

# The Role of a Multidisciplinary Team in Enhancing Medication Management in Emergency Departments In KSA

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## Abstract

Medications are the most frequent therapeutic interventions performed in emergency care processes. Their importance is well recognized, as medications are used to achieve a therapeutic effect for disease states and to improve negatively altered physiological processes. Changes in the emergency care environment and advancement in medication management are needed for emergency care to be improved. Over the last two decades, the practice of emergency care has evolved greatly in the Kingdom of Saudi Arabia. The emphasis has been on the use of evidence-based medicine to enhance quality care. One area of concern in emergency care is the management of medications in the emergency department, as this area is the most prone to medication errors.

Several influential factors, which include governmental and hospital-related factors, affect the process of medication management in emergency departments in KSA. The involvement of all healthcare professionals is indeed needed to promote safe medication use in an emergency care environment. Of course, we do respect the talents of all healthcare professionals, but one important aspect of the many new directions in emergency care involves the teamwork provided by a variable number of healthcare professionals who all collaborate to ensure that all processes related to patient care are completed effectively and efficiently. A multi-disciplinary management team does exist in some emergency departments; however, this movement was not yet required before the Joint Commission International became a mandatory requirement for many hospitals in KSA.

## 1. Introduction

The medication management process is widely recognized as a notably complicated and multifaceted endeavor, one that has garnered substantial interest and concern relating to the considerable potential for medication error to occur. The intricate tasks involved in prescribing, administration, education, and the employment of highly specialized skills are indispensable. Moreover, the ability to thoroughly assess complex clinical problems in coordination is crucial for the accurate prescription, efficient delivery, and diligent monitoring of treatment for ill patients. (Bassey, 2024)

This is particularly true given the relatively high likelihood of acute decompensation and the increased exposure time to healthcare systems that often arises from the challenging clinical environment of medical care. Within the clinical backdrop of an emergency department, the delivery of medications stands out as a fundamental aspect of comprehensive patient management and care. There exists a significant probability of error at each juncture of the medication management process—specifically at the stages of prescribing, transcribing, dispensing, administration, and monitoring. Each of these critical phases is susceptible to mistakes that can have serious repercussions for patient safety. (Mao et al.2022)

Furthermore, numerous factors drive the increased rate of error, which is intricately linked to the lively and dynamic nature of an active clinical setting. These contributing factors are multifactorial in nature and demonstrate a wide-ranging interdependency involving a diverse array of stakeholders, which includes health professionals, patients, patients' families, varied healthcare settings, and the precise execution of operational processes. On an international scale, there is a considerable and growing interest in the establishment of effective safeguards and robust control strategies aimed at combating the persistence of medication errors within healthcare systems. (Alqenae et al., 2020)

Medication administration is undeniably a safety-critical process, which necessitates the clear delineation and clarification of professional roles and responsibilities. The creation of strong safety cultures within healthcare environments relies heavily on fostering interprofessional collaboration among various healthcare providers. While numerous initiatives have successfully achieved reductions in medication error rates in inpatient care environments, there remains a knowledge gap concerning the extent to which such benefits may also be effectively extrapolated and realized across other patient care settings and contexts within the healthcare landscape. (Ho et al.2023)

## **2. Importance of Medication Management in Emergency Departments**

Sicker patients and public demand put pressure on the organization to provide better care in emergency departments (EDs). If a patient becomes a client of the organization, their assessment, management, transfer, or discharge could be effective, safe, and timely. These duties are hampered in EDs when proper medication management takes longer to ensure the correct delivery of medications. The misuse of medication could be expected from prolonged patient stays as a result of different factors such as medical errors. In hopes of maximizing patient and provider satisfaction that leads to proper medication management, a multidisciplinary team's contributions are needed. Therefore, discussing the role of the team in enhancing efficiency and safety in the medication management area has been crucial. (Zaki et al.2024)

Efficient ED medication management is necessary to ensure that patients receive the necessary medications, achieving the right drug at the right time, and safely in the correct dose and mode, to enhance the quality of care provided to individuals seeking care in EDs. Inadequate or delayed treatment means that patients who do not receive their drugs on time will suffer an untoward incident, making waiting for drugs unsafe and unpleasant. Such delays will ultimately affect the stay in this area; therefore, a proper medication management technique should be applied to reduce the continued replenishment of patient EDs, giving access to underserved people. (Kelen et al.2021)

## **3. Key Components of a Multidisciplinary Team in Emergency Departments**

There is no agreed definition for the term "Multidisciplinary Team"; however, there are key components that should be present in these teams. These key components have been outlined as being the essential building blocks or prerequisites of a successful multidisciplinary team. In brief, they may be summarized as achieving a common goal, bringing together individuals from different professions, establishing a mutual understanding among individuals within the team, and sharing and respecting each other's roles and responsibilities. (Igbinenikaro et al.2024)

Their biggest strength is the diversity they bring to the joint problem-solving and interest serving, aimed at improving patient care and health outcomes. In the emergency setting, the ability of a multi-occupational team to improve the care experience by decreasing wait times, minimizing overcrowding, ensuring faster throughput, and improving coordination and communication between health professionals requires the creation of a common team identity, as well as specific skills and competencies, good leadership, and supportive teamwork principles that allow the emergency multidisciplinary team to function effectively and efficiently. (Gittings et al., 2024)

A variety of studies examined two such dimensions, focusing on competencies and teamwork as the main attributes that make up the multidisciplinary team in the emergency department. They found that multidisciplinary emergency teams show the benefits of improved efficiency, effectiveness, and satisfaction with their health care. Still, the implementation of such multi-occupational teams may also represent a challenge to the professionals in these emergency departments. The establishment of a common identity among team members is difficult to achieve, though it is crucial for their effective work. (Lecky et al.2020)

### **3.1. Pharmacists**

Pharmacists are vital to the multidisciplinary team in providing adequate, effective, and safe medication management. This important role is even greater in an emergency department setting where the number of patients, complexity of conditions, and available data about the patient that could help reach the best decision are limited and oftentimes minimal. About 60% of the emergency departments in Saudi Arabia were reported to suffer from severe overcrowding; this might lead to an increase in medical errors and delays in medication management. (Alnahari and A'aqoulah, 2024)

Working together as a team, pharmacists, nurses, and physicians can significantly enhance the quality of medication management. Pharmacists are well educated in the science and practice of pharmaceutical care and are trained and specialized in managing medication-related problems. Some of the responsibilities of pharmacists include conducting patient interviews, reviewing and updating the patient's medical profile, confirming medication allergy status, obtaining medication history, reconciling medications, managing medications in patients, and providing education to staff about medication information. (Rech et al.2022)

In addition, it has been reported that getting a pharmacist to assist them in verifying patient medications significantly improved medication counseling by nurses in the emergency department and might consequently promote office staff's abilities to counsel patients effectively. Having pharmacists in the emergency department's multidisciplinary team can help in saving time as well, in addition to other benefits such as increasing patient satisfaction and reducing clinical errors; all of this was addressed as pharmacists' overall contributions to

improving care quality in emergency departments. Data of patients included in an emergency department were kept between 3 and 90 days before implementation of the Pharmacist-Assisted Medication Program and compared to similar patients with no intervention. Results showed that there is a reduction in emergency department visits with patients complementing the medication list via the tool and having fewer visits after those patients must be approached by a pharmacist. (Miarons et al.2021)

### **3.2. Physicians**

Prescribing medication is the responsibility of the physician, but the variability of the physician's practice in regard to correctly prescribing medications is still a concern. This is especially true for medications administered in unscheduled emergency departments where harm can be more likely to occur. Physicians need plenty of equipment and information in order to make correct decisions and improve patient management, especially in acute settings, in unscheduled emergency departments, and in areas with high workload. Common barriers include extensive availability of health care services, acceptability and receptiveness of health care services, inadequate resources, poor quality, and economic aspects. Drug-related problems are an important issue influencing the prescribing accuracy of these drugs. Numerous studies have demonstrated the positive consequences of multidisciplinary teams on patient outcomes related to patients who visited the emergency department of unscheduled care. (Berardi et al.2020)

### **3.3. Nurses**

Nursing has a significant role in clinical practice, adverse drug events, and preventable life-threatening errors in the administration of medications. The discipline relies heavily on nursing because nurses are at the front line of care. Nurses monitor patients and administer medications around the clock. Some studies reported a positive relationship between working in medication administration and the number of errors, while others reported no significant relationship. A previous study indicated that a significant number of medication errors were committed by nurses in obtaining medication history. Also, nurses are key communicators and the medium between physicians and patients or patients' relatives in providing information regarding medications in the cases of mothers and babies in the emergency departments. (Yoo et al., 2020)

Medication description and utilization counseling with patients or their relatives are often carried out by nurses in emergency departments. However, a nurse specialist in this area can reduce the risk of medication errors and enhance the quality of care. In addition, nurses must be knowledgeable in different areas such as pharmacological aspects, medication names, dosages, indications, and side effects. They are also responsible for promoting patient safety in taking history or information from patients and examining their medical records. In discouraging abuse and addiction, the role of the nurse must be observed, particularly in cases of abusing opioid medications. These medications are controlled drugs and must be stored securely. Nurses are the only healthcare professionals who have the right to store and dispense medication, especially controlled drugs, with proper prescription and category in healthcare settings. (Lee et al.2021)

### **3.4. Social Workers**

Social workers or "clinical social workers" are highly trained professionals who have a master's degree and are certified by the Saudi Commission for Health Specialties. Consequently, in KSA, unlike other countries in which clinical social workers are colleagues of other multidisciplinary team members, social workers are not common members of the team in KSA. Although this has been changing, the success of a study carried out in a long-term care hospital on incorporating a clinical social worker to address discharge challenges encountered in the ED has led to the implementation and expansion to include clinical social workers in the mental health and edema reviews. (Alhamidi and Alyousef2020)

Consequently, a strong relationship between the team and the community nurses and social workers is currently established. These professionals are usually part of major hospitals found in large cities in KSA. Adding the social worker to the multidisciplinary team in smaller hospitals and rural areas within KSA would support the provision of an individualized treatment plan for patients who are mainly elderly, with their own unique challenges experienced during healthcare transitions, and ensure the best experience and outcome in delivering the best supportive plan to patients. (Courtnage et al.2020)

## **4. Collaborative Practices and Communication Strategies within the Team**

The findings of our study have shown that the MD team, in combination with pharmacists, collaborating with doctors and nurses in the ED, has the potential to effectively perform the multiple tasks required to implement the full range of medication management activities through the delegated intervention model. However, there appeared to be many barriers to collaborative work between all the team members to ensure patient safety and satisfaction in such a challenging work environment. (Kaplan et al.2022)

Many components were considered as collaborators in this study; however, the dominant component from both sides was the pharmacist. Pharmacists also have a clear professional responsibility for ensuring patient safety in medication use and have a close partnership with doctors in clinical decision-making. They are in a unique position to assist in the overall clinical management of the patient by recommending treatment plans, identifying, preventing, and solving the medication-related problems of the multidisciplinary team. (De et al.2022)

As such, the increasingly recognized status attributed to patients by the pharmaceutical profession has led to increased collaboration with the current sharing of clinical decision-making duties. Significant benefits of advanced clinical services under the management of ED pharmacy have been recognized. Staff members highlighted the added value of such an activity by reference to their constantly growing clinical experience. However, it seems that we do not yet have a good understanding of physician responsibilities regarding the processes to ensure that patient care matters most.

### **5. Case Studies and Success Stories in KSA**

Public and private hospitals in KSA have developed unique success stories in implementing medication management programs to improve care and better patient outcomes. As the most significant governmental health institution in the country, the Ministry of Health in KSA provides around 70% of health care services to the public. The Ministry of Health is focused on improving the patient care journey and renewing the infrastructure and quality of care supported by modern technology, qualified human resources, and advanced scientific applications. (Alradhi and Alanazi, 2023)

This transformation requires innovative technologies and trained staff to facilitate change. In recent decades, the Ministry of Health in KSA has taken several successful initiatives and established effective programs that have made a significant impact on health care services in KSA. Sustainable medication management in emergency room settings is a significant achievement that positively impacts the quality of care provided and also saves a great deal of time, human resources, and overall healthcare budgets in KSA. Expanding the interdisciplinary team size in hospital settings will extend the benefit of the pharmacist's scope of practice and expertise. (Alaklopi et al.2024)

These consistencies, together with the coordinating activities and accountabilities of all involved team members, promote patient safety, enhance communication, and secure costs, while assuring efficient pharmaceutical service. This should assist in achieving proper healthcare, decrease medication non-adherence, and lower or avoid unnecessary problems such as relapse, hospital readmissions, serious deteriorations, or even deaths. Changes are beneficial to the patient as well as being highly rewarding to all team members and also improving the process of care delivery within the organization as a whole. (Zaki et al.2024)

### **conclusion**

In conclusion, medication management is pivotal for the well-being of patients. The challenge of providing this care in the hectic setting of the emergency department is significant. Many elements that contribute to medication errors can be resolved, however, with the establishment of a strong multidisciplinary team that ensures communication and collaboration. A significant portion of the medication errors were due to physicians' inexperience and workload. The inputs provided by pharmacists in controlling and supervising treatment shortened the length of stay of patients in the ED, and at the same time, improved the quality. The new services in the ED enhanced the roles of pharmacists, providing recommendations on drug therapy, monitoring drug interactions, managing drug shortages, and improving the quality of drug information. This collaboration brings a practical and insightful approach to drug care delivery across the ED. A collaborative model between pharmacists and ED specialists will ultimately build a strong and robust workforce framework.

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