

ADVANCED CLINICAL PHARMACY

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LECTURE 1,2&3 •

**INTRODUCTION TO
CLINICAL PHARMACY**

Learning outcomes

--- You will be able to:

- interpret clinical signs and symptoms
- evaluate laboratory data
- critically appraise treatment options
- state goals of therapy
- describe a pharmaceutical care plan to include advice to a clinician
- describe the prognosis and long-term complications
- describe the social pharmacy issues which could include supply (e.g. complex treatments at home, concordance and compliance) and lifestyle issues
- Describe the monitoring of therapy.

Pharmacists are considered as society's experts on drugs.

***Clinical pharmacy aims to: (Q)**

1-maximize drug efficacy,

2-minimize drug toxicity and

3-promote drug cost effectiveness.

*To achieve this, pharmacists need to work as fully integrated members of the health care team.

*As a one of the professional team members , pharmacists are responsible and accountable to patients for the services they provide.

What is Clinical Pharmacy?

- ▶ It is a special health science , which describes the activities and services of the clinical pharmacist to:
 - Develop and
 - Promote the proper use of drugs and devices.
- ▶ Clinical Pharmacy includes all the services performed by pharmacists practising in:
Hospitals (central pharmacies),
Community(or private) pharmacies,
clinics where drugs are prescribed and used.

Clinical pharmacy is a health science describing how pharmacists provide a patient care that optimizes and control medication therapy to promotes health, wellness, and disease prevention.

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Clinical pharmacy blends the pharmaceutical care or (medicines management) with specialized therapeutic knowledge, experience for ensuring optimal patient outcomes.

Levels of Action of Clinical Pharmacists

▶ Clinical pharmacy influence the correct use of drugs at **three** different levels:

- **Before** the prescription is written.
- **During** the prescription is written.
- **After** the prescription is written.

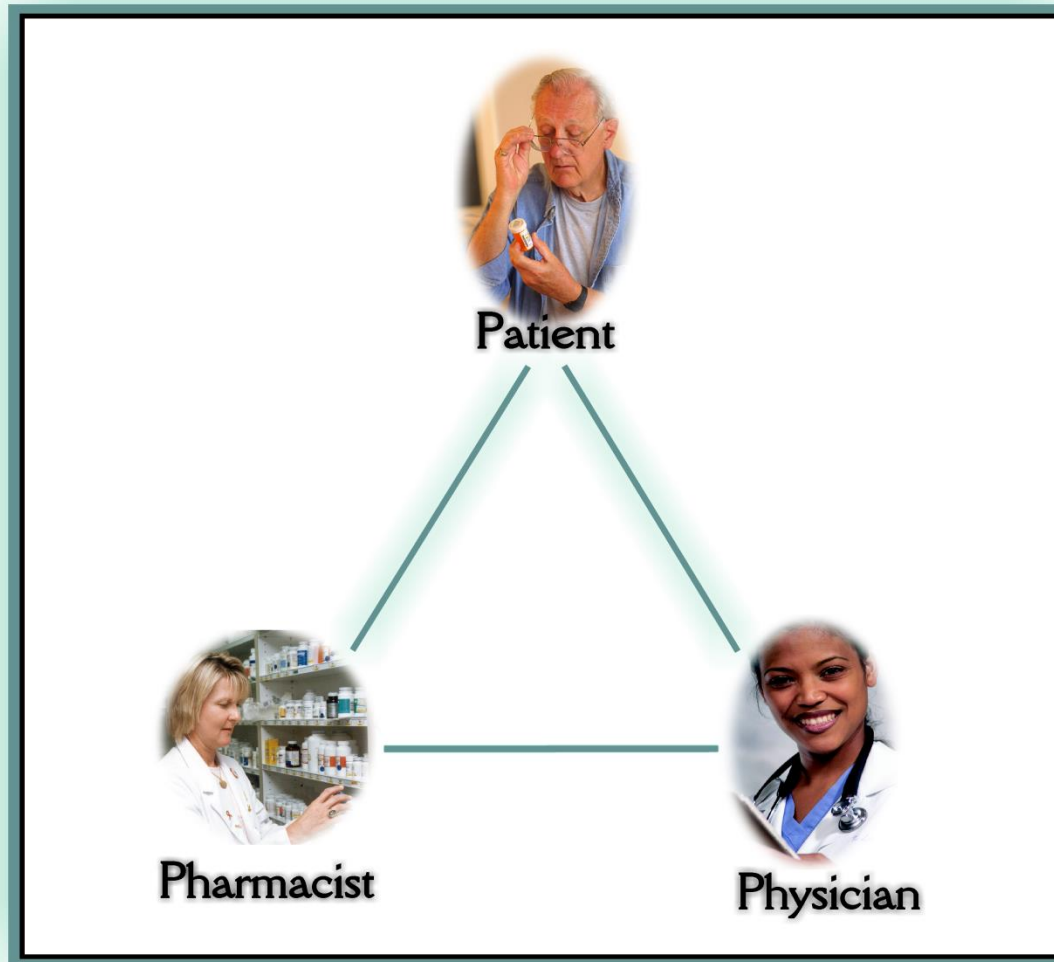
In practice, **Clinical Pharmacy** includes

1-Dispensing of required medications

2-Advising the patient on the proper use of all medications

- **3- utilizing** the pharmacist as an *information source* for other health professions.

Collaborative Drug Therapy Management (CDTM)



How Clinical Pharmacists care for patients in all health care setting?

▶ 1-They assume **responsibility** and **accountability** for managing medication therapy in direct patient care settings,

• 2-Clinical pharmacists researchers **generate**, and **apply** new knowledge that contributes to improved health

• 3-Clinical pharmacists are **experts** in the therapeutic use of medications and give the recommendations to patients and health care professionals.

• 4-Clinical pharmacists are a **primary source** of scientifically valid information and **advice** regarding the **safe, appropriate** and **cost** effective use of medications.



*"I stopped taking the medicine because I prefer
the original disease to the side effects."*

Preparation for the patient **INTERVIEW**

▶ There are **two** different approaches to prepare for a patient interview

- 1-Interview the patient **AFTER** reviewing the patient's document

- 2-Interview the patient **BEFORE** reviewing the patient's document

Observation of the patient and the patient's environment

- ▶ Close observation of the patient and the surroundings provides important informations regarding:-
 - The patient's health,
 - Economic status,
 - Compliance and
 - Social status.

Data to be collected

1) Demographic data

Includes:-

- Age
- Weight
- Height
- Race
- Education
- Life style (situation in house and people living with the patient)

Continue Data to be collected

2. Dietary information

Includes the type of diet and restrictions, supplements and stimulants

Some drugs may appear ineffective if the patient is noncompliant with diet restrictions

3. Social habits

Includes the use of tobacco, alcohol, and illegal drugs. (the duration of the use, frequency of administration, reasons for the use, date of stopping)

The smoking of tobacco is quantified in terms of pack per day .

- The **illegal** drugs are known as **street drugs**
(Cocaine, Marijuana, and Heroin)
- patients may be more comfortable to give these information to the pharmacist than other professionals.

4. Current prescription medications

Includes:-

- Name of the drug, dosage form, size, color
- Dosage
- Duration, try to determine exactly when the patient started taking his medication
- Reasons for taking medications, and
- Outcomes of the medications

5) Past Prescription Medications

▶ The information that can be obtained from the patient about his past prescription may be of help regarding new medications.

- Name of the drug, dosage form, size, color
- Dosage
- Duration, try to determine exactly when the patient started taking his medication
- Reasons for taking medications, and
- Outcomes of the medications

6) Current Non-Prescription Medications

▶ Information should include:-

- Name of the drug, dosage form, size, color
- Dosage
- Duration, try to determine exactly when the patient started taking his medication
- Reasons for taking medications, and
- Outcomes of the medications

▶ *This information allows to the pharmacist to **detect** any drug interactions whether a non-prescription medication is the cause of a patient complaint.*

7) Medication allergies

- **Drug induced allergic reactions includes:-**
 - Anaphylaxis
 - Contact dermatitis,
 - Serum sickness
- Firstly ask patients whether they are allergic to any medication e.g. :-
 - rashes
 - difficult in breathing

8) Compliance

- One of the important goal of the medication history interview is to determine whether the patient is **compliant** with the medication therapy i.e. taking the drugs as directed by the physician. The extent to which the patients do that is called compliance
- Knowledge regarding patient compliance is useful in evaluating the effectiveness of regimens.
- The therapy may be **ineffective** due to the patient does not comply with the regimen, i.e therapeutic blood levels are either not reached or not maintained long enough.

- When patients do not comply, it is called non-compliance and it may be intentional or non-intentional.
- Non-compliance means not taking the dose, but it could be taking it at the wrong time, or taking too much.