

(RESEARCH ARTICLE)



Role of pharmacist in healthcare system

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GSC Biological and Pharmaceutical Sciences, 2023, 24(01), 036–045

Publication history: Received on 22 May 2023; revised on 05 July 2023; accepted on 08 July 2023

Article DOI: <https://doi.org/10.30574/gscbps.2023.24.1.0261>

Abstract

Pharmacists play a crucial role in the healthcare system by ensuring that patients receive safe and effective medications. They are responsible for dispensing medication, advising patients on drug interactions and side effects, monitoring medication therapies, and collaborating with other healthcare professionals to optimize patient outcomes additionally, pharmacists provide patient education on disease management, medication compliance, and lifestyle modifications. They also serve as drug information experts, conducting drug utilization reviews and providing guidance on appropriate medication selection and dosing. The role of pharmacists is becoming increasingly important as healthcare systems strive to improve patient safety, reduce medication errors, and control healthcare costs. As medication experts, pharmacists are well-positioned to help address these challenges and improve the overall quality of care provided to patients. As a summary we can say that “Physician gives medicine to the patients but life to medicine given by pharmacist”

Keywords: Healthcare system; Effective medications; Medication compliance; Pharmacists; Patient safety

1. Introduction

The emphasis of the pharmacy profession has evolved from technical, product-focused duties to patient-focused, health outcomes counselling information and specialized services. The nation is embarrassed by this “Pharmaceutical Care” change, in which pharmacists accept responsibility for patient outcomes related to their medication therapy in partnership with other health care providers. Today’s pharmacists are primarily responsible for identifying, fixing, and preventing drug-related issues. In order to realize the objective of “Health for by 2000,” several crucial components of healthcare are outlined in the report of the worldwide conference on primary health care held in September 1978 at Alma Ata.

- 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.
- National health policies.^{1,2}

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More importantly, this report was seen as a fundamental requirement that needed to be supplemented in accordance with the nation's economic and social principles, and it's Public. To different people from various nations, the word "HEALTH" signifies different things. For far too many, it simply refers to being free from illness or the absence of illness. Health is total physical, mental, and social well-being, not only the absence of disease, according to the WHO. Ayurveda defines health as having a "well-balanced metabolism. Happy mental and sensory condition. Notwithstanding the WHO's shortcomings, the concept of health is expansive, beneficial, and gives countries a broad objective to work towards. Ought to march. Citizens' "Good Health" promotes social and economic protection

- Health is an integral part of the development
- Health is intersect oral
- Health is central to the concept of quality of Life hence, health is world Wide social-goal. To achieve this goal every nation sets Professional persons in healthcare System.³

2. Professionals include in Healthcare system



Figure 1 Professionals in Healthcare System

- Direct professional
 - Pharmacist
 - Physician/doctors
 - Nurses
 - Compounder
 - Dispenser
- Indirect professional Like Engineers, Teachers and every person
- Different professional plays different minor

Roles in health care system but only Pharmacist Play major role in health care system.

Pharmacy Act of 1948 states that a registered chemist is "a person whose name is currently included in the register of pharmacists of the State, in which he is now residing or operating his pharmacy-related profession or business.

PHARMACIST is an acronym denoting

- P- Patience
- H- Honesty
- A-Alertness
- R-Research
- M- Motivator
- A-Administrator

- C- Courageous
- I-Intelligent
- S- Studious
- T- Thinker⁴

2.1. Objective

It is evident that medicine has been prepared by the ancients since those times. Today, we refer to a specialist as a chemist. Human lives are still saved by medication today. Humans have basic needs for food, clothing, and shelter, but today's greatest basic requirement is medicine. According to a discussion at a British pharmaceutical conference in 1963, a pharmacist is regarded as an expert on drugs and that "without medicine there is no life, it acts as sanjivani for human beings." Such medications are only created by pharmacists, who are also the first members of the health care system.¹ This paper pointedly aimed to

- Provide the patient the appropriate drug at the right time, in the right dose, by the right route and in the right method.
- To get better therapeutic outcomes
- To receive professional Pharmaceuticals care
- To understand the strategy to deal with side effects And drugs interactions
- To improve better compliance

2.2. Geographical location

The survey was conducted within the boundaries of Patan, Umbraj, Karad and Satara. Patan is the tahshil from satara district of Maharashtra state and its geographical coordinates are 17° 22' 0" North, and 73° 54' 0" East⁵. Umbraj is located in satara district of Maharashtra state, India. Its geographical coordinates are 17° 24' 0" North, and 74° 7' 0" East⁶. Satara is the district of Maharashtra State, India and its geographical coordinates are 17° 41' 0" North, and 73° 59' 0" East⁷. Karad is well-known for Krishna and Koyana river confluence, Preeti Sangam and is located at 17° 28' 59" north and 74°12' 0" coordinates⁸.

2.3. Roles of Pharmacist in healthcare system

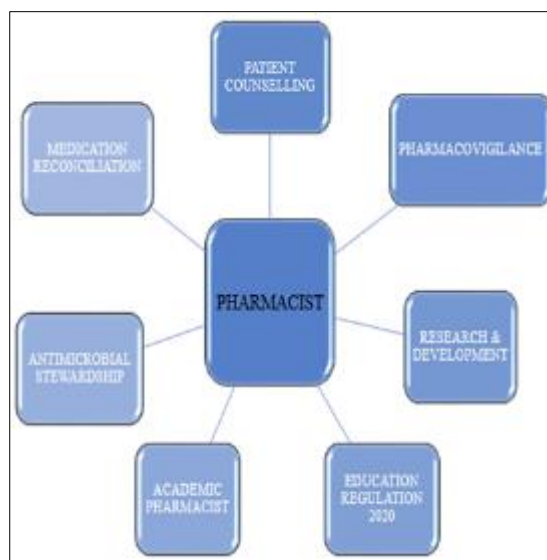


Figure 2 Roles of Pharmacist in Healthcare System

Academic Pharmacist: Academic pharmacists place a strong emphasis on student training, research, and instruction. Universities are a significant source of pharmacists are a professional addition to the healthcare industry. Organizing seminars, projects, or system academics is one way that pharmacists contribute to the healthcare system. Health care providers are motivated by education. Students gain a thorough awareness of the scientific concepts and methods of the pharmaceutical sciences from their basic education training and pre-registration training, as well as the capacity to keep up throughout their careers with advancements in medicine and pharmacy. They are knowledgeable and skilled

in all facets of drug production, distribution, action, and usage, and as well as to make it possible for individuals who want to continue their education to engage in postgraduate training and research.⁹

Programs for educational training assist professionals in maintaining their current expertise. The knowledge that a chemist acquires about substances and

Therefore, we can say that academic pharmacists are the first step in the pharmacy profession because of their practical training in therapeutic activity.

2.4. Education Regulation 2020

ER 2020 plays a huge role in the modern, industrialized world. Students need a good education to be able to survive in this competitive world. Modern society is based on students who have high living standards and knowledge which allows them to implement better solutions to their problems.

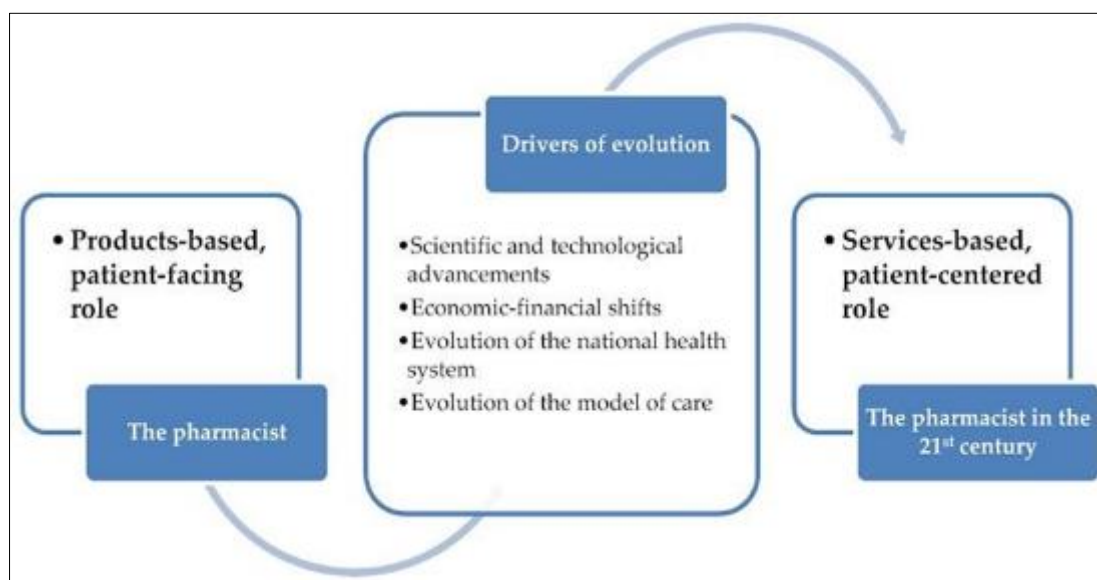


Figure 3 The historical development of the roles, responsibilities and duties of the pharmacist ¹⁰

3. Research and development

Pharmacists contribute to research, and the biological sciences particularly benefit from their knowledge of formulation creation.

Access to active substances Manufacture and quality assurance: A comprehensive approach to quality is ensured by the pharmacist's in-depth understanding of the pharmaceutical sciences. Assurance (including good manufacturing practice) by validating the various production phases and testing goods before distribution.

3.1. Drug Information

The pharmacist has the knowledge and expertise to provide detailed information on medicines to members of the health profession and the public. Also, pharmacists provide an information service within the company.^{11,12}

3.2. Counseling

Patient Counseling is defined as providing medication information orally or in written form to the patients or their representatives on directions of use, on side effects, precautions, storage, diet, life style modifications.

3.3. Parent application and drug registration

Pharmacists are well suited to comprehend and assemble the varied information needed for effective and legal drug registration and parent application. Submissions for authorizations.

3.4. Clinical trials and follow-up after marketing

The chemist possesses the medical and drug knowledge necessary to promote cooperation between clinical trials and surveillance are topics that concern businesses, healthcare professionals, and governments.



Figure 4 Global Clinical Trials Market 2021¹³

3.5. Sales and marketing

The chemist, whose ethical obligations call for a concern for patients' interests, can contribute to suitable marketing strategies for health services and the dissemination of relevant information to the public and health professionals

3.6. Management

Including pharmacists at all levels of management encourages management policies to have an ethical approach

3.7. Primary care pharmacist/ prescribing advisors

Prescription advisors and primary care pharmacists are individuals who work for NHS organizations and are in charge of a variety of services. Health services, including community pharmacy and medical offices. The best use of the area's resources and medications is what they are responsible for ensuring. Several locations have primary care or practice pharmacists who also hold medication review clinics and interact with patients frequently.¹⁴

3.8. Community pharmacists

Pharmacists are on the front lines of healthcare in all of the country's cities, towns, and villages. Their workplaces are their pharmacies or out of the doctor's offices and neighborhood hospitals. As a community pharmacist, your employment would revolve around serving the public by evaluating their health and deciding which medications they should take¹⁴. In addition to distributing medication, they will counsel patients and provide them with useful health information. The work is quite responsible, and local pharmacists are frequently well-respected members of their communities.

Moreover, community pharmacists are increasingly assuming clinical tasks that have historically been filled by doctors, such as managing asthma and testing for diabetes and blood pressure. Also, they offer advice on sexual health issues, help people quit smoking, and change their diets to become healthier. Several neighborhood pharmacists like the responsibilities of financial management and the accountability for personnel, inventory, and facilities that come with owning their own business. Others have the chance to move about inside a well-established corporate structure because they work for huge high street pharmacy chains pharmacists with particular interest: Pharmacists with special interests work to advance their knowledge and abilities in specialized fields like diabetes.^{15, 16}

Nearly half of the pharmacists (42%) provided extra clinical and educational services to local people, such as vaccines, blood pressure checks, cholesterol and osteoporosis screenings, glucose screenings, and diabetes counselling. According to the Indian government, a chemist who has the ability to manufacture, compound, and administer medications in his pharmacy is now referred to as an "Arogyadoot."

3.9. Hospital pharmacy

Pharmacists in hospitals play a crucial role in the healthcare system. Being a hospital pharmacist entails working in PHC or private hospitals. You work in a team where the patients come first.

The pharmacy department of a hospital offers us a wide range of opportunities. As doctors, pharmacists frequently participate in ward rounds and are now more active than ever in deciding which treatments to recommend to patients.

Together with overseeing the care of patients with various conditions, coordinating the production of sterile medications, working in the dispensary, and supplying the entire hospital with information on medications are other duties. You can also participate in the hospital's overall management. Some pharmacists specialize as consultant (or as Pharmacists with specialist interests) in many areas as Hematology (blood), Nephrology (kidneys), Respiratory medicine, Cardiology (heart), Urology (Urinary), Diabetes, Gastroenterology (stomach and

Intestine), Infection diseases, pediatrics (children) and Care of the elderly. Pharmacy a complete profession: Pharmacists reflect on every sector of society in the form of

- Artists – designing a drug dosage form
- Lawyer – having fair knowledge of laws and Legislation about the drug
- Engineer – having sound technical knowledge
- Entrepreneur – with sound knowledge of management
- Accounting, marketing, Counseling
- Health professional – having fair knowledge regarding Health.

In order to build a superior healthcare system and address every issue relating to society's health, pharmacists constantly strive and elaborate their Knowledge and morals. As a result, pharmacists are the only practitioners with the necessary training and expertise to support the country's healthcare system. ⁴

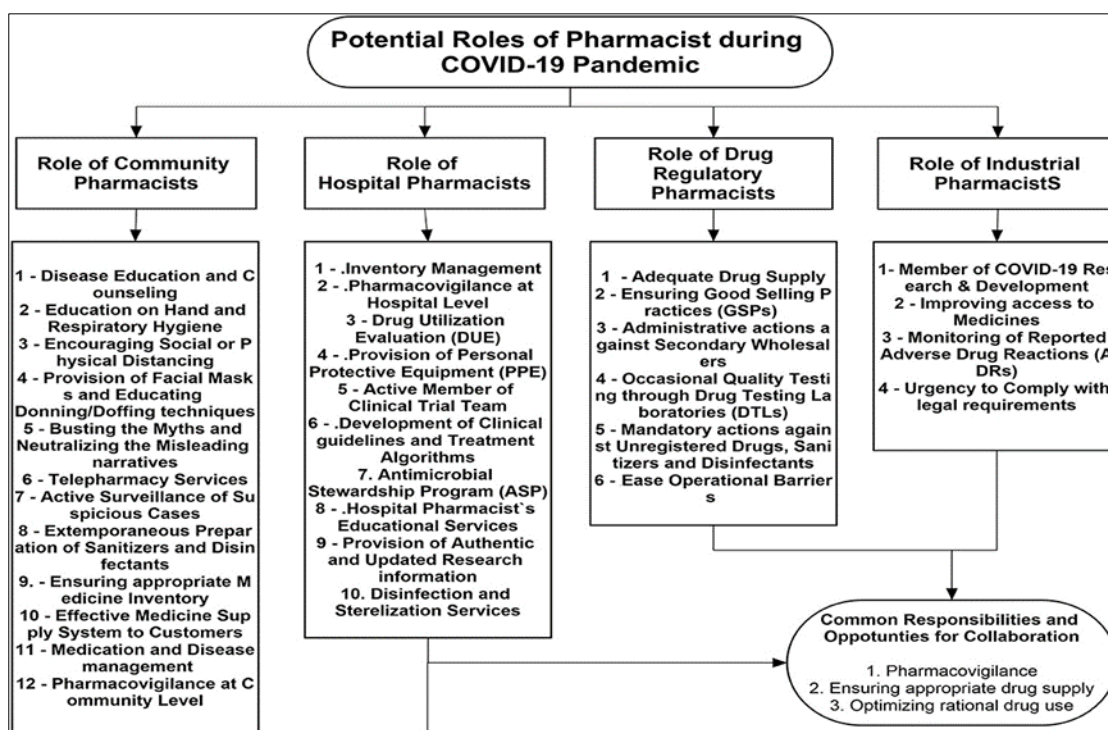


Figure 5 Potential roles of pharmacist during the COVID-19 Pandemic ¹⁷

4. Survey details

The survey was conducted and responses were collected from individuals currently taking a short-term (e.g., antibiotic), long-term (e.g., chronic disease such as hypertension), or lifestyle medication (e.g., contraceptive). We

present the results aggregated across all medication types (i.e., short term, long term, etc.), as some results are stratified by medication types.

Three out of four respondents want Pharma to provide information and services to support patients' management of their own health, giving additional support to the nation that an increasing number of your current patients, and likely the majority of your future patients, desire more control of their health. This movement in healthcare has been an underlying theme of several of our past columns.¹⁸



Name – Seema Shivaji Kamble
Address – Umbraj
Disease – Anaemia



Name - Arun Shivaji Desai
Address - Patan
Disease - Paralysis



Name – Gopinath Dabhade
Address – Umbraj, Satara
Disease - High Blood Pressure



Name – Kamala Arun Suryavanshi
Address – Karad
Disease – Diabetes and Blood Pressure



Firm Name - Raj medicals
Address - Satara



Firm Name - Shree Gajanan Medical
Address - Umbraj



Firm Name - Spruha Medical
Address - Sadar Bazar, Satara



Firm Name - Pioneer Medicine Shoppe
Address - Umbraj

Figure 6 Patients and Pharmacist interview about various services provided by healthcare system.

5. What Patients Want from Pharmacists ¹⁹

In decreasing order of the percentage of patients indicating they desired a service:

- Rewards programs: 63%
- Product information: 53%
- Financial assistance: 51%
- Measurement tracking and alerts: 35%
- Access to support forums: 29%
- Physician referrals: 28%
- Access to clinical trials: 28%
- Nurse support on the phone: 26%
- Lifestyle coaching and training: 23%
- Adherence support: 19%
- In-home nurse support: 8%

6. What other healthcare professionals expecting from Pharmacists

Pharmacist collaborate with a variety of groups and other health professionals, depending on the topic or area with which they want input and collaboration. For patient care, they collaborate with other health professionals (i.e. physicians, physician extenders, nurses, case managers, social workers, laboratory and radiology technicians, or other

pharmacists). They will also review current literature and reference articles-and may even contact the drug manufacturer-when determining the appropriateness of drug therapy for a patient's condition.^{19,20}

Among the self-efficacy statements the majority of nurses and physicians agreed that having a pharmacist present to help manage medication issues allowed them to feel more confident and better able to concentrate on their own professional roles. Within each profession, these opinions did not change implementation of clinical pharmacy services.

Future Roles

- Pharmacists will be able to take on a role similar to a physician, and use AI to complement their consulting work. Pharmacists will be able to operate as care providers and advise patients on their medical conditions while delegating administrative tasks like the collection of medications to AI-powered machines.
- Provide expert healthcare with a leading role in the clinical interactions with patients and in the decisions surrounding the patient.

7. Conclusion

The first person in the healthcare system is the chemist, who fills a variety of jobs, including academic pharmaceutical professionals such as community pharmacists, industrial pharmacists, hospital pharmacists, clinical pharmacists, veterinary pharmacists, etc. The nation's health is impacted by all pharmacists who work in various professions in some way^{3,4}. Ultimately, it is the duty of pharmacists to ensure that "the appropriate drug is given to the right patient at the right time in the right dose through the right channel in the right method." Hence, pharmacists are a crucial component of the healthcare system.

Compliance with ethical standards

Acknowledgement

Authors wish to acknowledge Raj Medicals (Satara), Spruha Medical (Satara), Shree Gajanan Medical (Umbraj), and Pioneer Medicine Shoppe (Umbraj) for their collaboration in this research work.

Disclosure of conflict of interest

The author declares no conflict of interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

References

- [1] https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Role+of+pharmacist+in+healthcare+system&dq=#d=gs_qabs&t=1680426142252&u=%23p%3Dc8brpZymyzgJ
- [2] https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Role+of+pharmacist+in+community+pharmacy&btnG=#d=gs_qabs&t=1681286265373&u=%23p%3DNod7yMZwK4MJ
- [3] https://www.academia.edu/24388565/Role_of_Pharmacist_in_Health_Care_System
- [4] https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Role+of+pharmacist+in+healthcare+system&dq=#d=gs_qabs&t=1680425910850&u=%23p%3Ddm5DZbxDx2QJ
- [5] <http://www.maplandia.com/india/maharashtra/satara/patan>
- [6] <http://www.maplandia.com/india/maharashtra/satara/umbraj>
- [7] <http://www.maplandia.com/india/maharashtra/satara/satara>
- [8] A Patil, Tourist attraction in and around Karad city of satara district Maharashtra, Online International Interdisciplinary Research Journal. 2018; 8: 57-63.
- [9] https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Role+of+pharmacist+in+healthcare+system&dq=#d=gs_qabs&t=1680426233919&u=%23p%3DlRftN9oa1p0j

- [10] Nicola Luigi Bragazzi, Muhammad Mansour, Alessandro Bonsignore, and Rosagemma Ciliberti. The Role of Hospital and Community Pharmacists in the Management of COVID-19: Towards an Expanded Definition of the Roles, Responsibilities, and Duties of the Pharmacist. *Pharmacy*, 8(3), 140.
- [11] Royal pharmaceutical society. Consultation on the statement on the role of pharmacist January 2018
- [12] Clan J. Pearson. Evolution in practice of Pharmacy. *Canadian medical association journal*
- [13] Cooper and Gun's Dispensing for Pharmaceutical students (Hardcover) by. John William Cooper
- [14] Akram ahmad et al: pharmacy profession in India: current scenario and recommendations. *Indian journal of pharmaceutical education and research*. vol. 8. July-sept. 2014
- [15] Remington the Science and Practice of Pharmacy, Remington, Philadelphia: Lippincott. Williams & wilkins
- [16] <https://www.frontiersin.org/articles/10.3389/fpubh.2020.561924/full#main-content>
- [17] https://www.researchgate.net/publication/341423922_Role_of_pharmacist
- [18] <https://www.computertalk.com/what-patients-expect/>
- [19] https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Role+of+pharmacist+in+healthcare+system&oq=#d=gs_qabs&t=1680425981785&u=%23p%3DrBBmmjODRhUJ