

# UNIT -5 PHARMACEUTICAL CARE

- Presented by

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SUBJECT :(COMMUNITY PHARMACY)

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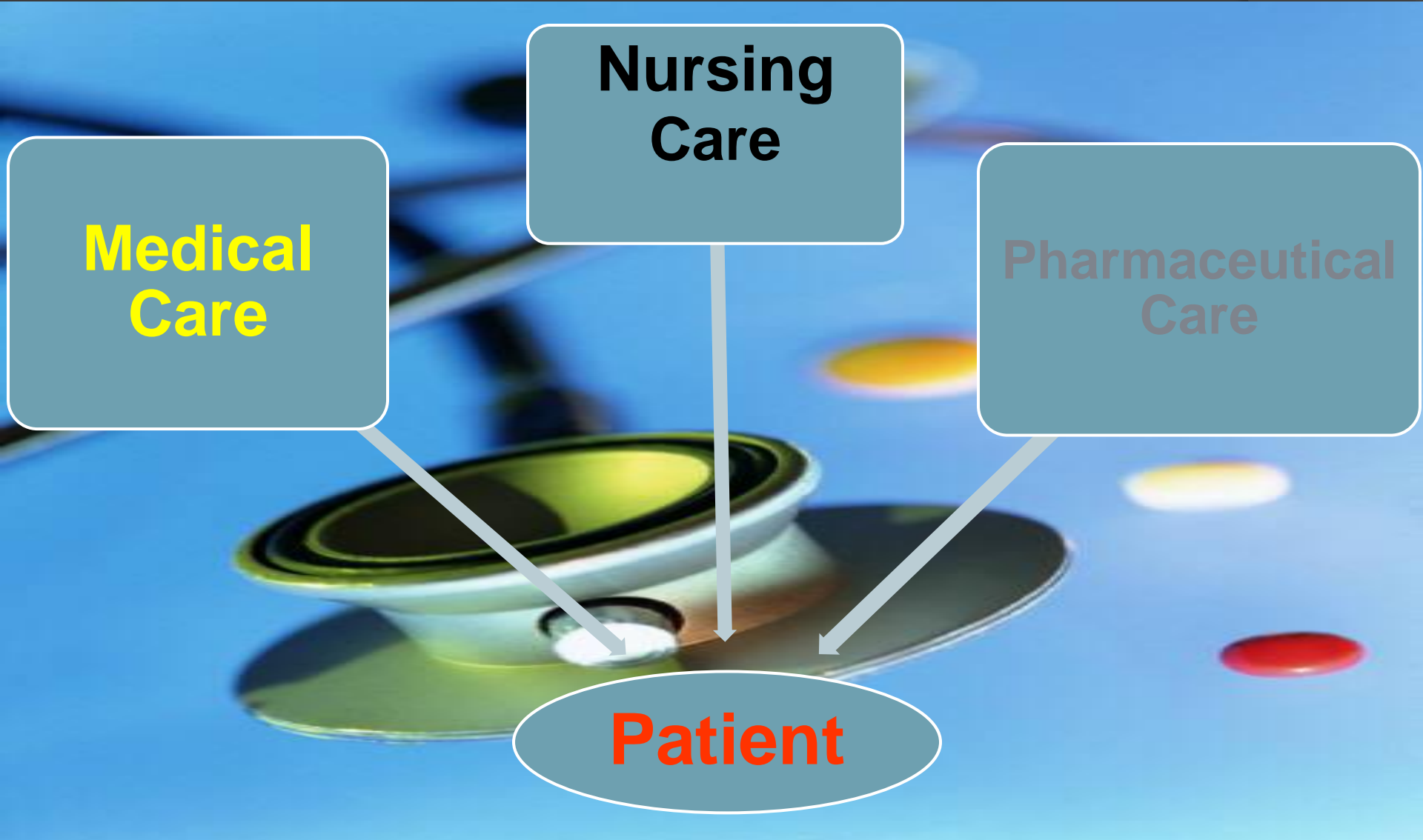
# Patient Care

**Medical  
Care**

**Nursing  
Care**

**Pharmaceutical  
Care**

**Patient**



# PHARMACEUTICAL CARE

It is the responsible provision of drug therapy for the purpose of **achieving definite outcomes** that **improve** the **patient's quality of life**.

# Pharmaceutical Care

- Pharmaceutical care is a **patient centered, outcomes oriented** pharmacy practice that requires the pharmacist to work in concert with the patient and the patient's other healthcare providers to promote health, to prevent disease and to **assess, monitor, initiate and modify medication use** to assure that drug **therapy regimens are safe and effective**

# Pharmaceutical Care

- ⦿ patient centered, outcomes oriented pharmacy practice
- ⦿ work in concert with the patient and the patient's other healthcare providers
- ⦿ to promote health, to prevent disease and to assess, monitor, initiate and modify medication

# Goal

- The goal of pharmaceutical care is to optimize the patient's health-related quality of life and to achieve positive clinical outcomes, within realistic economic expenditures

# outcomes are:

- Cure of the disease
- Elimination or reduction of patient's symptomology
- Arresting or slowing of a disease process
- Preventing a disease or symptoms

# To do this you require

Expert knowledge of therapeutics

Good understanding of disease process

Knowledge of pharmaceutical products

Strong communication skills- medical terminology

Drug monitoring skills

Medicine information

Therapeutic planning skills

Assess and interpret physical and lab findings



# Why Pharmaceutical Care ?

Evolution      Traditional  
                    Transitional  
                    Patient care

- Industrial growth narrowed down the professional role of a pharmacist
- Pharmacist began to perform new functions  
Hospital Pharmacy

# Hospital Pharmacy

- Purchase, Manufacturing, Storage, Distribution, Dispensing
- In 1970's *[Ward Pharmacy]*
  - Traditional activities continued
  - Large increase in number of new drugs
  - New ward activities - drug focused
  - Aim was to reduce medication errors

# Clinical Pharmacy

- Well developed in late 1970s and 1980s.
- It suggests what is right about therapy.
- ◉ **Definition:** All those services provided by the pharmacist in an attempt to **promote rational drug therapy** which is safe, effective and economic

# Principles of Pharmaceutical Care (Primary Functions)

- ⦿ Develop and maintain a professional relationship with healthcare professionals and patient
- ⦿ The Pharmacist
  - Reviews the patient's drug therapy
  - Monitor the patient's progress *and*
  - Evaluate & modifies the therapeutic plan as necessary

# Pharmaceutical Care

Product -  
oriented



Patient  
oriented

# What does pharmaceutical care involve?

- ◎ Identification of potential and actual drug-related problems
- ◎ Resolving actual drug-related problems
- ◎ Prevention of potential drug-related problems

Actual drug related problems	Potential drug related problems
<p><b>Def:</b> Patient has a medical condition that requires the initiation of a new or additional drug</p>	<p>By which the patient may be at risk to develop a new medical problem, created due to following</p>
<p>For which a wrong drug is administered</p>	<p>Additional drug therapy being indicated</p>
<p>Too little of right drug is given</p>	<p>Too much or too little of the correct drug</p>
<p>Too much of right drug is given</p>	<p>Wrong drug being prescribed</p>
<p>ADR from drug currently taking</p>	<p>Occurrence of ADR</p>
<p>Result from drug-drug/drug-food interaction</p>	<p>Taking unnecessary medication</p>
<p>Resulting from not taking drug approp.</p>	<p>Non compliance of the prescribed medication</p>
<p>Self medication for non medically valid reason</p>	

# Drug Related Problems

- ⦿ Untreated indication
- ⦿ Over dosage
- ⦿ Improper drug selection
- ⦿ Adverse drug reactions
- ⦿ Sub therapeutic dosage
- ⦿ Drug interactions
- ⦿ Failure to receive drugs
- ⦿ Drug use without indication



# Consequences of Drug Related Problems

- ⦿ Increased hospital admission /hospital stay
- ⦿ Increased health care expenditure
- ⦿ Loss of work and /or income
- ⦿ Decreased quality of life
- ⦿ Increased morbidity and mortality

# What Are We Trying to Achieve?

- Maximizing clinical effect
  - Minimizing risk of treatment
  - Minimizing cost of treatment
  - Respecting the patient choices
- ⦿ Doing good
  - ⦿ Do no harm
  - ⦿ Justice
  - ⦿ What does the patient want?

# Basic foci of Pharmaceutical Care

- ⦿ Patient centeredness
- ⦿ Addressing both acute and chronic problems
- ⦿ Emphasizing prevention



1. Needing drug therapy but not receiving it
2. Receiving unnecessary drug therapy

Patient adherence and convenience



1. Receiving the wrong medicine
2. Dosage too low



1. Too much of the correct drug
2. Adverse drug reactions

# Basic foci of Pharmaceutical Care

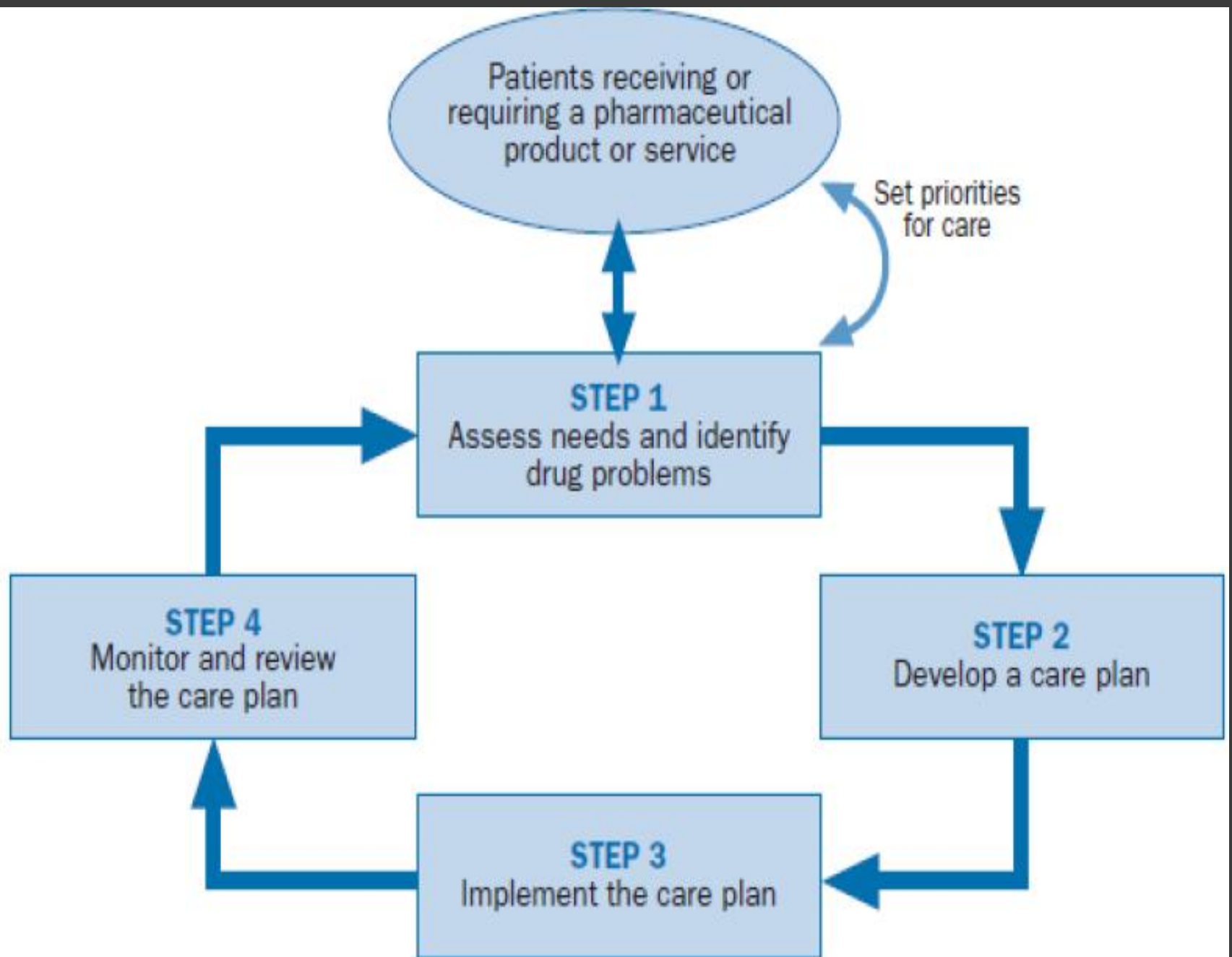
- Implementing documentation systems that continuously record patient needs and care
- Being accountable
- Placing emphasis on ambulatory patients including education and health promotion

# Primary Functions

- A professional relationship must be established and maintained
- Patient specific medical information must be collected, organized, recorded and maintained
- Patient-specific medical information must be evaluated and a drug therapy plan developed mutually with the patient
- The pharmacist assures that patient has all supplies, information and knowledge necessary to carry out the drug therapy plan
- The pharmacist reviews, monitors, and modifies the therapeutic plan as necessary and appropriate, in concert with the patient and healthcare team

# The Process

- ◉ Collection of Patient data
- ◉ Identification of Problems
- ◉ Setting of Therapeutic goals
- ◉ Evaluating treatment alternatives
- ◉ Individualizing drug regimes
- ◉ Monitoring outcomes





# Collection of Patient data

- ◎ Patient specific data must be collected
  - To allow the pharmacist to identify the drug related problems
  - To assess the appropriateness of the treatment prescribed
  - To establish a plan of management for the patient

# What Data to Collect?

- Patient demographics
- Current problems
- Past medical and surgical history
- Current medications
- Allergies & intolerances
- Pregnancy and lactation status
- Tobacco & alcohol use
- Financial status
- Relevant laboratory data

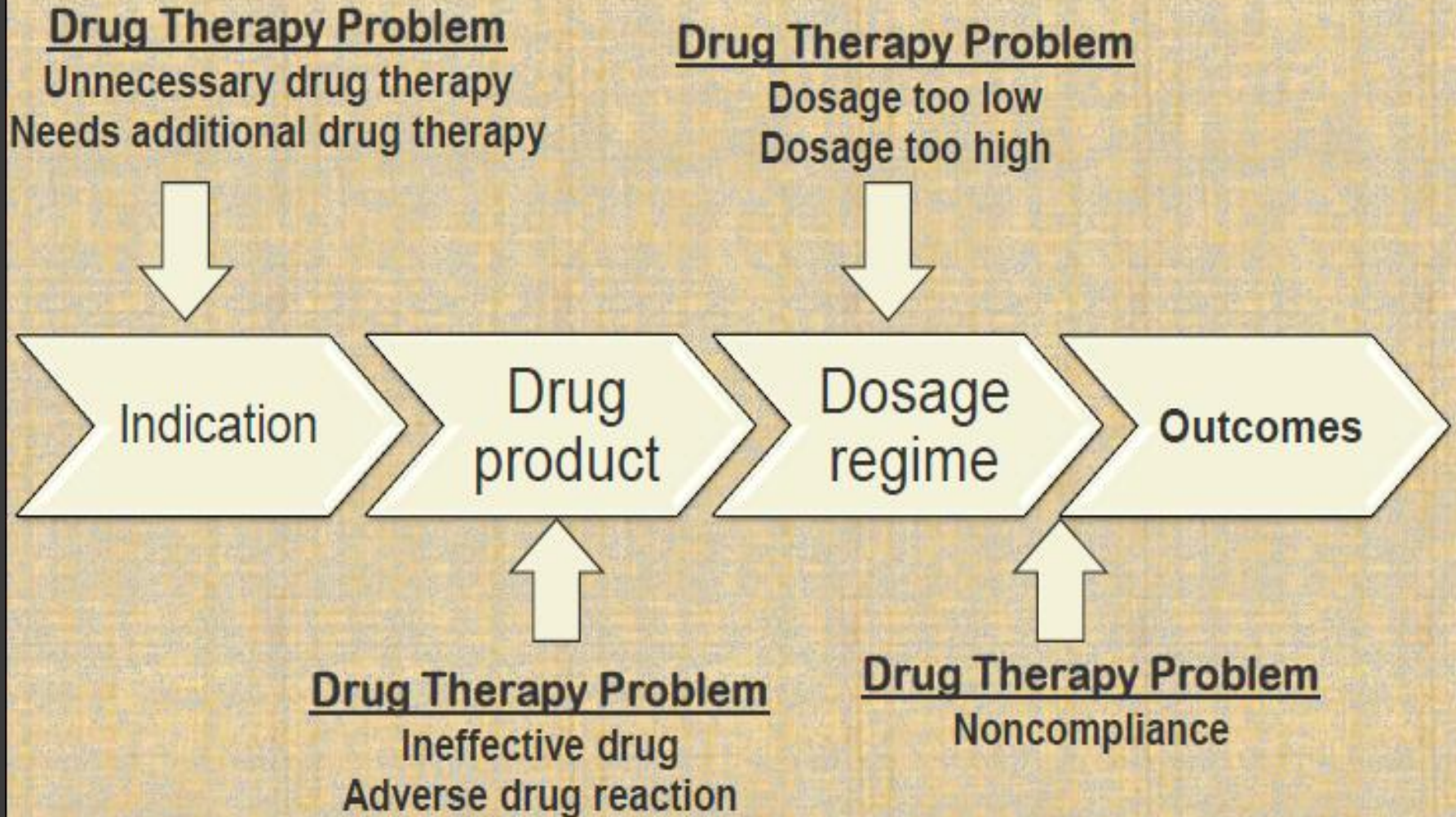
# Sources of Information

- An **interview** with the patient and or carer
- The patient's **medication profile**
- Patient's **medical record**
- Other health care professionals

# Identification of Problems

- The **appropriateness** of the patient's current drug therapy
- Drug administration
- Medication adherence
- Drug toxicity
- Failure to achieve the desired therapeutic outcome

# Drug use process



# Clinical Pharmacist needs to establish

- There is an **appropriate indication** for each of the medications prescribed
- The **medication is available**
- The patient takes it in an appropriate manner
- Desired therapeutic outcome is achieved

## If DRPs are identified

Make a list of the problems and formulate a management plan

- ⦿ Which problems must be **solved (or prevented) immediately** and which can wait?
- ⦿ Which problems will identify as his or her primary responsibility?
- ⦿ Which problems can be **solved by the pharmacist and patient** directly?
- ⦿ Which **problems require intervention** from someone else?

Interventions might involve providing the patient with

- Information about a particular drug therapy
- Information about non-drug therapy
- Changes in drug regimens
- Instructions on drug administration
- Additional drug(s) the patient requires
- Assistance with drug administration devices and or compliance aides
- Information from/about other health-care providers
- Referral to other health-care practitioners

# Establishing Outcome Goals

- Cure of the disease
- Elimination or reduction of a patient's symptomatology
- Arresting or slowing of a disease process
- Prevention of a disease or symptomatology

Out comes are disease specific

Disease	Positive outcome
Hypertension	Decrease risk of MI, Stroke, Arrhythmia
Ischemic Heart Disease	Fewer MI, Reduction of angina attacks
Peripheral vascular surgery	Better circulation, Decreased need of surgery
Diabetes	Fewer hypoglycaemic events, Fewer complications of vision and kidney
Asthma	Fewer acute attacks, Few hospitalizations

# Evaluating Therapeutic Options (**CASES**)

Efficacy

Safety

Availability

Cost

Suitability and convenience

Efficacy and safety = Risk V/s Benefit



# Risk benefit ratio will depend on

- ⦿ Seriousness of the condition /disease to be treated
- ⦿ The consequence of not treating the condition/disease
- ⦿ The seriousness and frequency of adverse effects associated with drug use
- ⦿ The efficacy of the drug
- ⦿ The efficacy of alternative drug or non- drug therapy
- ⦿ The side-effect profile of alternative drugs

Evidence based or consensus derived

# Individualizing Treatment Regimens

If more than one therapeutic alternatives exist, the patient's therapy should be modified by taking the following consideration factors

<b>Patient factors</b>	<b>Drug Factors</b>
Diagnosis	Efficacy
Goals of therapy	Adverse effects
Past medical history	Drug interactions
Contraindications	Dosage forms
Allergy or ADRs	Route of administration
Special considerations	Cost
Compliance	PK and PD
Patient co-operation and convenience	

# Monitoring Outcomes

The desirable outcomes of a disease is

- To cure the disease
- To eliminate or reduce patient's symptomatology
- To arrest or slow down disease process
- To prevent the disease or its symptomatology to reappear

## Less than desirable treatment outcomes due to

- ⊙ Inappropriate prescribing
- ⊙ Inappropriate or unnecessary therapeutic regimen
- ⊙ Inappropriate delivery
- ⊙ Drug not available, dispensing error
- ⊙ Inappropriate behavior by the patient
- ⊙ Inappropriate compliance with drug treatment or non compliance
- ⊙ Patient idiosyncrasy
- ⊙ Inappropriate monitoring (major cause for therapeutic failure)

# Inappropriate monitoring

- ⊙ Failure to detect and resolve inappropriate therapeutic decisions

&/or

- ⊙ Failure to monitor the effects of treatment

## Monitor 4 S

- ⊙ Signs
- ⊙ Symptoms
- ⊙ Side-effects
- ⊙ Sequel

# Patient to be **made aware** of

- What the **medication** is being taken for?
- What the medication is **expected to do**?
- Over **what time frame** when taken as prescribed?
- Important **side effects** that might occur and what to do if they occur?

# Follow up action

- ⦿ Positive outcome - *continue treatment until course is completed*
- ⦿ Negative outcome - *reassess alternatives*
- ⦿ Neutral (no change) - *reassess current treatment*

# Documentation

- ❑ A very critical component of pharmaceutical care process.
- ❑ Also of all clinical interventions and therapeutic outcomes
- ❑ Facilitates communication with other healthcare providers
- ❑ Enhances continuity of care



## Activities that should be documented are

### 1. Pharmaceutical care related activities

- a. Drug related problems
- b. Identification of drugs, allergies, diseases
- c. Type of problem or need
- d. Identification of recommendations and potential outcomes

### 2. Other non dispensing, non technical but patient related

1. Consultation with other HCP
2. Assessment of patient's understandings
3. Self care consultation or advice
4. Patient's referral to other HCP/professionals

The documentation should be patient and product oriented and have 4 components

1. Identification of the product and event
2. Identification of problem and/or need
3. Identification of activities, services and pharmaceutical care provided
4. Identification of recommendations and potential outcomes

# Documentation helps to provide

- Reimbursement requirements
- Managing some risks of legal litigations
- Indicate pharmacist's decisions taken for patients welfare
- Proof of his **reasonable judgment**
- Provides valuable tool to identify the new activities and roles that pharmacist can play
- Provides a method to **evaluate cost-benefit or cost-effectiveness** of the services
- It provides **recognition to the pharmacist** for his valuable pharmaceutical care services by other health care service providers

# PHARMACEUTICAL CARE IN HOSPITALS

- ◎ Prescription monitoring
- ◎ Prescribing advice to medical and nursing staff
- ◎ Medication errors and adverse reaction monitoring
- ◎ Medication history interview
- ◎ Patient education and counseling
- ◎ Pharmacokinetics and therapeutic drug monitoring
- ◎ Hospital formulary

# PHARMACEUTICAL CARE FOR THE COMMUNITY

- ⦿ Participate in health screening
- ⦿ Participate in health promotion and education
- ⦿ Serve as a source of drug and poison information
- ⦿ Collaborate with other health care professionals to develop treatment guidelines
- ⦿ Design and monitor procurement and drug distribution system including storage and disposal.