

Clinical Pharmacy in India: Recent Advances and Perspective

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ABSTRACT:

Clinical pharmacy has become one of the newest and least understood branches of pharmacy in the twenty-first century, despite the fact that no system can be guaranteed to be of high quality without sufficient oversight. Clinical pharmacists participating in medical rounds could assist doctors in optimising drug treatment. This new career in India includes solid manufacturing procedures, the acquisition, preparation, and distribution of medications, the reporting of ADRs and ADEs, and overall, a very promising facet of patient healthcare. In India, clinical pharmacy is in a stage of revolution and has seen significant, positive, and promising changes in recent years. Although still in its infancy, hospitals have begun to recognise the value of clinical pharmacy and have taken steps to make it possible. In terms of patient care services, the clinical pharmacy sector of pharmacy is unquestionably reaching new heights, which has undoubtedly improved patient services and satisfaction.

Keywords: Clinical Pharmacy, pharmacotherapy, Pharmacist, Health Care Team

INTRODUCTION:

One of the newest subspecialties of pharmacy in the twenty-first century is clinical pharmacy. [1] Pharmacy professionals deal with a variety of issues there of patient care, medication dispensing, and counselling patients on the responsible and safe use of medications. Another way to put it is that it is a branch of pharmacy where the clinical pharmacist gives patients care that maximises the use of their medications and encourages wellness, good health, and disease prevention. To further explain the situation, clinical pharmacy is defined as the use of drug control and the efficient use of knowledge.

The highest level of safety in the distribution and use of medicine is guaranteed by professional abilities and ethics. To enable each pharmaconomist (pharmaceuticals expert) to practise clinical pharmacy at a better and more professional level, the Professional Education in Clinical Pharmacy and Public Health programme was created. [2,3] ensures the patient's optimal well-being throughout the course of their pharmacological therapy.

The new function of pharmacists in the twenty-first century is clinical pharmacy. It does not limit the function of a pharmacist to just safe manufacturing procedures, convenient sourcing,

appropriate preparation, distribution, and control of drug products. Additionally, it includes tasks required to fulfil a specific set of social obligations related to the appropriate therapeutic use of drugs, such as prescribing, dispensing, and administering medications, recording professional services, directly involving patients, reviewing drug use, and providing education, consultation, and counselling.

These objectives are designed to help the doctor prescribe and oversee the patient's pharmacological therapy more effectively. Further, in order to assist the medical and paramedical staff in facilitating efficient drug therapy. In order to maximise patient compliance with the drug use process, clinical pharmacy practise also deals with good record maintenance regarding medication events.

BUILDING UP A CLINICAL PHARMACIST

Clinical pharmacists around the world, especially in nations like the US, Canada, Australia, etc., have received considerable training in the pharmacological, socio-behavioral, biological, and clinical sciences.[4] The majority of clinical pharmacists hold a doctorate in pharmacy (Pharm.D.), and many have also completed one or more years of post-graduate study, such as a general and/or speciality pharmacy residency. Additionally, many clinical pharmacists decide to pursue board certification through the Board of Pharmacy Specialties (BPS), which was established in 1976 as an independent certifying body of the American Pharmacists Association (American Pharmacists Association). A pharmacist can earn board certification in one of the following areas: pharmacotherapy (BCPS), oncology (BCOP), nuclear (BCNP), nutrition support (BCNSP), or infectious disease (BCID). [5] An "Added Qualification" or AQ is used to identify it. You must first be a Board Certified Pharmacotherapy Specialist before submitting a portfolio to the Board of Pharmacy Specialties for review to see if they would add the additional credentials to your list of credentials.

A two-year postgraduate programme in clinical pharmacy offered by the Board of Pharmacy Specialties in India is known as M. Pharm (Clinical Pharmacy) (BPS). Within the specialty of pharmacotherapy, there are other subspecialties, including cardiology and post-B.Pharm. degree programmes. Graduates of pharmacy are given the chance to learn about all the duties carried out by a pharmacist in clinics, nursing homes, hospitals, and other similar settings in this course. The study of drug use patterns and their impact on patients are the main topics of the course, which also covers the proper and appropriate use of medical equipment and products. One must take the GATE/GPAT Entrance Exam or another State or University Entrance Exam in order to apply for admission to the degree.

HEALTH CARE TEAM AND A CLINICAL PHARMACIST

A clinical pharmacist has established tasks and responsibilities within a healthcare team that includes many medical and paramedical professionals. The clinical pharmacist should handle these duties with extreme caution. The clinical pharmacist should communicate with the patients and keep a detailed record of their medical history.

The clinical pharmacist should also properly document the patient's hypersensitivities to or allergies to particular medications, dietary preferences, drug dependence or intoxications from particular chemical substances, adverse effects of specific medications, improper drug delivery, etc.[7] The clinical pharmacist should investigate the patient's medical history for drug-related interactions and the patient's behaviours after getting the prescription because the prescribed medications may interact with some over-the-counter medications. This aids in precise and effective medical treatment.

The clinical pharmacist can assist the doctor in choosing the right medication product or generic formulation (based on the bioavailability and comparability of such products). The monitoring of pharmacological therapy can help to assure its safety and effectiveness. Particularly for medications with a limited therapeutic range or those taken on a long-term basis, drug therapy monitoring is crucial. [8] The clinical pharmacist can also check several pharmacokinetic parameters based on things like medication plasma concentration, enzyme levels, and blood glucose levels.

Adverse medication responses are more likely to occur in patients with kidney disease or hepatic conditions. The detection, prevention, and reporting of negative medication responses can be assisted by clinical pharmacists. For the patients in question, he might suggest to the doctor an alternative pharmacological therapy. Clinical pharmacists can contribute significantly to the development of health and drug policies and serve as a resource for the public and other healthcare professionals in need of knowledge.[9] The clinical pharmacist's role in monitoring the choice, need, procurement, distribution, and usage of the pharmaceuticals is crucial to effective drug management.

Collaboration between the pharmacist, the patient or their caretaker, and other medical experts is required for Medication Therapy Management (MTM). professionals that advocate for the effective and secure administration of medications and help patients get the results they want from their drug therapy As a result, it covers formal education on sensible drug usage as well. It is envisaged that the public will be informed and educated about medical processes through this. Disease State Management (DSM) is the organisation of care for a specific high-volume, high-cost diagnosis with the aim of improving outcomes and, when feasible, lowering overall costs. DSM is a multi-step process that comprises an evidence-based clinical policy, a detailed implementation strategy, and a data-driven feedback mechanism to track the care-related characteristics (such as clinical outcomes, patient satisfaction, cost, etc.) that the programme is meant to influence. This might entail automated commercial data processing known as electronic data processing (EDP). Typically, this involves processing enormous amounts of comparable data using simple, repetitive activities. For instance, billing for utility services and airline reservations are both affected by bank transactions that are applied to customer and account master files.

Clinical pharmacists who work in hospitals and community pharmacies can gather medication histories, speak with patients, review treatment plans, monitor drug therapy, provide drug information, report adverse drug reactions, assess drug use, and provide poison

control services. They can also carry out drug use assessments and report adverse drug reactions. The only places in India where advances in clinical pharmacy were originally made were hospitals. However, due to the fact that the majority of practising pharmacists in India only have a two-year Diploma (D.Pharm) programme as their primary educational background, clinical pharmacy practise is not well established in the community context. The great potential offered by sickness management and patient counselling is already beginning to dawn on students.

The target approaches for the programmes were creating academic courses that would help students build their competencies and hospitals house practise facilities. Undergraduate curriculum development focused on making improvements to the curriculum, and postgraduate courses added a new branch. The government sector model and the private sector model were both designed as clinical pharmacy practise centres.

For those interested in studying clinical pharmacy, there are numerous institutions in India, including the Shri Sarvajanic Pharmacy College in Gujarat, the R.C. Patel College of Pharmacy in Maharashtra, the Bharath Institute of Technology in Andhra Pradesh, the School of Pharmacy and Technology Management at the NMIMS University in Maharashtra, the Shri Guru Ram Rai Academy of Pharmaceutical Sciences in Uttrakhand, and the University Department of Pharmaceutical Sciences in Orissa. Along with them, New Delhi has developed a number of other institutes, including the ICRI, CREMA, Jamia Hamdard, and the Delhi Institute of Pharmaceutical Sciences & Research (DIPSAR). Numerous institutions also offer placement and industry training.

The necessity for implementation and professional advancement in the field of clinical pharmacy in India, however, must also be understood in order to learn about the situation of pharmacy practise and education at this time. These main points still exist largely in accordance with the conventional Indian approach. It is evident that in order to achieve excellence in our clinical pharmacy education, we must change the scope and length of our degree programmes, as well as provide adequate training for the upcoming generations of clinical pharmacists rather than relying solely on the application of traditional pharmacy knowledge.

CONCLUSION

The focus of clinical pharmacy will be to improve the quality of healthcare provided to people. It will encourage the sensible application of medicine including conventional medicine and allopathy. In order to precisely diagnose the diseased status and obtain specificity to vulnerable diseases, which will greatly minimise the budgetary burden. Clinical pharmacists will pay close attention to ensuring that pharmacotherapy results in human health and wellbeing with the fewest possible side effects.

REFERENCE:

1. In en.wikipedia.org/wiki/Clinical_Pharmacy_and_Public_Health_Education
2. Kokate CK. Pharmaceutical Education in India Vision 2010. Indian J Pharm Edu; 1999; 77-33.
3. Gilhotra N. TQM and six sigma in health care industry. Pharmabuzz ; 2009; 4; 16-20.
4. George P.P., Molina JA., Cheah J., Chan SC., and Lim BP; The evolving role of the community pharmacist in chronic disease management - a literature review. Ann Acad Med Singapore 2010; 39; 861-867.
5. Talasaz AH. The Potential Role of Clinical Pharmacy Services in Patients with Cardiovascular Diseases. J Teh Univ Heart Ctr 2012; 7(2); 41-46.
6. Gharat MS., and Achhra CV; Community services: Much needed component in the pharmacy curriculum. Pharma Times 2011; 43-16.
7. Dave JB. Does bright future await pharmacy students? Pharma Times 2011; 43-13.
8. Educ Shantanu K. Pharmacy Education: Current problems and suggested solutions. Indian J Pharm 2004; 38-154.
9. Kaboli P. J., Hoth A B., McClimon B.J and Schnipper JL; Clinical pharmacists and inpatient medical care: a systematic review. Arch Intern Med 2006; 166; 955-964.