

Clinical Pharmacy in Pakistan

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Editorial

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Editorial

Clinical Pharmacy is generally used term in Pharmacy practice and in Pharmacy literature. It is a health sciences specialty, which describes the activities and patient care services of the Clinical Pharmacist to develop and promote the rational and appropriate use of medicinal products and devices [1,2].

Clinical Pharmacy includes all the patient care services performed by Pharmacists practicing in hospitals, community pharmacies, nursing homes, home-based care services, clinics and any other setting where Medicines are prescribed and follow-up [3].

The term "Clinical" does not necessarily imply an activity implemented in a hospital setting. It describes that the type of activity is related to the health issues of the patient (s). This implies that Community Pharmacists and Hospital Pharmacists both can perform Clinical Pharmacy activities.

How does Clinical Pharmacy differ from Pharmacy?

- The discipline of Pharmacy defines the knowledge on Synthesis, Chemistry and preparation of Drugs.
- Clinical Pharmacy is more clinical oriented to the analysis of population needs with regards to medicines, ways of administration, and patterns of use and Drugs effects on the patients.

The focus of attention moves from the drug to the single patient or population receiving drugs.

Overall Goal

The overall goals of Clinical Pharmacy activities are to promote the correct and appropriate use of Medicinal products and devices. These activities aim at:

- Maximizing the Clinical effects of Medicines, i.e., using the most effective treatment for each type of patient.
- Minimizing the risk of treatment-induced adverse events, i.e., monitoring the therapy course and the patient's compliance with therapy.
- Minimizing the expenditures for Pharmacological treatments born by the national health systems and by the patients, i.e., trying to provide the correct treatment alternative for the large number of patients.

Level of Action

Clinical Pharmacy activities may influence the appropriate and correct use of medicines at three different levels: before, during and after the prescription is written.

Before the Prescription

- Clinical trials on healthy volunteers.
- Formularies development.
- Drug information & surveys.
- Clinical Pharmacists have the potential to implement and influence drug-related information, i.e., making decisions on which drugs deserve to be marketed,

which drugs should be included in national and local formularies, which prescribing trend and treatment guidelines should be implemented.

- Clinical Pharmacists are also actively involved in clinical trials at different levels: participating in ethical committees; study monitoring; dispensation and preparation of investigational drugs.

During the Prescription

- Counseling activity.
- Clinical Pharmacists may follow the attitudes and priorities of prescribers in their choice of better and correct treatments.
- The Clinical Pharmacist monitors, detects and prevents harmful drug interaction, ADR (adverse drug reactions) additional medication errors through evaluation of prescriptions' profiles.
- The Clinical Pharmacist pays special attention to the dosage of drugs which need TDM (therapeutic drug monitoring).
- Community Pharmacists can also make prescription decisions directly; when OTC (over the counter) drugs are counseled.

After the Prescription

- Counseling with patients.
- Preparation of personalized formulation.
- Drug use evaluation as prescribed.
- Outcome of research conducted.
- Pharmaco-economic factors.
- After the prescription is written, Clinical Pharmacists play a key role in communicating and counseling patients.
- Pharmacists can improve patients' awareness of their treatments, monitor treatment response, check and improve patients' compliance with their medications.
- As members of a multidisciplinary team, Clinical Pharmacists also provide integrated patients care from 'hospital to community' and vice versa, assuring a

continuity of information on risks and benefits of drug treatment.

How to Pursue a Profession

At present Colleges of Pharmacy in Pakistan do not satisfy the minimal requirements for an appropriate education in Clinical Pharmacy. They are still largely focused an old model of Pharmacy activity, e.g., based on Chemistry and basic sciences knowledge.

A few universities have modified and broadened their curriculum including topics as Epidemiology, Pharmacoeconomics, Clinical Medicine, Pharmacovigilance, Communication skills, the latter being particularly important for Community Pharmacists.

The majority of new graduates Pharm.D in Pharmacy will therefore work either in the Pharmaceutical companies, different departments of Ministry of Health (Drug Regulatory Authority), Universities or the community & hospital setting to learn the skills unique to a Clinical Pharmacist [4].

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