

# Pharmacy Practice at a Glance



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## Article Synopsis

Pharmacy is the art and science of preparing and dispensing medications and the provision of drug-related information to the public. It involves the interpretation of prescription orders; the compounding, labeling, and dispensing of drugs and devices; drug product selection and drug utilization reviews; patient monitoring and intervention; and the provision of cognitive services related to use of medications and devices. The current philosophy or approach to professional practice in pharmacy is designated as pharmaceutical care. This concept holds that the important role of the pharmacist is "the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient's quality of life." Pharmacists, then, are those who are educated and licensed to dispense drugs and to provide drug information—they are experts on medications. They are the most accessible member of today's health care team, and often are the first source of assistance and advice on many common ailments and health care matters.

## Abstract

In the course of recent years, the job of drug specialists has advanced alongside the social insurance needs of our populace. Notwithstanding administering drugs and guaranteeing quiet wellbeing, the present drug specialists are playing a bigger job as therapeutic guides, instructors and backers. They are fundamental piece of the medicinal services group and are among the most trusted and available social insurance experts. This openness enables them to perform progressively quiet consideration exercises, including advising, medicine the board, and preventive consideration screenings. Past the consideration gave to singular patients, drug specialists have extended their range to impact the general soundness of networks. A drug specialist is extraordinarily situated to give ailment state the executives through fitting medicine treatment the executives that has been shown to enhance quiet results and decline by and large human services costs. This job could easily compare to ever as nature is requesting new practice and installment models that are required to additionally advance consideration and results while tending to the unsustainable increments in human services costs.

## Outline

APhA Practice for Pharmaceutical Care; Scope of Pharmacists; The Healthcare Pharmacists; Pharmacist's Role Plays in Public Health; Building Relationships; Future Roles; Pharmacy Professional Organizations

**Keywords:** Drug Interaction; Health Management Organizations; Over the Counter Drugs; Sexually Transmitted Infections; Patient Compliance

**Abbreviations:** AACP: American Association of Colleges of Pharmacy; AAPS : American Association of Pharmaceutical Scientists; ACCP: American College of Clinical Pharmacy; ACPE: Accreditation Council for Pharmacy Education; APhA: American Pharmacists Association; APPM: Academy of Pharmacy Practice and Management; APRS: Academy of Pharmaceutical Research and Science; ASP : Academy of Students of Pharmacy; ASHP: American Society of Health-System Pharmacists; ASCP: American Society of Consultant Pharmacists; DIR: Direct and Indirect Remuneration; HRQL: Health Related Quality of Life; NCPA: National Community Pharmacists Association; NARD: National Association of Retail Druggists; RPS: Royal Pharmaceutical Society; MRPs: Medication-Related Problems; CPP : Clinical Pharmacist Practitioner; HMOs: Health Maintenance Organizations; IPC: Interprofessional collaboration; EOP: Emergency Operations Plan; JCPP: Joint Commission of Pharmacy Practitioners; PPCP: Pharmacists Patient Care Process; ACPE: Accreditation Council for Pharmacy Education

## Introduction

Pharmacy is the workmanship and exploration of getting ready and apportioning meds and the arrangement of drug-related data to people in general. It includes the understanding of remedy arranges; the intensifying, naming, and administering

of drugs and gadgets; drug item determination and drug usage surveys; patient monitoring and mediation; and the arrangement of psychological administrations identified with utilization of meds and gadgets. The present reasoning or way to deal with expert practice in pharmacy is assigned as pharmaceutical

consideration. This idea holds that the essential job of the pharmacist is “the capable arrangement of drug treatment to achieve unmistakable results that enhance a patient’s personal satisfaction.” In 2015 the RPS proposed further reconciliation of pharmacists into general works on delineating the different advantages that pharmacists could give. Australia, New Zealand and Canada have demonstrated positive GP reactions towards the coordination of pharmacists into general practices. GPs perceived that having a training-based pharmacist diminished their outstanding task at hand and enabled them to concentrate on their indicative and endorsing jobs, while pharmacists gave master drug guidance and patient directing. The calling of Pharmacy is traditionally rehearsed in the three fundamental zones of Pharmacy Practice: people group, clinical, and healing facility. It is presently commonly acknowledged that the facility for a pharmacy professional isn’t limited to the clinic wards. Each place (even a network pharmacy) where drug is utilized for the aversion, determination, and treatment of any clinical condition, that is viewed as the interface of pharmacist and patient, ought to be perceived as the pharmacist’s facility.

### APhA Practice for Pharmaceutical Care

- a) Preparation of medications by reviewing and interpreting physician orders; detecting therapeutic incompatibilities.
- b) Dispensing of medications by compounding, packaging, and labeling pharmaceuticals.
- c) Controlling medications by monitoring drug therapies; advising interventions.
- d) Completes pharmacy operational requirements by organizing and directing technicians’ workflow; verifying their preparation and labeling of pharmaceuticals; verifying order entries, charges, and inspections.
- e) Providing pharmacological information by answering questions and requests of health care professionals; counseling patients on drug therapies.
- f) Developing hospital staff’s pharmacological knowledge by participating in clinical programs; training pharmacy staff, students, interns, externs, residents, and health care professionals.
- g) Complying with state and federal drug laws as regulated by the state board of pharmacy, the drug enforcement administration, and the food and drug administration by monitoring nursing unit inspections; maintaining records for controlled substances; removing outdated and damaged drugs from the pharmacy inventory; supervising the work results of support personnel; maintaining current registration; studying existing and new legislation; anticipating legislation; advising management on needed actions.

- h) Protecting patients and technicians by adhering to infection-control protocols.
- i) Maintaining safe and clean working environment by complying with procedures, rules, and regulations.
- j) Maintaining pharmacological knowledge by attending educational workshops; reviewing professional publications; establishing personal networks; participating in professional societies.
- k) Contribution towards team effort by accomplishing related results as needed [1].

### Scope of Pharmacists

A Pharmacist with the above skills and attitudes should make himself an indispensable partner in health care system of a nation. Pharmacy a complete profession: Pharmacists reflect on every sector of society in the form of

1. Artists- designing a drug dosage form.
2. Lawyer-having fair knowledge of laws and legislation about the drug.
3. Engineer-having sound technical knowledge.
4. Entrepreneur-with sound knowledge of management, accounting, marketing, Counseling.
5. Health professional-having fair knowledge regarding health [2].

Learning “Objectives for the pharmacists” roles in health promotion and disease prevention are listed below.

- i. Define, compare and contrast the terms health, health promotion and disease prevention.
- ii. Explain the significance of health promotion and disease prevention efforts.
- iii. List and distinguish examples of promotion and prevention activities.
- iv. Describe the need for pharmacist and pharmacy student involvement in health promotion and disease prevention.
- v. Identify opportunities and challenges for pharmacists to provide health promotion and disease prevention services [3].

### Academic pharmacist

In academic pharmacist focus on teaching, research and training of the upcoming pharmacist. Academic institute are major source of pharmacist, who add professional into health care system. By arranging seminar, project, or system academics, pharmacist plays valuable role in health care system. Academicians identify, educate and train student pharmacists to be change agents for the profession so they can influence and create more team-based care opportunities for pharmacy

practice. Academic institutions have changed their curricula to meet the future needs of team-based care for the profession [4].

### Industrial pharmacists

**Research and development:** Pharmacist contribute to research, and their expertise in formulation development is of particular relevance to the biological availability of active ingredients.

**Manufacture and quality assurance:** The pharmacist's broad knowledge of the pharmaceutical sciences ensures an integrated approach to quality assurance (including good manufacturing practice) through the validation of the various stages of production and the testing of products before release.

**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.

**Parent application and drug registration:** The pharmacist is ideally qualified to understand and collate the diverse Information required for potent and authorization submissions.

**Clinical trials and post-marketing surveillance:** The pharmacist has the knowledge of drug and health care provision required to facilitate collaboration between companies, health professionals and governments in relation to clinical trials and surveillance.

**Sales and marketing:** The pharmacist, whose professional ethics demand a concern for the interest of Patients, can contribute to proper marketing practices related to health care and to the provision of appropriate information to health professionals and the public.

**Management:** The inclusion of pharmacist in all levels of management promotes an ethical approach within management policies.

**Primary care pharmacist/Prescribing advisors:** These are people work for NHS organizations that are in charge of a range of local. Health services - such as doctor's surgeries and community pharmacies. Their job is to ensure the best use of medicines and resources across the area. In Some places practice pharmacist or primary care pharmacist also run medication review Clinics and have lots of patient contact.

**Community pharmacists:** Pharmacist work at the frontline of healthcare in cities, towns and villages across nation. They work from their own pharmacies or out of local healthcare center and doctors' surgeries. Some community pharmacist owns their own business and enjoy the challenges of financial management and responsibility for staff, stock and premises that this brings. Other work for large high street pharmacy chain and have the opportunity to move around within an established company structure.

**Pharmacist with special interest:** Pharmacists with special interests are involved with developing their skill and expertise in specialist areas such as cancer or diabetes. Almost half of all pharmacists (42%) offered additional clinical and educational Services to community residents including blood pressure checks, screening for Cholesterol and osteoporosis, glucose screening and diabetes counseling, tobacco Cessation programs, immunizations.

**Hospital pharmacist:** Hospital pharmacists are a vital part of the healthcare term. Working in either the PHC or private hospitals, being a hospital pharmacist means your part of a team where the focus is firmly on patients (WHO website). 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 [5-10].

### The Healthcare Pharmacists

The World health organization (WHO) report on "The role of the Pharmacist in the health care system" states that the competence of the Pharmacist is already proven and control.

In health promotion and social responsibilities

- a. In the direction and administrative of pharmaceutical services
- b. In drug regulation and control
- c. In the formulation and quality control of pharmaceutical products
- d. In the inspection and assessment of drug manufacturing facilities
- e. In the assurance of product quality through the distribution chain
- f. In drug procurement agencies and
- g. In National and institutional formulary & therapeutics committees [11].

### In health promotion and social responsibilities

Wellbeing advancement is any blend of mediations (i.e., wellbeing instruction and related authoritative, financial, or potentially political intercessions) intended to encourage conduct or natural changes that will enhance or secure general wellbeing. Wellbeing advancement methodologies center around network-based intercessions and organizations to keep up health and to help alter singular practices, for example, undesirable ways of life. As it were, wellbeing advancement includes network mediations that assistance an individual increment command over and enhance his or her own wellbeing. Ailment aversion is characterized as exercises that are intended to forestall and

control infection, stop the ailment forms, or lessen the results of ailment. Ailment counteractive action exercises center around people and networks with recognizable hazard factors that can be focused for successful mediation. Along these lines, rather than wellbeing advancement, sickness avoidance endeavors radiate more from wellbeing suppliers than from people. A Pharmacist has an essential task to carry out in wellbeing advancement and essential, optional and tertiary anticipation, particularly in connection to the administration of endless sicknesses [12].

Examined beneath in subtleties:

**Sexually transmitted diseases-AIDS:** Huge resource of community Pharmacist can educate people in the prevention and information of HIV/AIDS. Although many classes of antiretroviral are available like protease inhibitors, nucleoside reverse transcriptase inhibitors and non-nucleoside reverse transcriptase inhibitors, patients need close monitoring and strict dietary regimen. Pharmacy is a key player in all the NICE publications related to sexual health. They include: Contraception quality standard

- a) Contraceptive services for under 25s
- b) Long acting reversible contraception
- c) One to one intervention to prevent STIs and Under 18 conceptions [13,14].

**Pneumococcal disease and influenza:** The role of a Pharmacist in immunizing adults against pneumococcal disease and influenza is discussed. Pneumonia is the leading cause of death due to infection worldwide in children aged < 5 years and is responsible for approximately 16% of the 5.6 million deaths in this population [15]. Pharmacists can promote immunization by assuming the roles of educator, facilitator, and immunizer. Despite lack of specific mention of it in accreditation standards, health-system personnel have a duty to vaccinate adults, just as they do pediatric patients. Pharmacists should review immunization records with patients periodically and at the time of immunization. As with other drug products, formulary decisions and the distribution, storage, and handling of vaccines are important Pharmacist responsibilities.

**Chronic disease management:** A Pharmacist's role in the control of the chronic disease can range from the support of proven community programs such as screening and disease management clinics for diabetes etc.

**Nutrition Counseling:** Pharmacists have unique constellation of competencies, including clinical knowledge and skills which place them in an ideal position to contribute to the delivery of nutrition support therapy to patients. Indeed, the professional roles of pharmacists have been evolving from the traditional compounding and dispensing of medications to the modern delivery of direct patient care within multidisciplinary health care teams. Pharmaceutical care (PC) is a practice

philosophy, in which the pharmacist responsibly provides medication therapy to patients to achieve definite outcomes that improve their quality of life. There is cumulative evidence to support the positive impact of PC on patient care and health care costs [16].

**Oral health:** A Pharmacist has numerous opportunities on a daily basis to positively affect his trend. The American dental association has published pamphlets for dentists and Pharmacists that cover oral structures and diseases prevention to caries, OTC and prescription dental drugs and how these two professions can collaborate.

**Environmental health:** About this a Pharmacists should adapt his methods of health educations. A Pharmacist role in environmental health is related primarily to being alert to the conditions prevailing in the community and of working with others to adequately control any of the attendant hazards.

**Epidemiology:** Epidemiology is the study of the distribution and determination of health-related events in specific population and the application of this field in the control of these events. Epidemiology relates to the interaction of hosts and their environment with attention to those particular agents in the environment that are causal factors of disease. The alert Pharmacist who can apply the basic principal of Epidemiology in their community will become a significant member of the health team.

**Health measurement:** A Pharmacist in the health professional in the most frequent contact with the general public and this function as a community health education makes the Pharmacist role unique. By staying abreast of local health statistics Pharmacist can function as a valuable resource person to researcher's conduction epidemiological studies in the community.

**Health education:** Pharmacists are required more than ever to contribute in the area of health promotion (HP), and it is one of the six components that contribute to the health improvement of individuals accessing pharmacy services as stated in the Joint FIP/WHO guideline on good pharmacy practice. The importance of the role of pharmacists in patient counseling is recognized and because of increased accessibility, they are in a key position to provide HP services. Several studies have shown the benefits of pharmacists' involvement in a wide range of important public-health issues including smoking cessation, diabetes, hypertension and contraception [17].

**Alcohols, drug abuse and smoking cessation:** The diseases of alcoholism and drug abuse also come under the preview of the community Pharmacist. The Pharmacist has a key role to help individuals who become dependent upon alcohol. Counseling sessions can be made by the community Pharmacist to stop smoking.



**Vaccinations:** Administering vaccines to patients and health care workers is enabling some health-system Pharmacists to assume a prominent role in public health. Pharmacists have noticed that immunization needs were not being met and, through their advocacy, increased the numbers of patients and employees of health systems who have been vaccinated.

**Family planning:** Drug shops and pharmacies have long been recognized as the first point of contact for health care in developing countries, including family planning (FP) services. Drug shop operators and pharmacists should not be viewed as mere merchants of short-acting contraceptive methods, as this ignores their capacity for increasing uptake of FP services and methods in a systematic and collaborative way with the public sector, social marketing groups and product distributors. According to the service delivery guidelines of the Ministry of Health and Family Welfare, Government of India, all providers dispensing emergency contraception should be appropriately informed about emergency contraception and should also counsel their clients on regular contraceptive usage [18,19].

**Cholesterol risk management:** Pharmacist care improves the management of outpatients with major modifiable CVD risk factors. Pharmacists can help fill the gap as primary care providers and can contribute to the control of CVD risk factors by their knowledge of medications, their easy accessibility for patients, and their collaborative practice with physicians. More specifically, pharmacists have the opportunity to provide medication instructions to patients at each prescription, to improve safe medication use, and to assist physicians in chronic care [20].

**Women welfare-pregnancy and infant care:** Pharmacists, as the most accessible healthcare professionals, can work to empower women in their role as informal caregivers, to communicate to women the necessity to be educated and to support their health literacy. Furthermore, pharmacists can help women to take control of their reproductive health. They can help women to develop a reproductive life plan. A reproductive life plan consists of personal goals or intentions about having or not having children. During and after pregnancy, pharmacists can provide women with essential education on contraindicated medicines, recommended prenatal vitamins and infant feeding options, such as breastfeeding and formula feeding [21].

**Individualization of drug therapy:** Today the latest concept in medicine is towards individualization of drug therapy. Where judicious patient care is needed individualization of drug therapy becomes a need, and a Pharmacist can play a vital role in this. A Pharmacist can set up a separate consultation room and provide counseling to the patient. He can store the details of patient history, allergies and other details necessary for therapy so that the concept of individualization of drug therapy could be implemented.

**Radio pharmacy:** This is a specialized area of pharmacy, where radioactive materials are produced as drugs for the diagnostics of certain diseases like Thyroid problem by Iodine isotope. Here a Pharmacist has a significant role to play.

**Consultancy service:** It's another area in where a Pharmacist can play a role directly in public health. For independent career & business consultancy in pharmacy profession is challenging & demanding & has got a good scope of successful career build up.

**Rational use of drugs:** The way drugs are procured, stored, distributed, and dispensed and the information given by the pharmacist/dispensers dictates the quality of their use, thus in terms influencing the rational use of medicines. Different models of practice are

- a) the drug information practice model
- b) the self-care practice model
- c) the clinical pharmacy practice model
- d) the pharmaceutical care practice model
- e) the distributive practice models. These models are practiced across the continents alone or in combination based on the understanding of the local pharmaceutical needs, expertise of pharmacist, and their recognition of role [22].

**Disease prevention:** Distinctions between the types of disease prevention measures are sometimes unclear. Three levels of prevention exist. Here pharmacists play a great role.

- a) **Primary:** - Primary prevention is helping people maintain their health or improve the quality of their lives through a healthy lifestyle. An example of primary prevention is the control of infection through immunization.
- b) **Secondary:** - Secondary prevention in the early diagnosis and treatment of an already existing disease the use of penicillin in the treatment of a streptococcal infection prevent the onset of rheumatic fever. Thus, a pharmacist can perform a vital service by advising patients, who present a febrile illness characterized by a sore throat to see a physician.
- c) **Tertiary prevention:** - Tertiary prevention largely consists of rehabilitation. Most chronic disease cannot be cured but their progress can be retarded with maximum benefit to the patient. Much can be done for instance with rheumatoid arthritis to make patients more comfortable and more productive in their daily lives [23, 24].

Strategic practice-related efforts that could possibly enable pharmacists to provide health promotion and disease prevention services would include:

- a. Knowledge of the clinical and demographic characteristics of the community

- b. Targeted activities based on assessment of diseases associated with the service population in the community
- c. Development of a written plan for informational and preventive efforts
- d. Identification of stakeholders and collaborative community partners, such as health departments
- e. Community and advocacy groups, homeless shelters, institutions, and payers
- f. Marketing, documenting, and billing of professional services associated with health promotion and disease prevention in order to provide sustainable pharmacy-based interventions; and
- g. Utilization of educational materials, e.g., handouts, brochures [25].

### In the Direction & Administrative of Pharmaceutical Services

In this branch there are opportunities to a Pharmacist of all education levels. The largest numbers of Pharmacists are involved in marketing & administration. There are marketing people (Pharmacists) educate physicians & community Pharmacists, hospital pharmacists etc. about manufactures product. This can be a rewarding career for a Pharmacist with right personality & motivation.

#### In compounding and dispensing: pharmacists~

- a. Accept and check prescription details
- b. Script validity
- c. Safety and appropriateness
- d. Review patient's dispensing history
- e. Patient-specific factors
- f. Select product
- g. Dispensing check
- h. Label and assemble dispensed products
- i. Supply prescription to patient/carer: re-check
- j. Counsel patient/carer on safe and appropriate use

**In hospital management:** A Pharmacist has a great role to play in hospital administration. The responsibilities of a hospital Pharmacist are to develop a high quality comprehensive pharmaceutical service, properly coordinate & meet the needs of the numerous diagnostics & therapeutic departments, the nursing service, the medical staff, medical equipment of hospital & the hospital as a whole in the interest of community improving patient care. Clinical pharmacists 'role in patient safety stated below:

- a. Hospital pharmacists should take responsibility for the management and disposal of waste related to the medicine use process and advise on disposal of human waste from patients receiving medicines.
- b. Hospital pharmacists should take responsibility for all aspects of selection, implementation and maintenance of technologies that support the medicine use process, including distribution devices, administration devices, and other equipment.
- c. Hospital pharmacists should ensure appropriate assessment, development, implementation and maintenance of clinical decision support systems and informatics that guide therapeutic decision making and improve the medicine use process.
- d. Hospital pharmacists should support the development of policies regarding the use or medicines brought into the hospital by patients, including the evaluation of appropriateness of complementary and alternative medicines.
- e. Doses of chemotherapy and other institutionally identified high-risk medicines should be independently checked against the original prescription by at least two health care professionals, 1 of whom should be a pharmacist, prior to administration.
- f. Hospital pharmacists should ensure the development of quality assurance strategies for medicines administration to detect errors and identify priorities for improvement
- g. an easily accessible reporting system for adverse drug reactions should be established and maintained.
- h. an easily accessible reporting system for medication errors, including near misses, should be established and maintained.
- i. Medicines use practices should be self-assessed and compared with benchmarks and best practices to improve safety, clinical effectiveness, and cost-effectiveness.
- j. Systematic approaches (trigger tools) should be used to provide quantitative data on adverse drug events and optimal medicines use. These data should be regularly reviewed to improve the quality and safety of medicines practices [27-30].

**In health maintenance organizations (HMOs):** HMOs are open or private affiliations that give and regulates broad prosperity organizations to individuals enrolled. Here a Pharmacist can assume a job in the organization of this sort of association or provide guidance. Network drug stores are much of the time the principal contact with the medicinal services framework, frequently before a General Practitioner. There is a high recurrence of contacts with low hindrances to access to

medicinal services: no arrangements, no long holding up time, advantageous opening hours, and they are situated inside the network. Ordinary contacts offer access to a wide scope of individuals, to be specific, solid people, those appearing, patients experiencing treatment, relatives and other parental figures; individuals from every single social stratum. It is important to seek after applicable arrangements to upgrade the usage of the undiscovered possibilities of network pharmacists, particularly as essential medicinal services are the focal point of social insurance conveyance. Pharmacists can:

- a. Perform patient assessment (subjective and objective data including physical assessment)
- b. Have prescriptive authority (initiate, adjust, or discontinue treatment) to manage disease through medication use and deliver collaborative drug therapy or medication management
- c. Order, interpret and monitor laboratory tests
- d. Formulate clinical assessments and develop therapeutic plans
- e. Provide care coordination and other health services for wellness and prevention of disease
- f. Develop partnerships with patients for ongoing (follow-up) care [31-33]

### Extended role of community pharmacists

Community pharmacists have the potential to not only contribute to improving patients' outcomes through safe and effective use of drugs, but also to reduce the cost of healthcare by resolving drug related problems and promoting public health issues. At the same time, the nature of pharmacy practice and community pharmacy is also changing. Along with others, they community pharmacists have following responsibilities:

- a. Delivery services to household patients
- b. Services for groups with special needs
- c. Services for residential homes
- d. Out of hours services
- e. Domiciliary visits
- f. Distribution of welfare food
- g. Disposal of unwanted medicines
- h. Sale of prepayment certificates
- i. Hospital discharge and admission procedures
- j. Needle and syringe exchange schemes
- k. Health screening
- l. Patient referrals to general practitioners and other health professionals

- m. Development of local formularies
- n. Provision of professional advice
- o. Advice on palliative care
- p. Supply of disability aids
- q. Reporting adverse drug reactions
- r. Provision of quiet area for confidential
- s. Conversations
- t. Supply of complementary medicines [34,35]

**Pharmacists in ICU:** Because of the complexity of drug therapy and the critical nature of patients in intensive care units (ICUs), the attendance of a clinical pharmacist in this setting is an important issue. Studies have reported that the interventions of clinical pharmacists have resulted in a rational drug therapy and improved patient care and treatment costs [36].

**Long-term care:** Residents in long-term care are often elderly people with several comorbid conditions, who may be very susceptible to inappropriate prescribing. Although complex medication regimens are often required for these individuals, pharmacists can play a vital role in improving the overall quality of drug therapy. The pharmacist's medication review saves doctors' time; this is particularly the case for patients who are not reviewed opportunistically. Overall, the evidence for the benefit of pharmacists in long-term care settings is quite mixed. Pharmacists can improve clinical outcomes by reducing potentially inappropriate prescribing and MRPs; however, the majority of successful interventions in the literature were multidisciplinary in nature. Economic evaluations of pharmacist interventions in this setting are limited, but most studies have shown no significant difference in humanistic and economic outcomes [37].

**Ambulatory care clinics:** Ambulatory care pharmacy practice is defined as the provision of integrated, accessible healthcare services by pharmacists who are accountable for addressing medication needs, developing sustained partnerships with patients, and practicing in the context of family and community. Pharmacist services have varying effects on patient outcomes compared with usual care. CPPs deployed at the medical center's ambulatory care clinics have had a positive impact on clinical and cost outcomes, improving patient care through interventions, contributing to readmission reduction efforts, generating indirect revenue through cost avoidance, and generating new revenue through billing for patient visits [38-40].

**Drug information services:** Health care providers do not actually use these guidelines. Approximately 10% to 40% of patients do not receive care based on updated scientific evidence and more than 20% of interventions performed are not required or are potentially harmful to patients. Drug information

service is a dedicated and specialized service provided by pharmacists to enhance knowledge of medicines use, promote rational prescribing among prescribers, and reduce medication errors. One of the most important aspects of drug information is to be unbiased in its contents. Thus, the unbiased nature of information is of paramount importance to enhance patient outcomes and reduce adverse drug reactions (ADRs) [41, 42].

## In Drug Regulation & Control

A Pharmacist in government drug regulatory affair department plays his role by regulating the quality of medications, price of the medications, applying the ethics & law about medications & industries.

## In the Formulation & Quality Control of Pharmaceutical Products

The formulation of any medication is only depended on Pharmacist. It is one of the important roles of a Pharmacist. The physical, chemical & biological quality of a pharmaceutical product intended for administration to patients in the home must be of the highest quality attainable. This quality must be built in to the product in each step of the aseptic compounding process, that is, in the starting components, the design & operation of the compounding facilities, the control of the environment & the qualifications of operators all contribute to the final quality of the product, either in a positive or negative manner. Therefore, the control of quality is a continuous process throughout the compounding of the product. Testing of the finished product can only confirm the quality built into the product during its preparation. Here only a Pharmacist can play his role.

## In the Inspection & Assessment of Drug Manufacturing Facilities

Another important duty of a Pharmacist (by joining the government testing laboratory & medicine regulatory service) is inspect the pharmaceutical industries, their environment, quality of medications, facilities & assesses the medications.

## In the Assurance of Product Quality Through the Distribution Chain:

Distribution of medication is two types

**a. From industry to market:** After produced, before sending to the market ensuring the quality of pharmaceutical products is must, because it is directly related with life. Here only a Pharmacist plays a significant role.

**b. From hospital to the patient (through prescription):** The medication distribution system in hospitals is very complex & involves in several health care professionals. The usual flow is physician prescribes; Pharmacist dispenses & nurses administer medication. Here the Pharmacist who dispenses, has the right to change the medicine which is prescribed by the physician to ensure the quality of that medicine.

## In Drug Procurement Agencies

The work of drug procurement agencies is to supply the medication & find out the possible customer in home & abroad. Here a Pharmacist plays a great role.

## In National & Intuitional Formulary & Therapeutics Committees

During recent years, with the development of the clinical pharmacy movement, a number of clinical Pharmacists on the staff of some departments have developed expertise in specific therapeutic specially areas. Therefore, it was a logical development under the pharmacy & therapeutics committee. The formulary system has attempted to outline the scientific data on a medication, including its toxicities, untoward side effects, safety profile & beneficial effects- has been a controversial method of appraising medication therapy. All these are provided by a formulary committee of a nation & this formulary committee is constructed by the Pharmacists [43,44].

## Pharmacist's Role Plays in Public Health

Pharmacist commitments to general wellbeing that are not broadly revealed. This might be somewhat because of a portion of these administrations not being surrounded inside general wellbeing classes, so the populace effect of their administrations goes unnoticed. About 93% of U.S. inhabitants live inside five miles of a pharmacy, making the network pharmacy a standout amongst the most open social insurance establishments. The pharmacist is in a one of a kind positions to make basic general wellbeing commitments. In any case, there is constrained proof that patient viewpoints on the job of pharmacists has changed. The job of the pharmacist as a feature of the interdisciplinary group is significantly progressively basic in country areas the same number of them are social insurance laborer deficiency regions, and the pharmacist might be one of only a handful couple of human services experts in the network [45]. NHS England (NHSE) is confronting a developing GP workforce emergency, with proceeding with issues around GP enlistment, maintenance, and retirement rates. Around 30% of GP accomplices have detailed not having the capacity to fill a GP opportunity in their training for something like a year (2017-18 review). Late examinations bolster clinical pharmacists in General Practice, including their apparent skills, extent of training, practice situations, dimensions of combination, and bolster needs [46].

## Building Relationships

Organizations inside pharmacy and general wellbeing fields may give a stage to confirm based basic leadership through procedures that attention on regular issues and manufacture an establishment for choices.

## Joint effort

IPC is a vital piece of the act of Medicine and Family Medicine. The WHO characterizes IPC as "various wellbeing laborers from



various expert foundations cooperate with patients, families, carers and networks to convey the most astounding nature of consideration". To give successful, patient-focused consideration, family doctors must work together with other wellbeing and social consideration suppliers. There are numerous advantages of joint effort, for example, upgrading the utilization of rare assets the same number of associations have restricted capital, decrease in the duplication of expense and exertion by diminishing discontinuity of wellbeing administrations, enhancing quality by incorporating wellbeing results for patients, enhancing correspondence by considering assorted points of view on general medical problems and expanding trust and comprehension among people and associations [47-49].

### Emergency preparedness and response

Amid the occasions of cataclysmic events, mechanical mishaps or bioterrorist assaults, human services offices are frequently over-whelmed by the inundation of patients. This can prompt incorrectness or mistakes in endorsing the best possible treatment for a patient on account of restricted staff with brief period to treat. This is when pharmacists assume a basic job in individualizing prescription treatment regimens to choose treatment, increment medicine adequacy, and limit unfavorable drug occasions. Pharmacy pioneers should (1) audit government and network calamity reactions and comprehend the development of drug supply for every reaction, (2) make a pharmacy debacle plan, (3) list the fundamental prescriptions and decide their stock dimensions, and (4) set up a staff preparing system to improve comprehension and execution of the EOP. In the event that effectively created and executed, a healing center pharmacy division's EOP has a high appraising of achievement in meeting patient-focused needs in the unexpected case of a catastrophe [50].

### Patient advocacy

Both healing facility and network pharmacists have a huge task to carry out in support of pharmacy as a calling. Governments and pharmacy overseeing bodies are proceeding to work to expand the extent of routine with regards to pharmacists, abandoning us with a mind-boggling chance to develop. Pharmacists likewise should assume liability for pushing through the co-operations we have with patients, other social insurance experts and the general population. With the goal for pharmacists to address the issues of the medicinally needy, further endeavors are expected to demonstrate that the patient's conclusion is esteemed. Numerous strategies can be utilized to advocate for patients, for example, investment in network coordinated efforts, associations, buyers' rights gatherings, backing gatherings and not-for-profit associations which unite networks for activity in teaching general society and supporting approach changes in general wellbeing [51].

### Patient centered approach (Improving health outcomes):

The mission of pharmacists is to enable individuals to accomplish ideal wellbeing results. Thus, the mission of general

wellbeing authorities is to advance physical and psychological wellness and avert illness, damage, and handicap. There is cover in the two statements of purpose concerning accomplishing ideal wellbeing results. The JCPP made a calling wide patient-focused consideration demonstrate known as the PPCP in 2014. The PPCP suggests that pharmacists utilize a patient-focused methodology, as a team with other human services suppliers to streamline patient consideration. To achieve this, pharmacists should utilize proof-based medication to gather important abstract and target data, survey the gathered data, build up an individualized patient-focused plan, actualize the plan, screen and assess the adequacy of the plan – altering as required [52].

### Minimizing adverse drug events

It has been suggested that closer collaboration between doctors and pharmacists in primary care prevent ADR. Nowadays, pharmacists also ensure the rational and cost-effective use of medicines, promote healthy living, and improve clinical outcomes by actively engaging in direct patient care and collaborating with many healthcare disciplines. With this expanding scope of practice, pharmacists are being recognized as key components in providing individualized patient care as part of interprofessional healthcare teams [37].

### Education and research

The ACPE and Center for the Advancement of Pharmacy Education have empowered joint effort between social insurance callings and pharmacy by building the aptitudes and certainty of understudies to upgrade patient consideration and administrations. They additionally empower that pharmacy programs "endeavor to address network issues" and assess employees for their administration commitments to the network. Given that accentuation on administration, educating, and inquire about are trademark assessment measurements of every single institutional program, conformance is important to create educational models that are adoptable. In the general wellbeing field, these objectives of pharmacy practice advantage society by making alluring patient results, limiting abuse, underuse and abuse of prescriptions, and accomplishing medicine related general wellbeing objectives [53].

### Pharmacist on the home care team

Medication-related problems are common among home care clients who take many medications and have complex medical histories and health problems. Helping clients manage medications can be a challenge for all home care clinicians. By partnering with a college of pharmacy at a large university in the community, the agency successfully included a pharmacist as a member of their home care team. Medication-related problems are often classified four types: Indication, Effectiveness, Safety and compliance [54,55]. Except these a Pharmacist has important role to play as Chain Drug Store Pharmacist, Grocery Chain Pharmacist, Hospice Pharmacist, Hospital Staff Pharmacist, Managed Care Pharmacist, Military Pharmacist, Nuclear Pharmacist, Oncology Pharmacist, Operating Room Pharmacist,

Pediatric Pharmacist, Pharmacist in Non-traditional Settings, Pharmacy Benefits Manager, Poison Control Pharmacist, Primary Care Pharmacist, Psychiatric Pharmacist, Veterinary Pharmacist [56] Table 1.

**Table 1:** Pharmacist Organizations [6].

Name	Description
APhA	National professional organization of pharmacists representing pharmacy practitioners, and pharmaceutical scientists and students. Membership in one of the three academies of the APhA are APPM, APRS, ASP-offers members specialized benefits and the opportunity to influence their practice areas.
ASHP	Professional association of pharmacists who practice in organized health care settings. It endeavors to create an environment in which pharmacists can focus the full potential of their knowledge and expertise on patient care to provide high-quality pharmaceutical services that foster the efficacy, safety, and cost-effectiveness of drug use.
ASCP	Promotes the development and advancement of pharmaceutical care activities directed at patients in long-term care institutions.
NCPA	Membership in NCPA, formerly known NARD, dedicated to the continuing growth and prosperity of the independent community pharmacy in the United States.
AAPS	The members are eligible for membership in one of several disciplinary sections: Analysis and Pharmaceutical Quality; Biotechnology; Clinical Sciences; Economic, Marketing, and Management Sciences; Medicinal and Natural Products Chemistry; Pharmaceutical Technology; Pharmaceutics and Drug Delivery; Pharmacokinetics, Pharmacodynamics, and Drug Metabolism; and Regulatory Affairs.

### Future Roles

Progressive advancement in essential biomedical sciences, including human genomics, undifferentiated cell science, immunology, biomedical building, and bioinformatics, has given a remarkable supply of data for enhancing human wellbeing. The quickly developing fields of populace hereditary qualities and pharmacogenomics feature the noteworthiness of sub-atomic methods in the clinical indicative research center and the potential for application in patient-coordinated pharmacotherapy. Medicine recommending choices will progressively depend on the consequences of genotyping of drug-processing proteins. New innovation and practices will permit wellbeing framework pharmacists to diminish treatment disappointments and avoid antagonistic drug responses through the best possible use of pharmacogenetic standards. Advances in informatics will allow total and use of populace and patient-explicit clinical information in manners that will support improvement of populace explicit, proof-based infection the executives programs. As prescription use specialists, wellbeing framework pharmacists should apply these new instruments not just to enhance patient-explicit pharmacotherapy but rather to propel general wellbeing. So also, developments in drug conveyance innovation will enable increasingly complex treatments to be regulated outside institutional settings. Patients, parental figures, and wellbeing experts will require instruction about the sheltered utilization of such advances, as will the lawmakers and different authorities in charge of managing their utilization [57-63].

### Pharmacy Professional Organization

Pharmacy organizations and associations offer many benefits to, and can fulfill many needs for, both pharmacists and technicians. These groups can offer networking, continuing education opportunities, free publications, and leadership opportunities. Although some pharmacy organizations are specific to just pharmacists, there are many organizations available for both pharmacists and pharmacy technicians to

join, some of which provide specialty information for specific pharmacy fields. The Table1 lists some pharmacy organizations and their specialties.

### Conclusion

As the health care system changes, the line between the roles of pharmacist and physician can become blurred. What differentiates a pharmacy role from a medical role? A simple answer is that what the state licensing laws allow each profession to perform provides that differentiation. However, over my 50 years in practice, legislative changes in practice acts have tended to blur the differentiation. When you recommend a treatment for the problem, you are acting as an independent practitioner. As the FDA and some states move toward a class of drugs that pharmacists can prescribe/recommend, the line between physician and pharmacist blurs yet again “Fred M. Eckel, Editor-in-Chief, Pharmacy Times. From the above consideration, it is clear that the Pharmacists have definite beneficial roles regarding health matters. A Pharmacist is the legally qualified and professionally competent person to handle drugs and allied supplies required for the patients within and outside the hospital. It is a matter of regret that the government of our country is taking very little effort to employ highly skilled pharmacy personnel in different sectors of the health services. But in the developed countries, Pharmacists are in unique position in this regard. So, the governmental health policy should be modified by incorporation Pharmacist in different s. The huge divides that exist in patient education and income levels can be alleviated by design and use of cost-effective educational materials and the visual media. The development and empowerment of the pharmacist can occur only if appropriate steps are taken to ensure that pharmacy licenses are awarded only to qualified pharmacy graduates and adequate educational training is imparted so that pharmacists remain and are rewarded for being the best sources of information related to medication use. Successful policies in this regard and implementation of

appropriate regulation will ensure the development of a safer and more effective pharmaceutical public health system, which can in turn, directly translate to improved health of all citizen sectors to improve and ensure the health service for the well-being of people of our country.

## References

1. APhA Principles of Practice for Pharmaceutical Care.
2. Jaiprakash V, Kokan, Pawan S, Avhad (2016) Role of Pharmacist in Health Care System the Journal of Community Health Management 3(1): 37-40.
3. Stephanie Y, Crawford (2005) Pharmacists Roles in Health Promotion and Disease Prevention American Journal of Pharmaceutical Education 69(4): 73.
4. Ferreri SP, Cross LB, Hanes SD, Jenkins T, Meyer D, et al. (2017) Academic Pharmacy: Where is Our Influence?. Am J Pharm Educ 81(4): 63.
5. Page E (2015) How pharmacists can start a career in the pharmaceutical industry. The Pharmaceutical Journal 9.
6. Flink JL, Joseph P, Remington, Paul Beringer (2006) Chapter 1 Scope of Pharmacy In: Remington: The Science and Practice of Pharmacy Author: Philadelphia: Lippincott Williams & Wilkins.
7. Atkinson J, De Paep K, Pozo AS, Rekkas D, Volmeret D, et al. (2016) A Study on How Industrial Pharmacists Rank Competences for Pharmacy Practice: A Case for Industrial Pharmacy Specialization. Pharmacy (Basel)4(1): 13.
8. Chisholm Burns MA, Gatwood J, Spivey CA (2015) Economic Analysis of Obtaining a PharmD Degree and Career as a Pharmacist. Am J Pharm Educ 79(8): 117.
9. Brazeau GA, Meyer SM, Belsey M (2009) Preparing pharmacy graduates for traditional and emerging career opportunities. Am J Pharm Educ 73(8): 157.
10. Rossheim J Diverse Opportunities Await Pharmacists in Industry.
11. Wiedenmayer K, Summers RS, Mackie CA (2006) Developing pharmacy practice A focus on patient care HANDBOOK -EDITION.
12. The Health Promotion Strategic Framework.
13. Tseng A, Foisy M, Hughes CA (2012) Role of the Pharmacist in Caring for Patients with HIV/AIDS: Clinical Practice Guidelines. Can J Hosp Pharm 65(2): 125-145.
14. NICE (2014) Contraceptive services for under 25s. Public health guideline Published.
15. Tong S, Amand C, Kieffer A, Kyaw MH (2008) Trends in healthcare utilization and costs associated with pneumonia in the United States during. BMC Health Serv Res 18(1): 318.
16. Katoue MG (2018) Role of pharmacists in providing parenteral nutrition support: current insights and future directions. Integr Pharm Res Pract 7: 125-140.
17. Gelayee DA, Mekonnen GB (2018) Pharmacy students' provision of health promotion counseling services during a community pharmacy clerkship: a cross sectional study, Northwest Ethiopia. BMC Med Educ 18(1): 95.
18. Saxena P, Mishra A, Nigam A (2016) Evaluation of Pharmacists Services for Dispensing Emergency Contraceptive Pills in Delhi, India: A Mystery Shopper Study. Indian J Community Med 41(3): 198-202.
19. Chin Quee DS, Stanback J, Orr T (2018) Family planning provision in pharmacies and drug shops: an urgent prescription. Contraception 98(5): 379-382.
20. Santschi V, Chiolero A, Paradis G, Colosimo AL, Burnand B (2012) Pharmacist interventions to improve cardiovascular disease risk factors in diabetes: a systematic review and meta-analysis of randomized controlled trials. Diabetes Care 35(12): 2706-2717.
21. FIP (2018) Pharmacists supporting Women and responsible use of medicines. Empowering informal caregivers.
22. Toklu HZ, Hussain A (2013) The changing face of pharmacy practice and the need for a new model of pharmacy education. J Young Pharm 5(2): 38-40.
23. Ali A, Katz DL (2015) Disease Prevention and Health Promotion: How Integrative Medicine Fits. Am J Prev Med 49(5 Suppl 3): S230-S240.
24. Institute for Work & Health (Toronto) (2015) What researchers mean by Primary, secondary and tertiary prevention.
25. National Academies of Sciences(2017)Engineering, and Medicine; Health and Medicine Division; Board on Population Health and Public Health Practice; Committee on Community-Based Solutions to Promote Health Equity in the United States; Baciu A, Negussie Y, Geller A, et al., editors. Communities in Action: Pathways to Health Equity. Washington (DC): National Academies Press (US), Community Tools to Promote Health Equity.
26. Pharmacy Board of Australia. Guidelines for dispensing of medicines.
27. Management Sciences for health (2012) chapter 30. Ensuring good dispensing practices.
28. Management Sciences for health (2012) chapter 45. Hospital pharmacy management.
29. Warner DJ (ASHP) The Clinical Pharmacists' Role in Patient Safety.
30. FIP (2014) Revised Fip Basel Statements on The Future of Hospital Pharmacy. Approved, Bangkok, Thailand, as revisions of the initial 2008 version.
31. Goundrey Smith S (2018) The Connected Community Pharmacy: Benefits for Healthcare and Implications for Health Policy. Front Pharmacol 9: 1352.
32. Schwartzberg E, Nathan JP, Avron S, Marom E (2018) Clinical and other specialty services offered by pharmacists in the community: the international arena and Israel. Isr J Health Policy Res 7(1): 59.
33. Scott DM (2016) United States Health Care System: A Pharmacy Perspective. Can J Hosp Pharm 69(4): 306-315.
34. Hermansyah A, Sainsbury E, Krass I (2018) Multiple policy approaches in improving community pharmacy practice: the case in Indonesia. BMC Health Serv Res 18(1): 449.
35. Barber N, Smith F, Anderson S (1994) Improving quality of health care: the role of pharmacists. Improving quality of health care: the role of pharmacists Quality in Health Care 3 (3): 153-158
36. Mahmoodpoor A, Kalami A, Shadvar K, Entezari Maleki T, Hamishehkar H (2018) Evaluation of Clinical Pharmacy Services in the Intensive Care Unit of a Tertiary University Hospital in the Northwest of Iran. J Res Pharm Pract 7(1): 30-35.
37. Dalton K, Byrne S (2017) Role of the pharmacist in reducing healthcare costs: current insights. Integr Pharm Res Pract 6: 37-46.
38. Lampkin SJ, Gildon B, Benavides S, Walls K, Briars L (2018) Considerations for Providing Ambulatory Pharmacy Services for Pediatric Patients. J Pediatr Pharmacol Ther 23(1): 4-17.
39. De Barra M, Scott CL, Scott NW, Johnston M, De Bruin M, et al. (2018) Pharmacist services for non-hospitalized patients. Cochrane Database Syst Rev 9: CD013102.
40. Hawes EM, Misita C, Burkhart JI, McKnight L, Deyo ZM, et al. (2016) Prescribing pharmacists in the ambulatory care setting: Experience

- at the University of North Carolina Medical Center. *Am J Health Syst Pharm* 73(18): 1425-1433.
41. De Sousa IC, de Lima David JP, Noblat Lde A (2013) A drug information center module to train pharmacy students in evidence-based practice. *Am J Pharm Educ* 77(4): 80.
42. Alamri SA, Ali Al Jaizani R, Naqvi AA, Ghamdi MSA (2017) Assessment of Drug Information Service in Public and Private Sector Tertiary Care Hospitals in the Eastern Province of Saudi Arabia. *Pharmacy (Basel)* 5(3): 37.
43. WHO (1997) The Role of the Pharmacist in the Health-Care System - Preparing the Future Pharmacist: Curricular Development, Report of a Third WHO Consultative Group on the Role of the Pharmacist Vancouver, Canada, 27-29.
44. Malone PM, Fagan NL, Malesker MA Nelson P J, McGraw-Hill et al. (2011) Pharmacy and Therapeutics Committee. In *Drug Information* 4<sup>th</sup> (edn).
45. Scott DM, Strand M, Udem T, Anderson G, Clarens A, et al. (2016) Assessment of pharmacists delivery of public health services in rural and urban areas in Iowa and North Dakota. *Pharm Pract (Granada)* 14(4): 836.
46. Bradley F, Seston E, Mannall C, Cutts C (2018) Evolution of the general practice pharmacist's role in England: a longitudinal study. *Br J Gen Pract* 68(675): e727-e734.
47. Green BN, Johnson CD (2015) Interprofessional collaboration in research, education, and clinical practice: working together for a better future *J Chiropr Educ* 29(1): 1-10.
48. Bridges DR, Davidson RA, Odegard PS, Maki IV, Tomkowiak J (2011) Interprofessional collaboration: three best practice models of interprofessional education.
49. Stringer K, Curran V, Asghari S (2013) Pharmacists and family physicians: improving interprofessional collaboration through joint understanding of our competencies. *Front Pharmacol* 4: 151.
50. Bell C, Daniel S (2014) Pharmacy Leader's Role in Hospital Emergency Preparedness Planning. *Hosp Pharm* 49(4): 398-404.
51. Boechler L, Despins R, Holmes J (2015) Advocacy in pharmacy: Changing "what is" into "what should be". *Can Pharm J (Ott)* 148(3): 138-141.
52. Cooley J, Lee J (2018) Implementing the Pharmacists Patient Care Process at a Public Pharmacy School. *Am J Pharm Educ* 82(2): 6301.
53. Galal SM, Carr Lopez SM, Gomez S (2014) A collaborative approach to combining service, teaching, and research. *Am J Pharm Educ* 78(3): 58.
54. Reidt S, Morgan J, Larson T, Blade MA (2013) The role of a pharmacist on the home care team: a collaborative model between a college of pharmacy and a visiting nurse agency. *Home Health c Nurse* 31(2): 80-87.
55. Brown MT, Bussell JK (2011) Medication adherence: WHO cares? *Mayo Clin Proc* 86(4): 304-314.
56. The Pfizer Guide to Careers in Pharmacy. Published by ECOF: HIGH DENSITY MOBILE FILING SYSTEM 3.
57. John C (2018) The changing role of the pharmacist in the 21<sup>st</sup> century. *The Pharmaceutical Journal*.
58. Barrett J (2017) Pharmacists Play Key Role in the Future of Health Care.
59. Pharmacy Schools Council (2018). The future role of the pharmacist.
60. Byne T What Could the Role of the Pharmacist be in the Future? *British Pharmaceutical Students' Association (BPSA) News*.
61. Baker KR (2018) Two Crucial Skills Pharmacists Will Need to Succeed in the Future. *Drug Topics*.
62. Warner B (2018) Wanted: young pharmacists to shape the future. *NHS England Blog*.
63. Pharmacy's Global Transformation Is Pharma's Opportunity. *McCANN Health* (2017).



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