

Pharmacy Career Opportunities: An Overview

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Abstract: Pharmacy profession is always a choice of preference for the medical aspirants. Pharmacists are health care professionals whose professional responsibilities include seeking to ensure that people derive maximum therapeutic benefit from their treatments with medicine. Pharmacy is a versatile, dynamic, growing, and increasingly diverse, innovative and competitive field profession, one which creates an excitement because there are so many opportunities for career. It is an age old profession which has transformed into a hub for “Global Healthcare” and evolved as a multidisciplinary and multifaceted field in recent times. Pharmacists work in a wide variety of health care settings: in the pharmaceutical industry (carrying out a wide range of activities – from R & D to manufacturing to quality control, packaging, quality assurance, etc.), in practice settings (hospital & community i.e. retail pharmacy), in academics, regulatory affairs, clinical research. It is a noble profession which unfolds a vista full of opportunity leading to a golden future for a young career aspirant. Pharmacists represent the 3 largest healthcare professional groups in the world, and pharmacists are working in various positions, applying their unique knowledge and skills, contributing to the health of the nation.

Now a day's pharma industry and profession are experiencing rapid changes due to advanced technological innovations and ideas sweeping across the world. Hence these changes give better opportunities to the pharmacy profession and it is imperative to evolve a Pharmacy academic programme that suits the basic thirst of the nation like providing medicines at affordable prices, community health care etc. The attempt has been made to summarize the multidisciplinary curriculum opportunities for pharmacy professionals.

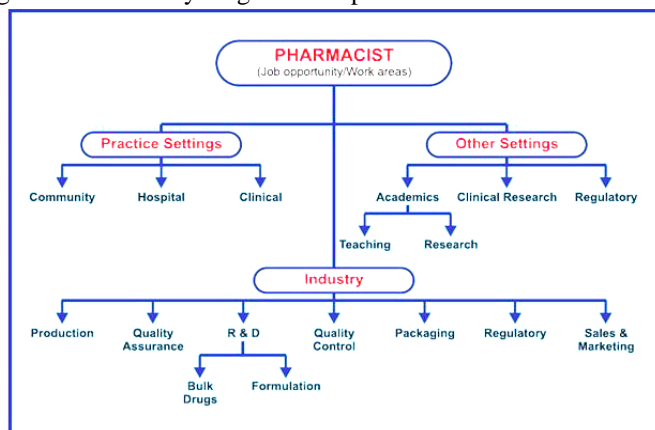
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I. INTRODUCTION

Pharmacy is a core area of healthcare comprising A to Z of drugs, industrial and clinical services constitutes division of pharmacy. The scope for pharmacy practices arises from two facts that pharmacists are experts in medicines from molecule to formulations. Now a day's pharma industry and profession are experiencing rapid changes due to advanced technological innovations and ideas sweeping across the world. It is an age old (Hospital & community i.e. retail pharmacy, in academics, Profession which has transferred into a hub for “Global Regulatory Affairs. Healthcare” and evolved as a multidisciplinary and Multifaceted field in recent times. The

profession of pharmacy is as old as human civilization. In the ancient periods, the physicians themselves practiced pharmacy and it is believed that Hippocrates, the father of medicine used to make his own prescriptions, or at least, supervises their preparations. Pharmacists are healthcare professionals whose professional responsibilities include seeking to ensure that people drive maximum therapeutic benefits from their treatments with medicines. While by nature of practice, many pharmacists work silently behind scenes, some of them who are in contact with patients represents the face of pharmacy profession. Thus pharmacy is a product, as well as a service related discipline, increasing its scope two-fold. It is a noble

profession which unfolds a vista full of opportunity leading to golden future for young career aspirant.



Source: IPA Booklet November 2009

Figure 1: Pharmacy Job Opportunities

II. PHARMACY CAREER OPPORTUNITIES

PRACTICAL SETTINGS

✓ COMMUNITY PHARMACY

There are around 5 lakh pharmacies (Chemists & Druggists, Medical Stores) in India in almost every nook and corner of the Country. These friendly neighborhood pharmacies are doing yeomen service to the nation by providing quick services and Medicines to the public through the day and even at odd Hours. A large majority of the 5 lakh Pharmacies are independent, family business passed on from generations. In the past few years, organized pharmacy chains have entered the market, and currently, around 2000 such pharmacies operate in different parts of the country, with Apollo Pharmacies being the largest chain. There is a shortage of Pharmacist to work in community pharmacies, and thus there is a large potential opening with a lot of challenges in providing appropriate health care to the ailing population of the country. The Indian retail market is worth US \$330 billion & expected to grow at 10%. With the growing number of chains and with foreign organized retail pharmacy chains eyeing the large Indian health care market, the independent pharmacist have slowly started getting professionally trained and following Good Pharmacy Practices and started taking up professional tasks of providing patient counseling, health and drug information, doing blood pressure checks, blood sugar Checks, etc. within the premises of their pharmacy. There is an Optimistic change towards achieving the prime objective of complete patient care.

✓ HOSPITAL PHARMACY

Another opening for a pharmacy profession is a “registered pharmacist” in the hospital or drug stores, practice of pharmacy inside a hospital close to the patient. In an environment where doctors, nurses and other health care professionals interact with the on pharmacist matters related to medicines, surgical and other patient care items required. In

India there are more than 15000 hospitals and around 9 lakh Hospital beds. Most of these hospitals have pharmacies run by Pharmacists thus work both in private and public hospitals across the country (PHCs, CHCs, district hospitals, tertiary Pharmacists and teaching hospitals, hospitals of other public sector undertakings like Coal India, Railway Hospitals, ESIS Hospitals, etc.). While the pharmacists here fulfill the traditional role of inventory management, storage and dispensing of medicines, there is a vast scope for providing Clinical services for patient benefit.

✓ CLINICAL PHARMACY & PATIENT COUNSELLING

Clinical pharmacists work in a hospital as part of a medical care team. They typically round on patients with a physician and help to determine which medications and doses would be most effective for each patient's conditions.

INDUSTRY SETTINGS

✓ MARKETING

As aspirant of a highly bright future can enter through various opening like starting his own retail or wholesale drug store or becoming a professional sales representative known as M.R Any business is incomplete without the marketing & sales aspect, as the universal fact is that anything produced has to be sold. The pharmacy Sales & marketing is a highly technical field & offers excellent opportunities for the pharmacy graduates. Additional qualification like MBA

✓ PHARMACEUTICAL INDUSTRY

The pharmaceutical industry is a complex, multi-factorial environment, but with the overall aim of discovering, developing and marketing safe and efficacious medicines, it demands high standards and quality from its employees. Industrial pharmacists carry out clinical trials, where drugs are tested for safety and effectiveness work in research and development to develop new formulations. The production job entails management and supervision of the production process, quality control, quality assurance, packaging, and storage; delivery work in marketing, sales.

✓ QUALITY ASSURANCE HEALTH MANAGER

The Pharmacy graduate can play an important role in the development of clinical care plans, can investigate adverse medication events and in some cases can suggest preventive measures. He can play a key role in spreading awareness among the people about AIDS and the preventive measures to be taken.

✓ ANALYTICAL CHEMIST OF QUALITY CONTROL MANAGER

The pharmacy graduate can play a crucial role in controlling product quality. The drug and the Cosmetics Act (1945), Rules 71(1) and 76(1) says that the manufacturing

activity should be taken up under the supervision of a technical man whose qualification should be B. Pharm, B. Sc, B. Tech or medicine with Bio-Chemistry.

✓ *SALES AND MARKETING*

Ambitious achievers with pleasant personality and good communication skills can opt for the job of Medical Sales Representative. The companies prefer pharmacy graduates for this job, as they have a good knowledge about the drug molecules, their therapeutic effects and the drug-drug interactions.

OTHER SETTINGS

✓ *TEACHING*

One who is having passion for teaching, good communication skills (oral and writing), good interpersonal skills, a strong work ethic and the ability to balance one's life strive to provide excellent education and research training can be a successful teacher. It good being a faculty member as in this profession students are fun and challenging and keep you intellectually young. One can constantly learn new things and can change focus over time. It can be one of the best jobs in all of the careers which is respectable job.

✓ *REGULATORY AFFAIRS:*

Locally the FDA is the main regulatory body governing and implanting the rules and regulations for the drug & pharmacy industry .The FDA has state branches and sub branches all over the country. The job opportunities for pharmacy graduates are excellent.

III. GOVERNMENT PHARMACY SERVICES

Employing agencies include U.S. Public Health Service, Medicare and Medicaid, The Food and Drug Administration, Drug Enforcement Administration, the Federal Bureau of Investigation, Centers for Disease Control, and U.S. Armed Services. Specialty and other pharmacy practice opportunities: Additional career pathways include long-term care, nuclear pharmacy, home infusion services, compounding, managed care, health maintenance organizations, academia, and professional association management.

Pharmacists are hired within the central and state government departments- the Health Protection, the Department of Health and Welfare, the Pest Control Division councils; and the Provincial Departments of Agriculture or the Environment. There are also employment opportunities within the food and cosmetic industries or within any other industry which requires the assurance about new products are as safe and effective as possible. In government departments, a pharmacist maintains proper records according to various government acts governing the profession of pharmacy.

A. DRUG INSPECTOR

A candidate for direct recruitment to the post of Drugs Inspector must possess the qualifications Degree in Pharmacy or Pharmaceutical Sciences or Medicine with specialization in Clinical Pharmacology or Microbiology or equivalent from a recognized University. The age limit should be within 21 to 40 years old.

B. PHARMACIST IN DEFENSE (ARMY, NAVY, AIR FORCE)

If you want to join in Indian Defense Sector after completing graduation in Pharma course, yes you can join by qualifying in Short Service Commission Examination and CDS Examination.

COMBINE DEFENSE SERVICE EXAMINATION (CDSE)

You must be completed Degree in Pharmacy from recognized university with any stream and your age should be between 19 to 22 years. This exam is conducted by UPSC twice in year

SHORT SERVICE COMMISSION (SSC)

If you want to apply for this position then you must be completed your Engineering/Pharmacy Graduation from recognized university with 55% of marks and your age should be between 19.5 Years to 25 years. Unmarried male candidates those who have completed technical Engineering/ Pharmacy courses are eligible for this position.

C. FORENSIC SCIENCE

It is the application of various sciences for application of various sciences to those criminal and civil laws that are enforced by police agencies in a criminal justice system. With scientific knowledge, and critical thinking skills acquired through forensic science. With Master's Degree in Chemistry / Biochemistry / Pharmacology / Pharmacy / Forensic Science with Chemistry as one of the subjects at Bachelor of Science level from a recognized University or equivalent.

D. GOVERNMENT APPROVED CHEMIST

There are a lot vacancies for the posts of pharmacists government jobs in India many aspiring candidates are looking for the latest pharmacist vacancy in various posts of pharmacist such as Pharmacist Technician, Pharmacist Assistant, Pharmacy Clerk, Pharmacy Dispenser, Pharmacy Supervisor, Pharmacy Intern, Pharmacy Technician Trainee, Pharmacy Manager .The candidates who are interested to apply for the posts of Pharmacists should have completed their Diploma in Pharmacy and the age limit should be within 18 to 39 years.

E. FOOD INSPECTOR

Candidates should completed graduation in medicine or have a bachelor's degree in agriculture, pharmacy food technology and dairy technology. This exam is conducted by MPSC and candidates aged between 18 to 25 years of age are eligible to apply for the post of food inspector.

F. CLINICAL RESEARCH

There are various job profiles available in clinical research field like clinical research associate, clinical pharmacist, data managers, pharmacovigilance case processor, project managers, regulatory affair publishers, biostatisticians, etc.

G. MEDICAL TRANSCRIPTION

The B Pharm graduate can work with medical practitioners (doctors) to maintain the patient treatment history, the drug to which he/she is allergic etc. Also some private company hired B. Pharm graduate to help them in translating medical terms they received from other or same country doctors.

IV. RETAIL PHARMACY

In medical retail stores, the pharmacist prepares and dispenses drugs on prescription to the general consumer with the growing availability of pre-packaged doses; the pharmacist monitors the drug sale on the basis of prescriptions and dosages, and gives over the counter advice on how to use prescribed drugs. In the retail sector, pharmacists run chemist's shops as medical representatives; they inform and educate the medical practitioners of the potential uses of the drug or health product and its administration along with side effects or precautions for its use. The job entails regular visits to medical practitioners, hospitals, clinics, nursing homes and health centers. There is usually a lot of touring to be done.

V. WHOLESALE PHARMACY

An India Pharma export is a leading pharmacy wholesaler and pharmacy supplier of top quality bulk medical supplies all over the globe. Day by day we are expanding our business of pharmacy wholesale, bulk medical supplies and pharmacy supplier of many prescription drugs. We provide excessive quality of pharmacy wholesaler bulk products and bulk medical supplies at very cost-effective rates. From time to time, we hold eye-catching offers over certain products. India Pharma exports.com is reputed pharmacy Wholesaler Company.

VI. OWN INDUSTRY

TO START THE MANUFACTURING COMPANY

To start pharmaceutical/cosmetic product manufacturing company/ business you require obtaining manufacturing license from concerning authority of applicable state. Procedure and requirement may vary state to state or amendments in drug and cosmetic act/rules. Aspirants can refer drug and cosmetic act/rule at the regular basis for accurate requirement and procedure.

TO START THE MARKETING FIRM

One who does not have his own arrangements for manufacture but who intends to avail himself of the manufacturing facilities owned by another licenses Loan licenses are issued for the manufacture and aspirant has to register his marketing firm for sale or distribution of drugs.

TO START AYURVEDIC BUSINESS

Only drug licenses procedure can be skipped. Sale and purchase of Ayurvedic medicines don't require drug license number.

VII. ELIGIBILITY & COURSE REQUIREMENTS

D. PHARM: A person who has completed D.Pharmacy can be employed as a Registered Pharmacist in a community pharmacy (Medical Store/Chemists & Druggists) or a hospital pharmacy. It is the minimum qualification to practice pharmacy, therefore, it is mandatory that all dispensing of prescription medicines has to be done under the supervision of a pharmacist only. He / She can also work as a medical representative & also work in an industry.

B. PHARM: As per the present curriculums in India, a B. Pharm degree mainly prepares the candidates to work in the pharmaceutical industry. The course structure of the degree includes practical training in the pharmaceutical industry environment. Practical experience goes a long way in getting the candidates ready to enter the actual work environment and develop a successful career for themselves in the field. A pharmacist having a B.Pharmacy degree is also eligible to practice pharmacy in a community or hospital pharmacy.

M. PHARMACY: B. Pharm candidate is eligible to do M. Pharm. & needs to select one of the 10 specializations. After the implementation of GATT, new drug research has become more important. Those perusing higher education (M. Pharmacy) have advantage over pharmacy graduates in R & D.

PHARM. D: Pharm. D is a six year course after 10+2 or Diploma in Pharmacy (D.Pharm) (or 3 years after B.Pharmacy – called as Pharm. D Post Baccalaureate) was started in August 2008 and includes five years of clinical and community-based theory, with ward rounds and one-year internship in hospitals. The Ministry of Health & Family Welfare, Government of India.

VIII. PHARMACY EDUCATION AND JOB OPPORTUNITIES OUTSIDE INDIA

Pharmacy graduates may consider venturing into pursuing higher studies outside India to make their career even more lucrative and challenging. One can enroll for masters as well as Ph. D in desired field of study after obtaining B.Pharmacy degree in India. Learning opportunities for higher studies exist in both the practice as well as research streams. The details of avenues/approaches to get admissions to pharmacy colleges in different countries, are easily available on the respective websites of various colleges. Generally, one needs to answer one or more of the following entrance/qualifying exams GRE (Graduate Record Exam) TOEFL (Test of English as a Foreign Language) IELTS (International English Language Testing System). Further, after seeking admissions into a pharmacy college in these countries, one may have to take up certain subjects or electives before getting equivalency and eligibility to pursue further studies. In order to work as a registered pharmacist in a particular country, one will have to answer registration exams, which will be country specific. Ample job opportunities await qualified pharmacy professionals in various countries including the U.S.A., Canada, European countries like U.K., France, Germany, African countries like South Africa, Nigeria, Yemen, Gulf countries like UAE, Saudi Arabia, Kuwait, South East Asian countries like Singapore, Korea, Japan, etc. and the Australian continent including New Zealand. In some countries, the job opportunities are in the industrial setting, while in some countries, they are in the practice setting. There are thus plenty of higher education and research opportunities in different countries along with excellent job openings. The pharmaceutical career is one of the highest rewarding careers especially in the developed countries.

The pharmacy profession has exciting opportunities, as well as challenges. Accessibility to health care and essential medicines still remains a problem. One third of world's population does not have regular access to essential medicines. Rising cost of healthcare, increasing disease burden (both communicable, and now non-communicable too) and advent of new diseases, irrational use of medicines, non-availability of health care providers in sufficient numbers especially in rural areas are all challenges we have to overcome.

IX. CONCLUSION

The career paths described are representative of the many exciting possibilities that await pharmacists entering today's pharmaceutical and biopharmaceutical industries. Additional areas of concentration include Business Intelligence, Consumer Health, Promotion Compliance, Policy and Advocacy, R&D Strategy and Analysis and many others.

With a career in the pharmaceutical industry, a pharmacist has an unparalleled opportunity to make a significant contribution to the development and delivery of medicines to patients around the world. The pharmacist's role in industry has evolved from traditional areas of sales and manufacturing and currently encompasses a wide array of clinical, medical

and marketing functions. Frequently, positions sought by pharmacists in the pharmaceutical industry require additional postgraduate training, which can be obtained through participation in a fellowship or residency program. Individuals interested in a career in industry are encouraged to research and consider carefully the available postgraduate training programs option to help them make informed career choice with respect to the pharmaceutical industry.

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