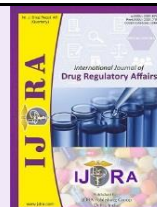


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Review Article

Challenges and Future of Pharm D (Doctor of Pharmacy) Profession: Promising Career but with some reforms**Rishitha Kalchetty, Priyanka Lone, Chandipriya Bonaboina, Sravani Rafter, LayaSree Panugantisira, Resika Kanukuntla, Ravi Kumar Badhavath, Madhusudhan Boddu, Jithan Aukunuru Venkata, Vidya Sagar Jenugu****Omega College of Pharmacy, Edulabad, Telangana, India 501301***Abstract**

Pharmacy being a vast field has a lot to offer. However, it takes diligent work, proper planning, and the ability to choose the right option. Considering the value of a Pharm. D degree, it is recommended that the candidates pick the best college that focuses equally on theoretical as well as experiential postulates. After completion and during the course Pharm D candidate may provide the clinical pharmacy services in the hospital, work in the areas of Clinical research organizations (CRO), Pharmacovigilance, Pharmaco-economics, community services, research and academics. As a summary, it can be expected that the Pharmacists, i.e., Pharm D would play a major role in Indian health care system in future. This course will give an opportunity to pharmacists to work more prominently in Indian health care system. A poll conducted on LinkedIn Poll on the subject matter whether Pharm D (Doctor of Pharmacy) professionals have skill in 1. Prescribing Drugs 2. Drug interaction 3. Drug dose 4. Patient counselling has shown more positive responses, which is a good note for the future of Pharm D profession in India.

Keywords: Pharm D (Doctor of Pharmacy), pharmacists, Clinical research organizations, Pharmacy Council of India (PCI), CRO.**Article Info:** Received 10 May. 2022; Review Completed 13 Jun. 2022; Accepted 15 Jun. 2022**Cite this article as:**Kalchetty R, Lone P, Bonaboina CP, Rafter S, Panugantisira LS, Kanukuntla R, Badhavath RK, Boddu M, Aukunuru Venkata J, Jenugu VS. Challenges and Future of Pharm D (Doctor of Pharmacy) Profession: Promising Career but with some reforms. *Int J Drug Reg Affairs* [Internet]. 2022 Jun 15 [cited 2022 Jun 15]; 10(2):90-93. Available from: <http://ijdra.com/index.php/journal/article/view/535>**DOI:** 10.22270/ijdra.v10i2.535

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1. Introduction

In 2008, the first batch of Pharm D took admission to the course. Pharm D is short form of “Doctor of Pharmacy.” It is the professional pharmacy doctoral program. In India, it is a total six years’ program after 10+2 or D. Pharm which includes five years of academic study and one year of internship. (1)

The academic study includes the same subjects such as B. Pharm, in addition the pharmacy practice components are emphasized such as Hospital Pharmacy, Community Pharmacy, Pharmaco-therapeutics, Clinical Pharmacy, Biostatistics and Research Methodology, Clinical Toxicology, Clinical Research, Pharmaco-epidemiology, Pharmaco-economics, Clinical Pharmacokinetics and Pharmaco therapeutic Drug Monitoring. Further to add, in the fifth year of the course the candidate has to perform a project work for six months. Pharm D (post baccalaureate) is a three-year course which includes two years of academics and one year internship after B. Pharm. (1, 2) Some unique features of Pharm D include-

eligibility to register for Ph.D., prefix ‘Dr.’ to name and a registrable qualification after completion of course. (2)

The pharmacists can provide the clinical pharmacy services in wide variety of fields. Out of the services patient medication counselling is considered to be the most important part from a patient's point of view. The information that may be discussed while a counselling session purpose, expected action, storage, method of administration of drugs and medical devices. (3) Overall skills required to provide better clinical pharmacy services are up-to-date knowledge of clinical aspects of drugs and good communication skills.

After completion and during the course Pharm D candidate may provide the clinical pharmacy services in the hospital, (3, 4) work in the areas Clinical research organizations (CRO), Pharmacovigilance, Pharmaco-economics, community services, (5) research and academics. Though its launched curriculum in India 14 years back, still its taking time to get well established. Pharm D candidates need to work hard and get

recognized in the society for patient-care by clinical pharmacy services. They have to create a rapport with other healthcare providers such as physicians, nurses, and also with patients. Pharm D candidates have to generate the need of clinical pharmacy services in the society and prove its importance.

As the Pharm D is mostly patient-centered curriculum, therefore, patients will be benefited the most. The patients would be able to know all the information about their disease, drugs and lifestyle modifications for the disease in future which would definitely increase prognosis of the patients. The clinical pharmacy services would also minimize the work-load of physicians from their busy schedule as well as it would decrease the load on the Indian health-care system.

2. Avenues for PHARM D

Scope of Pharm D in India

After completing this degree, the students can work in the following positions in India:

- Clinical Pharmacist
- Hospital Pharmacy Director
- Hospital Staff Pharmacist
- Medical Writer
- Pharmaceutical Advisor
- Medical Safety Physician
- Supply Logistics leader
- Drug Safety Associate

Future Scope of Pharm. D course in the US

The United States of America is the best landing ground for pharmacists as it is the most paying country for this profession. There are various career opportunities after completing Pharm. D course:

- Director of Pharmacy in Hospitals
- Regulatory Manager
- Community Pharmacist
- Quality Assurance Manager
- Clinical Pharmacist
- Staff Pharmacist
- Retail Pharmacist

Since the USA is home to eminent Pharmaceutical companies, students can easily pick and choose to work with the best of companies. The list includes:

- Pfizer Inc.
- Johnson & Johnson
- Roche Holding AG
- AbbVie Inc
- Amgen

- Novartis AG
- Sanofi S.A
- Bristol-Myers Squibb
- Merck & Co., Inc.

Future scope of Pharm D in the United Kingdom

The UK is one of the countries badly hit by COVID-19 and is also among those working towards creating a vaccine for curing this virus. This implies that the country's pharmaceutical industry is well expanded and will surely have a huge demand for pharmacists in the times to come as well.

In the U.K. candidates with a Pharm. D degree can work as:

- Retail Pharmacist
- Clinical Pharmacist
- Clinical Scientist for Research
- Patient Safety Physician
- Medical Science Liaison
- Scientific Director
- Medical Writer
- Clinical and Medical Affairs Director

The candidates can work on technical as well as managerial positions in a Pharma company. They just have to complete their MBA from the **Top Management Colleges in India** to join the top-tier companies as managers and executives. UK-Based Pharma companies in which candidates can work:

- Metrion Biosciences
- Quotient Sciences
- Recipharm
- Veristat
- GlaxoSmithKline

Other Opportunities after Pharm. D

A Doctor of Pharmacy, during the duration of six years, helps students in understanding the overall functioning and familiarizing themselves with the inside-out of the industry thereby increasing the career opportunities for the students. Pharm. D graduates can work as research associates, teachers, lecturers, etc. in colleges and universities all around the world.

What's more to this degree is that not only Pharmaceutical companies but also Biotech companies hire pharmacists. Consequently, candidates can work as pharmacists in Biotech firms along with all the graduates from the Best Biotech colleges in India.

3. Challenges

With just a few weeks to commence the next batch of Pharm D course in the recognised colleges in India and the college managements are making a last ditch effort to

woo students for admissions, senior academicians are concerned about the future of the course and scope of job opportunities for the degree holders.

The Pharmacy Council of India (PCI) had introduced Pharm D course as an educational reform to match global standards, but critics are of the opinion that the course will not seem to match the claim. The course was started in 2008 giving much expectation to students of pharmacy in India, especially the aspiring pharmacists who were targeted for the six-year course and the B Pharm graduates to the lateral entry.

Giving a warning to the aspirants of the course, the faculty members who have thorough knowledge about the various courses such as D Pharm, B Pharm and M Pharm are advising the students to opt for degree course suitable to Indian scenario rather than dreaming of western opportunities.

So importantly the regulatory, academic bodies and the management of colleges in India, should provide adequate time and facilities for the students to learn the skills on clinical allied fields, provide training in critical care medicine, patient counselling etc. to make Pharm D course to be better in the Indian scenario

Right now the US is producing enough number of pharmacists to meet their healthcare demands in hospitals and retail pharmacies. There is unemployment for American Pharm D holders in the states of New Jersey, New York, Pennsylvania, Connecticut and Maryland. Individual state in the US will recognize the foreign Pharm D degree depending upon their demand. Besides, there is no special visa category to take Indian Pharm D graduates into America. It is too difficult to get jobs in hospitals in the US because they prefer their own

graduates who are properly trained for therapeutic drug monitoring. Not only from India, but also from other countries the pharmacists come to US in search of jobs and compete with the local graduates. There are very few clinical and hospital pharmacy jobs for Indian Pharm D graduates in the US hospital. (6)

Post graduates in Pharmacy (M. Pharm) are preferred to teach the B Pharm students and to work in pharmaceutical industries. No such chance will be given for the Pharm D graduates who have to compete M Pharm graduates in India for jobs.

4. Opinion poll on Quality of Pharm D profession

Methodology of Survey

A poll conducted on LinkedIn (Professional networking) and survey question was published and authorized QA/RA experts in the medical field to poll their answer within 14 days. The subject matter was shared to 526 LinkedIn contacts and 320 contacts participated and responded in the poll.

Question on the subject matter

Do you think Pharm D (Doctor of Pharmacy) profession have skill in?

1. Prescribing Drugs
2. Drug interaction
3. Drug dose
4. Patient counselling

Option 1: Yes, have knowledge on all 4

Option 2: Yes, have knowledge in few

Option 3: No, don't have understanding

Option 4: Replace doctor in prescription



Dr Vidya Sagar • You

Head - Med Tech, Ph.D.PDF., MBA(AI), PG- AI / ML, DAS - Biostatistics, PGD-R...
4d • Edited •

Avenues, Challenges, and future of Pharm D (Doctor of Pharmacy) course,
Profession in India / 14 years completed after Introduction of course in India.
Please let me know your opinion

#pharmacy #doctorofpharmacy #students #india #futureofhealthcare

<https://lnkd.in/dxCcseJ3>

https://lnkd.in/dG_Qxj4J

Do you think Pharm D(Doctor of Pharmacy) profession have skill in 1. Prescribing Drugs 2. Drug interaction 3. Drug dose 4. Patient counseling

You can see how people vote. [Learn more](#)

Yes, have knowledge on all 4	35%
Yes, have knowledge in few	35%
No, don't have understanding	15%
Replace doctor in prescription	15%

Figure 1. Showing the results of the poll conducted on LinkedIn

Analysis

Poll results were analysed on the subject matter whether Pharm D (Doctor of Pharmacy) profession have skill in? 1. Prescribing Drugs 2. Drug interaction 3. Drug dose 4. Patient counselling

Total contacts shared: 526

Total votes polled: 320

Voting Pattern is as below:

Option 1: Yes, have knowledge on all 4 (35%)

Option 2: Yes, have knowledge in few (35%)

Option 3: No, don't have understanding (15%)

Option 4: Replace doctor in prescription (15%)

5. Conclusion

Doctor of Pharmacy, during the duration of six years, helps students in understanding the overall functioning and familiarizing themselves with the inside-out of the Clinical field and industry thereby increasing the career opportunities for the students. After completion and during the course Pharm D candidate may provide the clinical pharmacy services in the hospital work in the areas Clinical research organizations (CRO), Pharmacovigilance, Pharmaco-economics, community services, research and academics. There is a positive note from the survey conducted that in future the Doctor of Pharmacy having sufficient knowledge in prescribing drugs, drug dosage, drug interactions, patient counselling etc. can replace the Medical Doctor / Physicians in prescription of the drugs for effective treatment of diseases.

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Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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