerabilities. This may include food insecurity and entrenched poverty, displacement, environmental degradation, political instabilities and epidemics. Intense conflicts and frequent grievances as well as natural disasters, environmental degradation, poverty and poor governance force people to flee their home.

❖ **The role of pharmacists in healthcare system**

Pharmacists play a multifaceted role in the healthcare system, evolving from traditional dispensers to integral members of healthcare teams. Their contributions span various domains, including patient care, public health, and combating misinformation, which collectively enhance healthcare delivery and patient outcomes. Pharmacists play a crucial role in patient-centered care by providing medication management, patient counseling, and drug monitoring to ensure the safe and effective use of medications (Bektay & Sancar, 2024). Their involvement in chronic disease management and preventative care significantly improves medication adherence and health outcomes (Mbata et al., 2024). Beyond individualized care, pharmacists are instrumental in public health advocacy. They educate patients on medication use, lifestyle modifications, and disease prevention strategies, contributing to broader health literacy and wellness (Pal & Dash, 2024). Additionally, their work as drug information specialists and their role in conducting drug use assessments help reduce prescription errors and enhance overall patient safety (Pal & Dash, 2024).

Pharmacists also play a vital role in combating misinformation, a critical function in today's healthcare landscape. By providing accurate, evidence-based information, they help counter medical misinformation and support informed healthcare decisions (Harris et al., 2024). Their active engagement with communities and dedication to patient education empower individuals to take control of their health, fostering trust and adherence to medical advice (Harris et al., 2024). Despite their expanding roles and contributions, pharmacists face challenges such as limited resources and persistent misconceptions about their capabilities. Addressing these barriers is essential to fully integrate pharmacists into healthcare systems and maximize their positive impact on health outcomes.

❖ **The effect of Humanitarian Crises on health care system**

Humanitarian crises significantly disrupt healthcare systems, leading to severe consequences for public health. These crises, often characterized by conflict or natural disasters, result in the destruction of health infrastructure, shortages of medical supplies, and increased disease burden. The following sections outline the key effects of humanitarian crises on healthcare systems.

Humanitarian crises severely disrupt health services, as seen in conflicts like the recent crisis in Sudan, where hospital closures and attacks on healthcare facilities have drastically limited access to essential care (Khogali & Homeida, 2023; Oduoye et al., 2023). Similarly, in Syria, targeted attacks on health facilities led to a 51% reduction in outpatient consultations immediately after each incident, with long-term effects on service availability (Burbach et al., 2023). These disruptions compromise the delivery of critical healthcare services, leaving affected populations vulnerable to a wide range of health challenges.

Increased disease burdens are another consequence, driven by overcrowded living conditions, poor sanitation, and interrupted vaccination programs. For instance, the Sudan crisis has triggered outbreaks of measles and cholera, alongside a rise in malaria and respiratory infections (Oduoye et al., 2023). The mental health toll is equally severe, with heightened rates of PTSD

and depression among affected communities (Oduoye et al., 2023). Furthermore, health financing becomes a significant challenge in such crises, as traditional funding mechanisms often fall short. Innovative solutions, including digital financial systems and active community participation, are essential to sustain healthcare access in these fragile settings (Okoli et al., 2024).

While humanitarian crises pose severe challenges to healthcare systems, they also present opportunities for innovative solutions and international collaboration to strengthen health resilience and improve outcomes for affected populations.

❖ **The role of the pharmacist in humanitarian crises**

The role of pharmacists in responding to humanitarian crises is multifaceted, encompassing medication management, patient education, and collaboration with healthcare teams. Their involvement is crucial in ensuring effective pharmaceutical care during emergencies, as evidenced by various studies highlighting their preparedness and adaptability in crisis situations. This response will explore key aspects of pharmacists' roles in humanitarian crises.

Pharmacists play a critical role in managing medication supplies during humanitarian crises, where shortages are often prevalent. Their ability to implement strategies that mitigate the impact of these shortages ensures the availability of essential medications for affected populations (Miljković, 2022). Beyond supply management, pharmacists provide vital education to survivors, explaining proper medication use, potential side effects, and the importance of adherence, which are crucial for effective recovery (Uzun et al., 2024). Their responsibilities also extend to consulting on wound care and immunizations, highlighting their expanded clinical roles in disaster settings (Uzun et al., 2024).

Collaboration with other healthcare professionals is another vital aspect of pharmacists' contributions in crisis scenarios. Recognized increasingly as integral members of disaster response teams, pharmacists enhance patient care through interdisciplinary collaboration (Nazar & Nazar, 2020). For crisis management to be effective, their inclusion in disaster preparedness plans is essential, ensuring they are well-equipped to respond swiftly and effectively (Albahar & Abdullah, 2021). Despite these significant contributions, there remains a pressing need for enhanced training and better integration of pharmacists into emergency response frameworks to maximize their impact in such high-pressure environments (Nazar & Nazar, 2020).

❖ **The role of pharmacists in humanitarian crises (Covid19)**

The role of pharmacists in responding to the COVID-19 pandemic has been pivotal, encompassing various responsibilities that extend beyond traditional pharmaceutical care. They have emerged as frontline healthcare providers, facilitating access to treatments, providing patient education, and participating in vaccination efforts. This multifaceted involvement highlights the critical contributions of pharmacists during public health emergencies.

Pharmacists played a crucial role in managing COVID-19 patients through the implementation of telehealth services, which significantly improved access to antiviral treatments. In one study, pharmacists managed nearly 20% of COVID-19 cases, issuing 3,820 antiviral prescriptions with a median turnaround of just one day from symptom onset to prescription (Potter et al., 2024). This approach was especially valuable for marginalized populations, ensuring timely access to care amid strained healthcare resources (Potter et al., 2024). Community pharmacists also stepped up during the pandemic by providing essential information about COVID-19 symptoms, prevention, and treatment. With 86% of pharmacists reporting an increase in patient inquiries, they leveraged digital communication tools to maintain effective counseling and support despite limited face-to-face interactions (Stefanović et al., 2024; Pratiwi et al., 2023). Preparedness and

training were key factors in enhancing pharmacists' roles during the pandemic. Their confidence in managing COVID-19 cases improved significantly through training and a solid understanding of treatment guidelines (Santos et al., 2024). This experience not only strengthened their immediate response but also led to the development of better strategies for handling future public health emergencies (Emenike et al., 2023). However, challenges persist, including the need for improved integration into healthcare teams and addressing resource limitations. Overcoming these barriers is essential to maximize the effectiveness of pharmacists in managing future health crises.

Case Stories Pharmacists Serving in Humanitarian Crisis Globally

FIP and Capacity Building of Pharmacist Working in Humanitarian Crisis:

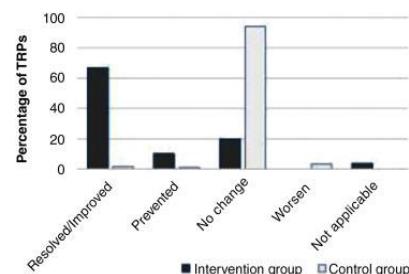
The International Federation of Pharmaceuticals combines the role of emergency pharmacist and the military services under the umbrella of military and emergency pharmacists (MEPS) since 1994 (International Pharmaceutical Federation (FIP), 2019). The organization provides extensive framework of activities including the meeting of the MEPS colleagues during annual congress of FIP, webinars, newsletters, and special projects including the FIP pictogram project and development of guidelines for emergency preparedness of pharmacists during disaster situation.

In Chronic Disease Management

- 1- As global political conflicts continue to increase, more and more refugees are facing urgent challenges such as the unavailability of proper medical care. Many of the Syrian refugees now living in Jordan (the entire group accounts for one-tenth of that country's population) are struggling with at least one chronic disease, placing tremendous strain on existing health and humanitarian resources as a result.

A 3-month long-single blinded randomized study was carried out in three cities of Jordan with the majority Syrian refugee population. The total number of patients recruited was 109. Treatment-related problems (TRPs) were identified and resolved using the pharmacist-delivered Home Medication Management Review (HMMR) service based on the Australian HMMR protocol. Significant differences were observed between the intervention and control groups with the percentage of TRPs resolved/improved in the intervention group being 66.8% in comparison to 1.5% in the control group. The postintervention evaluation showed that only 19.7% of the TRPs remained unresolved in the group receiving medication review by the pharmacists (Fig. 1). The study demonstrates that pharmacists can play a vital role in closing treatment gaps for managing chronic health conditions among this underserved population. The interventions were received positively by the physicians as well as by the patients, and the authors recommend that this service can be of vital significance in designing effective refugee health programs (Al Alawneh et al., 2018).

Figure 1:



Outcome on TRPs observed in the Syrian refugee population undertaking pharmacist led Home Medication Management Review in Jordanian cities.

Ensuring the Adequate Supply of Quality Essential Medicines in a Country with Poor Access to Essential Medicines (2005–2013)

2- **In 2005**, earthquakes hit the northern regions of Pakistan, and the federal capital and the task of essential medicines availability were closely managed by a team of pharmacists that grew from few pharmacists to an expanded team working in nation-wide disaster management offices under World Health Organization (Bukhari et al., 2010).

For a country where pharmacist was still to be recognized as an essential health-care team member, the pharmacists managed to provide essential medicines to the far-flung regions in the country. WHO acted as a hub for receiving and rationalizing the donations for many donor agencies, and this centralized framework was the main reason for a low pharmaceutical waste documented during this humanitarian operation.

Emergency pharmacists were trained along with the establishment of central warehouse and satellite facilities. Apart from logistic supplies, it was ensured that the medicines were provided with the training of paramedics delivering the services of catering the remote facilities. Storage, dispensing, and prescribing protocols were developed, and the huge number of pharmacists and paramedics were trained to work in close collaboration with the public health experts and epidemiologist to enhance the effectiveness of emergency response. The concept of health-care kit supplies was used to ensure rational and complete provision of the treatment needs. The whole process was aided with the development of an ungraded software (LSS upgradation to Pharmacy Information System (PIMS)) that linked the central warehouse with the regional units. Two types of customized kits were designed to cater different types of health-care needs and speed up the delivery and demand process (Bukhari et al., 2010).

Conclusion

Pharmacists are indispensable in humanitarian crises, providing essential services that range from managing medication supplies to patient counseling. Their integration into healthcare teams enhances the efficiency of emergency responses, contributing to better health outcomes. However, to fully realize their potential, it is crucial to address challenges such as resource limitations and training gaps. Strengthening the role of pharmacists in disaster preparedness and response frameworks will ensure more resilient healthcare systems, capable of mitigating the impacts of future crises.

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