

# THE ROLE OF PHARMACY IN CRISIS MANAGEMENT AND DISASTER RESPONSE IN UNITED ARAB EMIRATES

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## ABSTRACT

*Progressing arrangement of drugs and clinical supplies is of key significance during and following a catastrophe or other crisis occasion. An effectively organized response including locally accessible pharmacy personnel—drawing upon the efforts of authorized drug specialists and unlicensed care staff—can assist with relieving harms and mitigate difficulty in a community after crisis occasions. Nonetheless, pharmacists and the health care sector generally receive little training in crisis readiness of medications, even in countries with proficient training programs. The pharmacy sector centers mostly around clinical supply, more so than on general crisis readiness. To encourage future work between drug store faculties on crisis preparedness, the aim behind this research is to describe pharmacists' experiences in responding to or preparing for both natural and manmade disasters. Notwithstanding distinguishing key exercises that must be performed, having built up management plan for drug store faculty. This will empower drug store faculty working in assorted practice settings to recognize and embrace fundamental activities that are important to guarantee a compelling crisis reaction and will advance better coordinated effort between drug store colleagues during actual disaster situations.*

**Keywords:** Emergency Preparedness, Emergency Response, Pandemic, Pharmacists, Crisis Management

## INTRODUCTION

In 2006, the International Pharmaceutical Federation (FIP) gave a Statement of Professional Standards with respect to the role of pharmacist in reacting to emergencies, including pandemics and manmade or catastrophic events. This essay takes note of the numerous ways that pharmacist can attempt to reduce damage after a crisis occasion. It likewise determines extra precautions that should be made by the health care personnel specially pharmacist to work to their maximum capacity in mitigating difficulty during a disaster. 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 centers. However, pharmacists' roles in disasters both formal and informal are currently undefined or acknowledged.

Anecdotally, pharmacists have been attempting different tasks in catastrophes in an impromptu design to help their communities. Nonetheless, pharmacist's role in crisis did not become of significant interest in the literature until the occasions of September 11, 2001 in the United States (US). Prior to 2001, acknowledged roles for pharmacists by focusing on their contribution in logistics and supply chain management. Post 2001, pharmacists started to be perceived for their casual commitments in patient care and general wellbeing during disasters, in spite of the fact that their basic role and formal job was still logistics.

The strength that pharmacists give during disasters is their positioning in the community. They are viewed as community landmarks or communication hubs for patients and are normally the principal medical care administrative to continue activities after a disaster has happened. Jobs embraced by pharmacists in disasters are within their extent of training and are regularly an expansion of their day-by-day obligations (for example coherence of medication management). For instance, patients will in general leave their homes without taking their medications, remedies, cash or ID. In this situation during a disaster, with the breakdown of community medical care services, pharmacists can give a restricted emergency supply of the patient's chronic disease medications. This can reduce the medical care trouble on stuffed trauma centers and let loose specialists and attendants to treat higher-acuity patients.

Hurricane Katrina, a Category Four hurricane, altogether influenced portions of the US in 2005 and featured the effect pharmacists can have in the response and recuperation of a community following a disaster. It was discovered that pharmacists performed numerous obligations in the wake of Hurricane Katrina and satisfied extra parts without other medical services experts. A portion of the obligation's pharmacists performed following Hurricane Katrina included: taking medication histories, giving vaccination, performing fundamental clinical checks. Blending intravenous medications, giving consultations on injuries, helping with significant traumas and surveying the contamination risks of drugs brought in, and pill identification.

Pharmacy in the UAE is quickly progressing. There are unequivocal qualities in UAE pharmacy for instance; the drug business and drug store practice has been enveloped in the UAE Federal Law since the mid-1980s. The prime legislation that controls medications and drug store in the nation is the UAE Federal Law number 4 of 1983 for Pharmaceutical Professions and Institutions. Pharmaceuticals were among the primary items accessible to consumers in the UAE, which went through guideline regarding enrolling, permitting, and valuing.

In regard to the roles outlined by pharmacists on their day-by-day obligations, their significance become more important during disasters when there is a possible collapse of community medical care services, or influenced communities become cut off from outside help.

The objective of this study is to build up a Pharmacy Emergency Preparedness and Response (PEPR) Framework and proposals for pharmacy professional pathways towards full incorporation within the public medical care on the field of disaster all through the four disaster stages—prevention, preparedness, response, and recovery.

#### Problem Statement

Alongside its prospected development, the pharmacy is viewed as the most emergency inclined of all enterprises. Particularly so for drug organizations, which is hoping to expand to cater to the growing demand. However, such development in the drug business accompanies a drawback – the scourge of unpredictability. With developing requests, overseeing drug work processes have gotten more complex. Exploring and testing new medications is currently stacked with shortcomings, from compliance issues to missing deadlines. Noncompliance, specifically, is a costly and very important problem looming over drug organizations over the globe. All in all, what does it involve?

In the pharmaceutical business, noncompliance ranges over a vast array of cases. Certain organizations keep up inconsistent chemical labels while others store chemicals past their expiration dates. Manual systems or the conventional systems are one of the main factors prone to errors in regards of insufficient and inaccurate translation of data and continuous manual labor.

#### Research Questions

Based on problem statement above, the study attempts to answer the following research questions;

- What is the role of pharmacist in crisis management?
- What are the causes of crisis?
- What are the different phases of response to crisis?

- How can pharmacist minimize harm affected by crisis?
- How can pharmacist avoid future-related emergencies?

## Research Objectives

The following research objectives aim to answer the above research questions:

- To define the role of pharmacist, past, present and future in crisis management
- Outline different causes of crisis and their outcomes
- Highlight the phases of crisis response with listing various methods in handling them
- Come up with a crisis management plan in dealing with emergencies harming the industry
- Review futuristic scenarios in managing a crisis with the prospected team of specialists

## Significance of the Study

The purpose of this study is to plan, methodologies and approach a disaster through however a wider perspective of management. Developing an emergency management plan isn't troublesome yet requires some thinking ahead. An astounding number of associations don't have an emergency plan set up before an emergency occurs, which can lead them to be caught off-guard when things turn out badly and incorrect data circulates around the web very quickly. Consider what sorts of conditions could compromise a drug association and analyze how you would respond. Make intentional messaging for those circumstances while you are able to think and mandate clearly. On the off chance that you stand by until you are facing a disaster, you will feel rushed and react internally. That is when mistakes will undoubtedly occur.

## Defining Crisis and Crisis Management

### Defining Crisis

The term crisis is ambiguous. A crisis comprises of two main definitions. One carrying a productive connotation, which is the turning point, indicating recovery after a defining moment. The second depicts a pessimistic outcome such as, an intense moment or a difficult time during the threat ordeal. A "threat" is a state of danger with the intention of conflicting harm on an organization or community. A threat is one of the stages which comprises into a crisis from different sources such as, environmental, economic, technological, financial threats and etc.

The crisis can be played on an individual or cultural level. It tends to be traumatic or distressing change in someone's life, or socially unstable and dangerous circumstance in political, social, economic and military terms, or major ecological event, particularly one that causes close and abrupt change. All the more, it is a term signifying "difficult period" or "crisis".

Crisis could be established by the social norms, conflicting harm and danger on the society's individuals or groups by prompting stress and achieving a sensation of hazard and risking the social equilibrium, while changing regular patterns and propensities.

It can impact different parts of the community – schools, families, cooperation, government and many more. An emergency targets the fundamental structure or the basic characteristics and guidelines of a community. An argumentative debacle of crisis continues to be discussed on how an emergency is an unforeseen obstacle, more than on how strategic planning is preparing for such expected crisis.

Regardless of how crisis could vary in definition from one definer to another, three main parts are basic in every crisis definition: which are, a time decision, danger to a system and the element of surprise. Every crisis is positioned in a particular way, despite its affect on the system, they all carry the same basic highlight of swift acceleration of events, lack of data, the surprise factor, panic, pattern changes and decisions and movement.

## Defining Crisis Management

A crisis management is a process by which an organization tries to deal with a crisis or emergency that threatens the business, staff, customers and the cycle of work.

Crisis management, unlike crisis, aims to target the risk of threat before, during and after a crisis can occur. The role of crisis management is to strategize scenarios that constitute a crisis and trigger a response and use methods to respond to reality and perception of crisis before a crisis happening. To effectively communicate planned and rehearsed strategies during the emergency phase.

All in all, the act of crisis management incorporates efforts to wipe out failure, and the advancement of a conventional communication framework to prevent or oversee crisis and control under the broader spectrum of the management. For example, when a driver is planning for a long car venture, the driver deliberately checked the vehicle, renew the tank, inspected the tires and the motor. This is a form of crisis management at its simplest form.

An effective crisis management plan contains the methods and procedures for surveying, comprehending and managing an emergency, especially the moment the occur, till the recovery process. A crisis management proposes a plan to respond to target circumstances, as well as an insightful recognition.

## The Pharmacist: History

In the past years, the professionalism figure of pharmacists has shown a developmental progress of their roles, duties and obligations. Assuming at first, their roles was basically "product based", "patient-counseling" 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, for example, patient counseling. A few of improvement have urged and added to this advancement: (I) logical progression and mechanical achievements; (ii) economical and financial developments with the need of executing new strategies; (iii) headway of the clinical administrations settings and of the general wellbeing systems; and (iv) advancement of patient care, which centers around patients and their necessities.

Now a days many projects are driven towards proof, educated based, upgraded medicine treatment remedy, presenting them to cutting edge and modern ideas, for example, pharmacogenetics and pharmacogenomics. These days, the pharmacist isn't considered any longer as a simple master in drugs and medications, but represents a pertinent medical service-related entertainer who plays, in a joint effort with other medical care experts, a critical part in uncovering excellent data yet clear by the community, just as in observing and observation of antagonistic responses of medications and drugs, expanding wellbeing proficiency of patient's counseling, teaching and ensuring the right use of medication with the correct adherence to the regimen.

In a few western nations, the pharmacist workforce is effectively occupied with upgrading of the community health and prosperity: This solid responsibility interprets in between a proficient and sectoral cooperation. The pharmacist is ideally viewed as a caregiver, emphasizing the appropriate use of medication. Now the focus also encompasses other generic roles such as, manager, analyst, service developer, clinical expert, regulatory affairs officer, researcher, etc. The additional roles undertaken by pharmacist depends highly on their positioning in the community.

In community pharmacy the role of pharmacists differs from a country to another and is largely affected by the economic, regulatory and authorities' systems. For instance, this affect is influenced largely on the way the medications are ordered and distributed: in case the drugs are uninhibitedly accessible through any source or whether drugs are confined to sale from enlisted drug stores only, or some are only available by written prescriptions. Those guidelines differ generally on the financial structure of the medical framework systems. Various countries have various methods of health care provision, and this in return is

reflected on the arrangement of community drug store services. Nations vary generally concerning who can claim drug stores. Some permit corporate possession, bringing about chains and products: some confine drug store proprietorship to drug specialists alone, and some permit singular drug specialists to claim one drug store only.

In hospital pharmacy, a large number of pharmacists are needed in emergency clinics. The focus on the role of the pharmacist in hospitals here too, is patient-focus. However, the most important value of drug specialist is the supervision of medications required and needed by the inpatients as well as outpatients with providing the appropriate counseling on the right use of the medications. Some hospitals often manufacture units for sterile and non-sterile products, which are not commercially available. Others have facilities for laboratories, quality control and other technological services. Clinics have gotten progressively engaged with the advancement of new medications, and the discerning and viable utilization of existing ones, therefore, they have become more proficient.

The diversity of pharmaceutical industries is as unique as it sounds, providing many opportunities for jobs for pharmacists than any other sector. The pharmaceutical industry provides multiple experiences on drug control in the pharmaceutical sector. Such diversity could be found in departments like the quality control and production department, research and formulation department as well as medical representatives marketing. After the pharmacist have gained some history behind drug formulation, some proceed to different sectors of the industry such as, clinical data, regulatory affairs officer, product registration and while others proceed towards marketing and sales departments.

Pharmacists are likewise to be found in a wide scope of organizations, for example, jails, and in certain nations generous quantities of drug specialists are utilized in the military, in maritime, military and aviation based armed forces foundations. A later improvement in developed countries assign pharmacists to local health authorities for advices on monitoring drug prescriptions and creating drug formularies. A couple are presently utilized straightforwardly by broad experts on drug use, both costs effectively and rationally.

The future of pharmacist is promising, with the wide labeling of its proficiency, skills developed by pharmacists' attributes to a future of well-rounded player, maintaining their deserved role in the healthcare. Years from now, numerous progressions are expected to occur and jobs will continue expanding with a particular ultimate objective to control expenses and upgrade the nature of care. The optimum goal is to promote effected health outcome and asses the therapeutic needs of patient to prevent adverse side effect. Furthermore, to expand the patient's understanding about the role and duties performed by the pharmacists in minimizing obstacles faced by patients during their journey of wellbeing.

## **Role of Pharmacist**

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. These incorporate; Arranging and purchasing of pharmaceuticals and related supplies, Monitoring and assessment of the stocks received, Setting up medication supply system, Doing pharmacovigilance activities and checking the supply chain for any infiltration of unacceptable and falsified medicines, Guaranteeing rational utilization of medications, Preventing antimicrobial resistance, Counseling and guaranteeing drug adherence, Preventing wastage of medication, Controlling and preventing misuse and abuse of drugs and Limiting communication boundary between influenced community and pharmacy experts to guarantee appropriate counseling and understanding of the social and cultural preferences.

Policy and lawful framework, drug supply management, and the management support are three primary degrees of drug specialist's role in healthcare offices (WHO Regional Office for Africa, 2004).

Pharmacists can play the role of a medical care volunteer, a regulator and a colleague. They can help advancement of indigenous rules drug donations to cater the requirements of

the local population exceptionally in settings that are especially powerless against catastrophe or emergency.

### What Makes a Crisis?

A crisis can occur when an organization either (a) doesn't have adequate or precise data to settle on choices or (b) comes up short on the assets to control the circumstance – and the circumstance unfolds with a raising progression of events that should be managed. During an emergency, the organization needs to deal with the issue while under intense scrutiny from outcasts, the media, and its own labor force. Where a labor force is coordinated, the organization additionally encounters the emergency -not just from the circumstance itself, but also from its individuals' view of how the organization is reacting. An emergency can prompt an attack attitude where both administration and work may feel under attack from all angles. How well the emergency is managed may decide the drawn-out endurance of the organization (and accordingly jobs) just as the endurance of the organization or its present leadership.

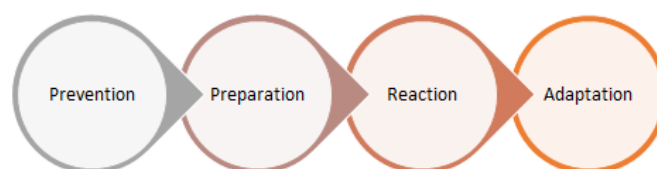
### The Management of Crisis

The element of crisis centers on the knowledge how and where are decisions made. Did the previous activity plan work? How can the crisis management team continuously improve the crisis management plan? And what are the appropriate procedures to ensure recovery after a crisis. Treating an emergency doesn't lie on the right plan solely, but on the decisions made, efforts obtained and communications highlighted by vigorously updating the plan and setting a standardized framework for minimizing hurdles.

In order to have a continuity plan, some organization develop risk analysis, which is a procedure used to recognize the probability of a threats happening. The risk manger will survey the likelihood of a risk occurring in the future and will request a simulation running. For example, a flood, which can damage the organization's projects, computers, losing various data and thus affecting the business prosperity.

When the risk manager acknowledges the impact of such a risk before it happens, the crisis management team develops a plan. For example, creating a back up system for all the information stored, this way the organization will not be able to lose valuable information. Even though, a business slows down the progression of work after being impacted by a crisis, being able to have a crisis management plan prepares the organization to resolve unexpected hindrance at work.

### Stages of Crisis Management



**FIGURE 1**  
**STAGES OF CRISIS MANAGEMENT**

The risks an organization faces could be presented in various forms, from technical, financial, economic, environmental, human related errors, etc. And are not generally foreseen, portraying harmful ramification on the organization: resulting into the loss of abilities and business sectors. At a time where an emergency happens, the organization's quick response is directly dependent on its level of readiness and quick data analysis. It is

fundamental for the organization to recognize the most punctual potential weaknesses and related threats. It should likewise foresee how to respond, systems to operate, plans to implement and communications to direct.

## METHODOLOGY

There are different approaches of research, strategies and a few research procedures are accessible yet the decisions of the current study's research methodology depend on research objectives. The following areas depict the research design, methods, survey scale, data collection methods and the data analysis by using the descriptive quantitative approach and the analytical approach in collecting data to describe the study variables and analyze its relationships using (SPSS).

The study includes 3 governmental sectors and 5 private pharmaceutical sectors, including governmental hospitals and community pharmacies. The study is composed of two sections, one that focuses on questionnaire on the crisis management departments in Ministry of Health, Dubai Health Authority and National Emergency Crisis and Disaster Management in governmental sectors and the second section focuses on pharmacy managers in private community pharmacies. With a total of 200 employees.

## CONCLUSION

An emergency is a danger for the majority of organizations. Identifying and eliminating these threats means to apply the right strategies.

This article shows the significance of the usage of managerial benchmarks in the midst of an emergency, for example, communication, decrease costs, develop better approaches for motivating force, and search for more steady business sectors to go up an emergency with the least resources.

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