

The Role of Pharmaceutical Care Services in improving The Quality of Healthcare Services in the Saudi Healthcare Sector

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Introduction

Especially in the Saudi healthcare industry, pharmaceutical care services are essential to raising the standard of medical treatment. Better patient outcomes and more efficient healthcare delivery can result from incorporating pharmaceutical care as the nation's healthcare system develops. Pharmaceutical care services prioritize patient-centered strategies that enhance the overall healthcare experience in addition to drug management, claim Alshammari et al. (2020). Addressing the particular health issues that the Saudi populace faces, such as chronic illnesses and problems with medications, requires this integration.

The rising incidence of non-communicable diseases in Saudi Arabia emphasizes the significance of pharmacological care even more. According to the World Health Organization (WHO), managing medications well is essential to preventing these problems with health (WHO, 2021). Healthcare professionals may guarantee that patients receive the right prescription therapy by integrating pharmaceutical care services, which may enhance adherence and result in better health outcomes. This strategy is in line with Saudi Vision 2030's objectives, which include raising the standard of healthcare provided nationwide (Saudi Ministry of Health, 2019).

Additionally, putting pharmaceutical care services into place can help patients and healthcare providers communicate more effectively. Understanding patient wants and preferences through effective communication might improve patient satisfaction and treatment plan adherence (Khan et al., 2022). Pharmaceutical care services can support a more comprehensive approach to patient care by encouraging teamwork, which will eventually enhance people's health and quality of life. Improving the quality of healthcare in Saudi Arabia requires the incorporation of pharmaceutical care services. These services can greatly enhance patient outcomes and be in line with national health goals by emphasizing drug control, patient-centered care, and good communication. The next sections will investigate the many characteristics of pharmaceutical care services and their impact on healthcare quality in Saudi Arabia.

Pharmaceutical care is practice-based, with the patient's requirements at the focus of the pharmacist's work. This implies a way of functioning in which pharmacists assume responsibility for ensuring that the patient's best interests are always considered. This concept originated from a term that Mikeal et al. (1975) defined as a subset of medical treatment. The concept then changed as a result of the community's changing surroundings and the pressures they put on the pharmacy. This includes the prescription needs for a particular patient, which includes providing the drugs and services needed for effective and safe treatment (Alanazi et al., 2016). The basis for pharmacological treatment is the collaboration between the patient and the health care providers who assume responsibility for their treatment. Pharmaceutical treatment consists of the active involvement of the patient and medical professional in decisions regarding drug therapy (Al-Quteimat & Amer, 2016).

Pharmaceutical care has three primary tasks: identifying potential and current drug-related problems; resolving drug-related problems; and preventing drug-related problems. "The responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient's quality of life" is the goal and guiding principle of all these trends, which include medication management, drug management, medication assessment, clinical pharmacy services, and mental health services. (Amer& Al-Quteimat, 2016).

Pharmacists are thought to be the most personable members of the medical field and support the practice of medicine. Pharmacists are a vital human resource because they serve as the center of their communities. Because of their professional training and research, they are able to provide the public with accurate and thorough medical data. Prior to the start of the epidemic, pharmacists were in the vanguard of patient care, infection prevention, and infection effect mitigation (Bragazzi et al., 2020). Nowadays, a pharmacist's role in patient care extends beyond simply writing prescriptions and providing basic pharmacological counseling. They also work together with the community and other medical specialists. This has led to the increased involvement of pharmacists in various health care systems, such as general practitioners' offices, hospitals, and pharmacies for both in-patients and out-patients (AlQuteimat&Amer, 2016).

Clinical pharmacists may offer their patients a wide range of services, including prescription drugs and other health-related services. They can assist physicians in rationally prescribing drugs, ensuring that patients comprehend the amount and method of administration, and improve patient compliance. Furthermore, in community pharmacy settings, pharmacists have a critical role in improving public health in areas such as regular vaccinations, infection prevention and treatment, mental health management, healthy eating and lifestyle choices, and other chronic illness care (Alim et al., 2016).

Pharmacists have an obligation to collaborate with other healthcare providers in order to improve patient care. Pharmacists have become more crucial in the treatment and prevention of chronic illnesses and their associated consequences since the healthcare system moved from episodic care to population health management and from volume to value-based care. Hospital pharmacy departments prioritize the outpatient hospital pharmacy (OPh) because of the high volume of visiting patients and the associated expenses. influence on the medical system. Effective use of human and financial resources in this field improves patient outcomes right away (Martínez-López-De-Castro et al., 2017).

Aims and Objectives

To identify how pharmaceutical care services contribute to the management of medication therapy, identify how pharmaceutical care services contribute to patient education and medication monitoring, identify how pharmaceutical services care fit into patient counseling and education.

Literature Review

The Saudi Food and Drug Authority, the Saudi Pharmaceutical Society, the Ministry of Civil Services, the Saudi Commission for Health Specialties, and the Ministry of Health are some of the organizations that oversee the pharmacy profession in Saudi Arabia. A crucial component of drug shop guidelines is provided by the Service of Wellbeing (MOH) through its drug care section. The main goal of pharmaceutical care is to administer pharmacotherapy using state-of-the-art techniques and knowledgeable pharmacists. Furthermore, the Saudi Commission for Health Specialties (SCFHS) is in charge of creating and approving residency programs at the various internship locations in addition to licensing and registering pharmacy graduates (Almaghaslah et al., 2018). All pharmaceutical items, including prescription medications, are subject to regulation by the Saudi Dietary and Drug Authority. Herbal, nutritional, over-the-counter, and behind-the-counter supplements. All pharmacists in the Kingdom are represented by the Saudi Pharmaceutical Society. It aims to promote the pharmacy profession by moving forward with training as deemed by the License Gathering of Drug Store Instruction (Rasheed et al., 2020).

Barriers to implement pharmaceutical care in community pharmacy

Time restrictions were cited by 59% of pharmacists in diverse practice settings in Argentina as the largest barrier to pharmaceutical treatment. This was followed by a shortage of space in the pharmacy, poor patient communication abilities, and a lack of specialized training. Furthermore, a lack of communication with other healthcare practitioners was mentioned by 5% of pharmacists as a barrier to pharmaceutical care. The two main barriers to offering pharmacological treatment, according to Northwest China's community pharmacists, were cost.issues as well as a lack of time, expertise, abilities, and support from other medical specialists (Ahmed & AlWahibi, 2016).

Regions of practice

Pharmacists work in non-traditional settings such as regulatory bodies (like the Saudi Food and Drug Authority), the pharmaceutical industry (such as sales and marketing, scientific offices, manufacturing sites, licensing and regulation departments, and drug evaluation), and educational and teaching institutions in addition to hospitals and neighborhood pharmacies. According to Al-Jedai et al. (2016),

the majority of pharmacy technicians are employed in hospitals, where there is a greater demand for their knowledge than in other contexts.

Community Drugstore

In the community, pharmacists fulfill the customary tasks of administering medication and offering counseling. Medications fall into three categories: prescription, over-the-counter, and over-the-counter. Medications that are accessible to people and that a pharmacist gives out without a prescription are recognized like over-the-counter medications. Behind-the-counter medications are those that are accessible to patients and are supplied by a pharmacist without a prescription. Pharmacists are prohibited by law from diagnosing illnesses or giving prescription medications to patients without a prescription. Unfortunately, many pharmacies still sell antibiotics, contraceptives, and medications for chronic conditions without a prescription. The lack of authorization is attributed to a shortage of auditors by the MOH, which is the only regulatory authority for neighborhood pharmacies. This situation is troubling because, according to local research, community pharmacists in the Kingdom of Saudi Arabia are not equipped with the clinical knowledge and training needed to diagnose and/or prescribe. The primary situation in which drug specialists strictly adhere to the law is prohibited or opiate substances, because of significant, valid outcomes (Al-Jedai et al., 2016).

Reducing the cost of drug-related morbidity and mortality or medication errors is one of the two objectives of pharmaceutical care treatments' cost-effectiveness. Because they are qualified to recognize, address, and prevent medication errors and other pharmaceutical-related issues, pharmacists have a significant chance to significantly lower healthcare expenditures (Mekonnen et al., 2016).

Management of Medication Therapy

Medication therapy management (MTM), which improves patient health and encourages more collaboration among MTM providers, is administered by pharmacists and other medical specialists. The ambitions of Saudi Arabian pharmacists to provide MTM services are still mostly unknown (Alsulami et al., 2019).

Pharmacists have been recognized by other medical experts for their important role in reducing medication errors; this position could be further strengthened by providing MTM. For instance, studies showed that prescription errors were lower when pharmacists participated in rounding teams with physicians and other medical specialists than when they did not (Alsulami et al., 2019).

Furthermore, studies showed that the medication review services offered by clinical pharmacists decreased the frequency of potentially dangerous drug interactions and inaccurate prescriptions. Both the healthcare system and patients' financial and clinical outcomes improved as a result. Furthermore, high patient satisfaction levels were associated with MTM availability (Stuhec et al., 2019).

Clinically speaking, pharmacists have identified and addressed problems with inadequate medication adherence, drug-drug interactions, improper dosage and/or medication selection, and unnecessary pharmacological therapy. Prior research has indicated that between 45.0 and 69.1% of medication-related problems (MRPs) were resolved (Turner et al., 2018).

When pharmacists offer MTM services, patients have seen cost savings. When less expensive medications are used instead of more expensive ones, both the patient and the healthcare system save money. According to Turner et al. (2018), offering medication and health management services has a higher benefit-to-cost ratio than not doing so.

To find out how satisfied patients are with MTM services provided by pharmacists, numerous international studies have been conducted. If MTM services are made available in Saudi Arabia, it is anticipated that patients will accept and be more enthusiastic about them. This is due to the fact that most studies carried out globally have shown evidence of the benefits and improvements in patients' health and well-being brought about by pharmacists' MTM services (Alhaddad, 2019).

Monitoring of drugs and patient education

The Saudi Ministry of Health (MOH) released its most recent pharmacy strategy planning, which prioritized critical pharmaceutical care services. Medication counseling for patients and drug therapy monitoring were also incorporated in advanced clinical pharmacy. The plan was divided into multiple phases, one of which was implementation. Taskforce committees were formed at that time to supervise over thirty patient-centered pharmacy practice programs. The pharmaceutical wellness program, for instance, addresses medication errors as well as the identification and counteraction of antagonistic medication responses. It also covered every facet of the USA Institution of Safe drug Practice and the Saudi Center of Organization Accreditation's requirements for drug safety standards.

One of the projects started with education on restriction prescriptions. A special board The program's direction manual for patient education, the investment in public world days, such as drug specialist day, asthma and diabetic days, the setting up of patient education at the short-term drug store, the release of patient counseling, and the layout of walking care centers for patient guidance were among the

concerns raised by the trustees. Alomi et al. (2018) discuss the high cost of the health care system at MOH hospitals and primary healthcare clinics, as well as the counseling that addresses chronic conditions such as diabetes mellitus, asthma, and epilepsy.

Counseling and Education for Patients

For some people, community pharmacists are their only interaction with medical professionals, and they frequently serve as their initial point of contact with patients and other members of the public. Additionally, community pharmacies are a significant resource for society, functioning as the only medical facility in times of need and being a vital source of health care (Alfadl et al., 2018). By taking use of their central placement in communities, pharmacists can assist numerous public health programs, encourage health, and provide extra health and wellness services. By teaching the public on the correct administration and use of medications, as well as by providing advice on maintaining a healthy lifestyle and promoting self-care, community pharmacists can also help to improve health and reduce hospital admission rates (Alfadl et al., 2018).

For several reasons, it is believed that providing adequate counseling is necessary to achieve all of the aforementioned goals. First off, counseling plays a major role in helping patients adhere to their treatment plans. Adequate counseling is a critical prerequisite to help patients take their drugs as recommended and lower the risk of drug-drug interactions, drug-food interactions, drug allergies, or any other safety precautions that need to be observed when taking pharmaceuticals (Alfadl et al., 2018).

Poor pharmaceutical counseling can also directly result in drug overdoses, ineffective treatments, injuries, or even fatalities, despite the fact that it is thought that effective patient counseling produces better therapeutic effects. Getting the right advice is one of the most important parts of taking medications to improve patient outcomes because of all of these factors (Sanii et al., 2016).

Pharmaceutical care intervention's benefits

For almost two decades, the role of a drug specialist in drug delivery has been generally recognized and valued as a crucial part of their normal area of expertise. The importance of pharmacists to patient-centered care in hospital and community pharmacy settings has been demonstrated in literature from developed nations; however, in developing nations, where pharmacists are more involved in pharmaceutical sales, this documentation is still lacking.

A significant reduction in the total amount of time patients spent in a tertiary care hospital as well as a lessened financial burden were two benefits of having a pharmacist on the medical team in charge of managing inpatients. Additionally, the pharmacist's involvement in ambulatory patient care helped patients control their blood pressure, blood sugar, and low-density lipoprotein cholesterol while reducing the frequency of adverse drug events (Upadhyay & Ooi, 2018). Linking Other Health Care Professionals (HCPs) with Pharmacists Trained pharmacists are the best individuals to assist patients and medical professionals in avoiding drug use problems and making the most of their drug use. Prescription, distribution, and administration practices in developing countries have long been recognized to be nonsensical. The earlier factors affecting the efficacy of pharmacological therapy as well as how patients and medical professionals use pharmaceuticals were somewhat clarified by research.

Physicians' perceptions of pharmacist competency influence whether or not they accept direct patient services, and multiple published studies have found a communication gap between physicians and pharmacists (Maes et al., 2018).

Results

There are now two different kinds of health providers in Saudi Arabia: one that is free (supported by the government) and the other that charges a fee to use its services (private). All Saudi nationals and foreign residents are entitled to free access to all medical services, including dental care, under the Saudi constitution: As stated by the former Saudi monarch King Khalid, "health [is] free for everyone in Saudi Arabia."

8. The MOH is the primary supplier of providing free healthcare (Table 1). The MOH manages its own budget and is in charge of planning, organizing, and defining health plans, managing health initiatives, and keeping an eye on private sector health administration.

9. It is also in charge of promoting other government agencies and the business sector to implement strategies that align with the regulations and objectives for wellness. Additionally, all public health services and systems in Saudi Arabia are under the jurisdiction of the Saudi Ministry of Health.

The MOH has an authorized branch in each Saudi province that is in charge of developing plans and monitoring the health situation there in order to enhance it (MOH, 2020).

Additionally, it is responsible for overseeing the private sector and granting private healthcare facilities permission to open and treat patients. Additionally, a hospital or public clinic that is run by an individual or business that makes money from patients can be considered to be in the private sector. In

conclusion, the MOH is in charge of overseeing all MOH clinics and hospitals, in addition to those in the private sector, in order to improve the health of the Saudi populace.

Other Saudi organizations offer free medical care in addition to the MOH. These organizations are the Saudi Arabia National Guard (SANG), the Ministry of Defense (MOD), the Ministry of Education (MOE), and the Ministry of Interior (MOI). Regarding providing free healthcare to Saudi nationals, each of these organizations has particular qualifying requirements (Table 1). While the MOD, MOI, and SANG offer medical services to employees and their dependents, the MOE offers instant primary healthcare to students and its staff (Table 1).

Table 1: Number of hospitals in the private sector, MOH, and other government entities, together with access eligibility.

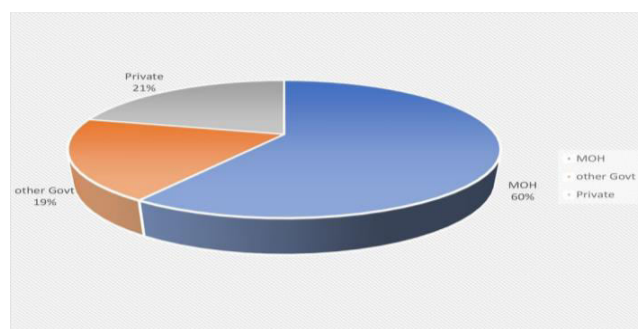
Provider	Number of Hospitals	Number of PHCs	Eligibility
Ministry of Health (MOH)	275	2280	Saudi citizens and residents (non-Saudi)
Ministry of Defense (MOD)	40	None	Employees of the Ministry of Defense and their dependents
Saudi Arabian National Guard (SANG)			Employees of the National Guard and their dependents
Ministry of Interior (MOI)			Employees of the Interior Ministry and their dependents
Ministry of Education (MOE)			Students and employees of the Ministry of Education
Private Sector	135	2180	
Total	450	4460	

The provision and financing of healthcare services in the nation are overseen by a number of separate Saudi organizations in addition to these. Custodial homes for orphans and facilities for the mentally impaired are run by the Ministry of Labor and Social Affairs. These establishments offer a particular level of medical care to their residents. In conjunction with managing sports facilities, the General Organization for Social Insurance and General Presidency of Youth Welfare provide health services to specific demographic groups. Residents and workers in the two industrial cities of Jubail and Yanbu can access health facilities provided by the Royal Commission for Jubail and Yanbu. In order to offer healthcare services to its personnel, Saudi Arabian Airlines runs its own medical facility.

In addition to doing health research in conjunction with other research centers, Saudi universities offer specialized curative services, medical education, and training programs through their medical colleges or hospitals. Saudi Arabia also funds and offers referral-based care at King Khalid Specialist Eye Hospital and King Faisal Specialist Hospital and Research Center, two of its main specialized national tertiary care referral facilities. In addition to doing research on health concerns generally and those pertaining to the Kingdom specifically, the King Faisal Specialist Hospital and Research Centre employs cutting-edge technologies and serves as a reference hospital for situations requiring sophisticated and specialized care.

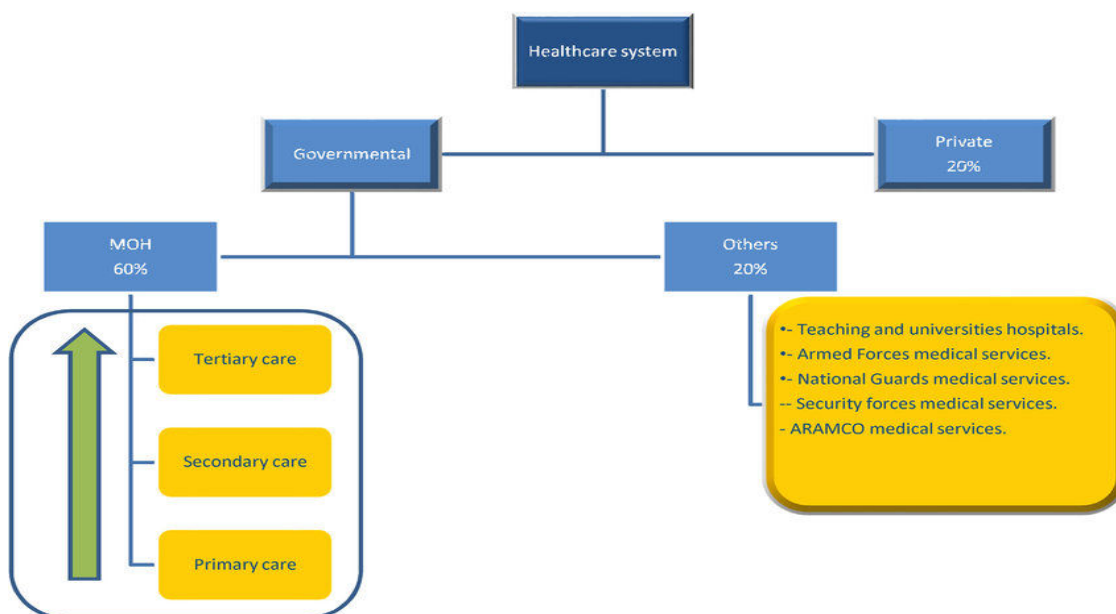
Additionally, the Saudi Red Crescent Society contributes significantly to health services by offering emergency assistance. They give patients emergency care before they are sent to the hospital, either at the scene of an accident or while they are being transported there (Fig. 1).

Figure 1 Percentage of hospitals based in each sector. Source: (MOH 2020)



The Saudi Ministry of Health oversees and manages the whole health system in Saudi Arabia. This covers the business sector as well as additional government organizations like SANG and MOD. Similar to the British NHS, the MOH is in charge of the organization, planning, and strategies for the health system. Additionally, MOH is in charge of any oral health public education initiatives. This includes the ongoing program in schools, as well as preventative initiatives, public posters, mobile street clinics, and an informative public festival. MOH even oversees and manages media promotions, including text and TV messaging. In Saudi Arabia, public education programs are also offered by medical and dentistry schools via their websites and social media accounts (such as Twitter). With both the public and commercial sectors (MOH, 2020). While secondary level hospitals handle more complex and critical situations, primary healthcare centers provide necessary preventive and therapeutic therapy. Additionally, instances requiring specialized care are directed to particular tertiary healing centers (Fig. 2).

Fig2: The current structure of the healthcare system in Saudi Arabia.



Conclusion

Getting a patient's medication history, teaching them how to take their medications, giving them storage advice, and informing them of drug and/or food interactions are the main pharmaceutical care-related activities that community pharmacists do. The quality of pharmaceutical care in Saudi Arabia is on par with that of other countries. In general, pharmacists in different countries have observed the similar range of services provided and associated challenges. The study facility was the first to offer pharmacist-led pharmaceutical care services. The results unequivocally demonstrate that pharmacist-led interventions enhanced drug therapy when combined with other HCPs' coordinated care. By offering exceptional professional services and knowledge, pharmacists can gain more recognition from other HCPs as vital members of the healthcare team. By healthcare facilities in developing countries must stay up to date with quickly changing trends in order to minimize drug-related issues, better address patients' drug-related needs, counsel patients on their prescribed therapies, and maximize the clinical outcomes of treatment. This includes establishing clinical pharmacy departments and involving pharmacists in medical ward rounds.

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