PHARMACY AND THERAPEUTIC COMMITTEE

Points to be covered in this topic

➞ INTRODUCTION

➞ ORGANIZATION

➞ FUNCTIONS

➞ POLICIES

➞ INPATIENT AND OUTPATIENT PRESCRIPTION

➞ AUTOMATIC STOP ORDER

➞ EMERGENCY DRUG LIST PREPARATION

INTRODUCTION

• The **pharmacy and therapeutics committee** **(PTC)** is an **advisory group of the medical staff** and serves as the **organizational line of communication between the medical staff and the pharmacy department**.

• The **committee is composed of physicians, the pharmacist and the other health professionals** selected with guidance of the **medical staff**.

• This **committee assists in the formulation of broad professional policies** regarding the **evaluation, selection, procurement, distribution, use, safety procedures and other matters relating to drugs use in the hospital**.

OBJECTIVE

• The **PTC has 3 major objectives**. These are

1. **Advisory**
2. **Educational**
3. **Drug safety and adverse drug monitoring**

1. ADVISORY

• The **committee assists in the formulation of the broad profession policies** regarding **evaluation, selection and therapeutic use of drugs in the hospital**.

• It **makes recommendations concerning the drugs to be stocked in hospital patient care areas**.

• The **committee advises the pharmacy in implementation of effective drug distribution and control procedures**.

2. EDUCATIONAL

• The **committee recommends** or **assists** in the **formulation of functions, designed to meet the needs of the professional staff**, the **physicians, nurses, pharmacists and other health care practitioners**, for the **complete current knowledge of the matters related to drugs and their uses**.

3. DRUG SAFETY AND ADVERSE DRUG MONITORING

• As the **therapeutic agents are increasing**, the **scope, knowledge and responsibility** of the **hospital pharmacist is also increasing**.

• The **safety aspects** are more or less **taken for granted** by **pharmacy, medical and nursing staff**.

• So, one of the **main aim of PTC** is to **improve medication safety and monitoring adverse drug reactions** by **monitoring, analyzing, reporting ADRs and implementing corrective action**.

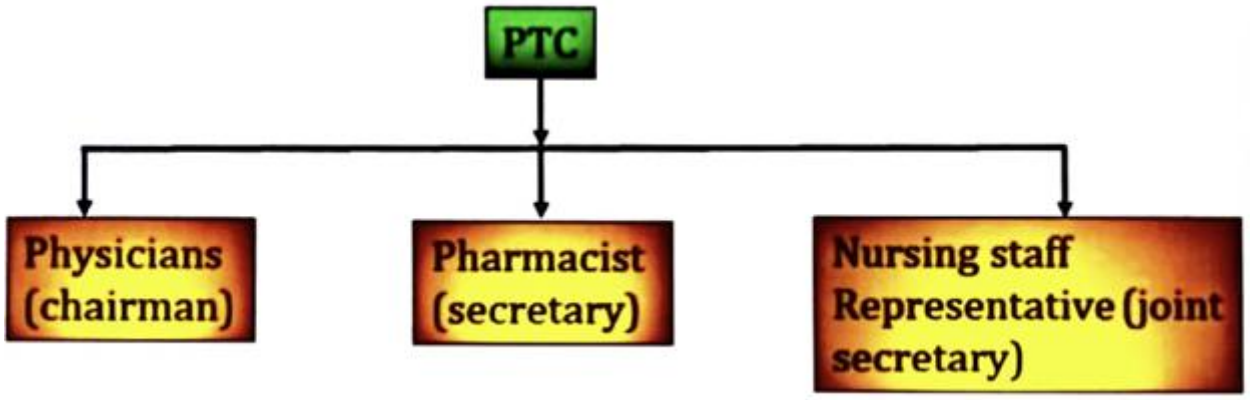
ORGANIZATION

• The **PTC is usually made up of health care professionals** from the **medical staff, pharmacists, nursing personnel and representatives from various departments**.

• Ideally, a **well-known and respected physician** will provide **leadership for the committee (chairman)**, with a **pharmacist as co-chair** or **executive secretary**.

• These individuals should be **appointed by the health care organization's administration**.

COMPOSITION OF PTC



SUB – COMMITTEES OF THE PTC

- Anticancer agents
- Antidiabetic agents
- Gastrointestinal agents
- Endocrine drugs
- Cardiovascular drugs
- CNS acting drugs
- Anti-infective drugs

OPERATION OF PTC

- This committee should meet regularly at least **six times in the year** and also as and **when necessary**.

- The committee can invite its meetings persons within or outside the hospital who can **contribute specialized or unique knowledge, skills and judgments**.

• The **agenda and the supplementary materials** should be prepared by the **secretary** and furnished to the **committee members** well in advance so that the members can study them **properly before the meeting**.

• A **typical agenda** may consists of the following categories in general

• Minutes of the previous meeting.

1. Review of the contents of the **Hospital Formulary** for purpose of **bringing it up to date**, and **deleting of products** not considered necessary for use.
2. Information regarding **new drugs** which may have become **commercially available**.
3. Review of **side effects**, **adverse drug reactions**, **toxic effects** **and drug interactions** since the last meeting.
4. Review of **drug safety in the hospital**.
5. Report of **various sub committees**.
6. Report of **medical audit**.

FUNCTIONS

1. The **PTC develops, compiles and ratifies** the **hospital formulary system** sponsored by the **medical staff**. The medical staff adapts the formulary according to the needs of the **individual hospital**.
2. The **Committee promotes rational therapeutic treatment** and prevents **duplication waste and confusion**.

3. The **Committee develops written policies and procedures** to afford guidance is **appraisal, selection, procurement, storage, distribution and use of drugs**.
4. It also develops policies regarding **drug safety**.
5. The **Committee's recommendations** are adopted by the **medical staff**.
6. The **formulary is subjected to constant review and revision**.
7. The **Committee minimizes duplication** of the same **basic drug, drug entity**.
8. The **committee helps the development of training programs** for professional staff in **drug use**.
9. The **PTC studies problems** related to **drug administrations, distributions, drug reactions, drug stocking and drug use**.
10. The **PTC advises the pharmacy** regarding **drug distribution and control procedures**.

POLICIES

• The **pharmacy and therapeutic committee** formulates policies regarding **evaluation, selection, diagnostic and therapeutic use**, and monitoring of medications and medication associated products and devices.

• The **P and T committee** should establish and assist in programs and procedure that ensure **safe and effective medication therapy**, should participate in or direct the **development and review** of such programs or procedures, which should be kept **current**.

• The **P & T committee** should participate in **performance improvement activities** related to **procurement, prescribing, dispensing, administering, monitoring, and overall use of medications**.

• The **P & T committee** should advise the institution, including the **pharmacy department**, in the **implementation of effective medication distribution and control procedures**, incorporating **technological advances** when appropriate.

• The **P & T committee** should initiate, direct, and review the results of **medication-use evaluation programs** to **optimize medication use** and routinely **monitor outcomes** (economic, clinical, and humanistic) of formulary decisions.

INPATIENT AND OUTPATIENT PRESCRIPTION

OUT PATIENT

• Is patient who is **hospitalized for less than 24 hours**.

• Or a patient who is **not hospitalized overnight** but who visits a **hospital, clinic, or associated facility** for **diagnosis or treatment**.

INPATIENT

• A patient who stays for **one or more nights** in a hospital for **treatment**.

• An inpatient is **admitted to the hospital** and stays overnight or for an **intermediate time**, usually **several days or weeks or years**, sometimes until **death**.

ROLE OF PTC IN DISPENSING OF MEDICATION TO IPD AND OPD

• **PTC has the responsibility** to establish the policy for **drug distribution to inpatients and outpatients care services**.

• In these services, before **dispensing a drug**, a pharmacist must make sure about the **correct prescription of the drug and its validity** with regards to **diagnosis and treatment**.

• **Pharmacists** should also check for any **modification concerning the dose regimen**.

• **PTC also supervises a steady supply of drugs** as per the needs of the **patients and health care partners**.

AUTOMATIC STOP ORDER

- PTC has to set the **policy for the automatic discontinuation** of all medication prescriptions after **48 hours** for:
    - **Sedative and hypnotics**
    - **Narcotics**
    - **Anticoagulants**
    - **Antibiotics-containing drugs**
- Another way is **prescription strictly indicates** the dispensing of an **exact number of doses** to be administered and if require more need to **re-order the medications**.
- There must be a **policy of rewrite of prescription order every 24 hours** for **narcotics and CNS active drugs**.

- While such type of practice is **not routinely used in Indian hospitals** except a few such as:
    - **Juslok Hospital Mumbai**
    - **Mayo Hospital**
    - **Christian Medical Hospital Vellore**
- These drugs should be only continued or prescribed if:
    - ✓ Physician writes the **number of doses** to be administered
    - ✓ Physician specifies the **time period for administration** of drugs
    - ✓ Physician may **re-prescribes the medicine**

EMERGENCY DRUG LIST PREPARATION

- The **Time Factor is necessary** for the Pharmacy and Therapeutics Committee of a hospital to get prepared boxes containing **emergency drugs** which should be always **available readily for use at the bed-side**.
- List of such drugs and other supplies should compiled by **Committee** and it should find their place in **"Emergency Kits"**.
- After the emergency boxes have been placed in the wards, it is very **essential and compulsory** that a **system is developed** whereby they are **checked daily** either by the **hospital pharmacists** or by **nursing supervisor responsible for the ward**.

- Following is the list of **suggested drugs and other articles maintained in emergency box**.

SUPPLIES TO BE MAINTAINED IN EMERGENCY BOX

- Syringes of various range
- Needles
- Files for **breaking the ampoule**
- Airway equipment

THESE MAY BE SELECTED IN CONSULTATION WITH THE PHYSICIAN

- Atropine sulphate **0.4 mg/ml**
- Digoxin **0.25 mg/ml**
- Heparin **10,000 units/ml**
- Neostigmine methyl sulphate **0.25 mg/ml**
- Mannitol injection **25%**
- Saline for injection **0.9% 30 ml**
- Water for injection **20 ml**

SUPPLIES FOR CABINET UTILITY ROOM

- Oxygen catheters
- Razor with blades
- Resuscitation tube

OTHER EMERGENCY SUPPLIES

- Burn sheets
- Dextran and tubing
- Resuscitation carts

INFORMATION SERVICES (PART - 2)

Points to be covered in this topic

- **DRUG INFORMATION CENTRE**
- **POISON INFORMATION CENTRE**
- **SOURCES OF DRUG INFORMATION**
- **COMPUTERISED SERVICES**
- **STORAGE AND RETRIEVAL OF INFORMATION**

DRUG INFORMATION CENTRE

- Drug information means **providing clinically relevant information** on any **aspect of drug use** relating to **individual patients**, or **general information** on how best to use **drugs for populations**.
- Drug information service can be applied to any activity where information about **drug use** is transferred, and includes **patient related aspects of pharmaceutical care**.
- A **Drug information center** is an area where **pharmacists (or other health care professionals)** specialise in **providing information** to health professionals or public.

- The drug information centre **provides authenticate, unbiased information** to healthcare professionals, provide **tailor-made counselling and health information** to patients/consumer as well as monitor and document **adverse drug reactions**.
- The first drug information centre was **opened in 1962** at the **University of Kentucky medical centre** and was intended to be utilised as a source of selected, **comprehensive drug information**.
- A drug information centre can also **contribute to pharmacovigilance** (adverse drug reaction reporting), **drug use reviews**, **health education programs** and **clinical research**.
- In this, **IPD/OPD pharmacist** works together with **inventory, drug distribution in-charge, and physicians**.
- **PTC has a contribution** to managing and **advisory role** to a pharmacist who is **working in the hospital**.
- In this, **PTC must guide pharmacists** to supervise regarding **proper distribution of drugs across inventory, pharmacy, floor pharmacy, ward pharmacy, IPD, OPD**, etc. to avoid ambiguities or any other **failures**.
- The PTC should also **assist/guide the pharmacist** regarding **supervising the purchase orders**, manage logs of **material transfer across departments**, and maintain **smooth functioning of drug distribution across the hospital**.

OBJECTIVES OF DIC

• To meet the needs of **health-care practitioners** by providing an **organized database source of information** on **specialized medicines**.

• To provide **unbiased medicinal information** to the **pharmacists, physicians**, and other **health-care professionals** working in the **hospital field and community field**.

• To **recognize and guide** about the importance of **evaluation** and also to **monitor** about the **quality of drug information**.

• To provide a **learning center** about **drug information skills** to **student pharmacists and residents**, and other **health sciences students**.

• To aid in the promotion of **clinical pharmacy health-care services** by offering **drug information services** throughout the state.

• To promote the **profession of pharmacy** in various **health-related fields**.

• To provide **evidence-based practice** by promoting **patient care through the rational use of medicines**.

CLASSIFICATION OF DIC

HOSPITAL BASED DIC

• Some of the major activities performed by **hospital-based DIC** include **receiving and answering** the in-house call by the requestor, involved in **formulary decision making** and **providing service education**, participating in **drug use evaluation**, publishing **newsletter**,

reporting **ADR**, assist in **investigational drug activity**, and **Pharmacy and Therapeutic Committee**.

INDUSTRY BASED DIC

• DICs in the industry have access about all the **detailed knowledge accumulated from the time of drug which was first developed**, information about **published literature**, the knowledge of **unpublished documentation**, records of usage in **unusual circumstances**, and very important **access to the relevant experts**.

COMMUNITY-BASED DIC

• Community-based DIC aims to **change patient behavior through drug therapy**, improving **patient adherence**, thereby ultimately leads to **quality health care**.

THE FUNCTIONS OF DIC

• Information on all aspects of **therapeutic uses of drugs**.

• Information on **dose and administration of drugs**.

• Information on **drug–drug, drug–food and drug–herb interaction**.

• Information on **adverse effects of drugs**.

• **Indication and safety indication** of drugs.

• **Drugs in pregnancy and lactation**.

• **Availability / substitute**, formulary decision etc.

• **Dissemination of unbiased drug information** through release of **bulletins / newsletters**.

• **Drug information related to academic and research**.

• **Continuous education programs** for promoting rational use.

POISON INFORMATION CENTRE

• Poison information is a **specialized area of drug information** which includes information about the **toxic effects of chemicals and pesticides**, hazardous **material spills**, **household products**, **overdose** of therapeutic medicines including **mushrooms**, **animal toxins** from bites of **snakes, spiders** and other **venomous creature and stings**.

TYPES OF POISON

• Prescription drug

• Over the counter drugs

• Herbal medications or preparations

• Household chemicals

• Industrial chemicals

POISON CAN BE

Unintentional poisoning

- Drug overdose
- Drug abuse
- Misreading of product labels
- Children

Intentional poisoning

- Suicide
- Murder

FUNCTIONS

- Provision of **information and advice**
- **Patient management**
- **Laboratory services**
- **Teaching and training**
- **Toxicovigilance**
- **Prevention**

1. PROVISION OF INFORMATION AND ADVICE

- The main function of a **poison information centre** is to information and **advice concerning the diagnosis, prognosis, treatment and prevention of poisoning**, as well as about the **toxicity of chemicals** and **the risks they pose**.

2. PATIENT MANAGEMENT

• While a poison information centre may have its own **clinical toxicology unit** **or treatments facilities**, poisoned patients may be cared for at any of a variety of **medical facilities**.

3. LABORATORY SERVICES

• A **laboratory service for toxicological analyses and biomedical investigations** is essential for the **diagnosis, assessment and** **treatment** of certain **types of poisoning**.

• The laboratory service can also determine the **kinetics of the toxin**, particularly its **absorption, distribution,** **metabolism** **and** **elimination**.

4. TEACHING AND TRAINING

• The experience gained in a **poison information centre** can be an important source of **human and animal toxicological data**.

• The application and communication of this knowledge are vital for improving the **prevention and management of poisoning**. Centres thus have **educational responsibilities** that extend to **training of medical practitioners** and other **professional health workers** likely encounter cases of poisoning.

5. TOXICOVIGILANCE

• Toxicovigilance is an **essential function of poison information centers**.

• It is the **active process of identifying and evaluating the toxic risks** existing in a community, and **evaluating the measures** taken to reduce or **eliminate them**.

6. PREVENTION

- Informing the general public, as well as special groups at risk, about recognized or emerging risks to the community posed by the use, transport, storage and disposal of specific chemicals and natural toxins, and giving guidance on how to avoid exposure to, or accidents with, these substances means such as brochures, leaflets, posters, educational programs, and campaigns in the media may be employed, but should not arouse unjustified false anxieties and should take due account of local psychosocial and cultural circumstances.

SOURCES OF DRUG INFORMATION

- Drug information is **current**, **critically examined**, **relevant data** about drugs and drug use in given patient or situation.

a. Current information Uses the most recent, **up-to-date sources** possible.

b. Critically examined information

- More than **one source** should be used when appropriate.
- The extent of agreement of sources should be determined.
- The **plausibility of information**, based on clinical circumstances.

c. Relevant information Must be presented in a manner that **applies directly** to the circumstances under consideration.

- Various sources of drug information can be classified:
    1. **Primary**
    2. **Secondary**

3. **Tertiary**

1. PRIMARY SOURCES

- They provide the most **up-to-date information** on that particular topic.
- Include **unpublished studies** and **original articles** published in reputed **peer-reviewed journals** reporting original research, ideas or opinions.
- Evaluation and interpretation of research articles is difficult and requires **time and expertise**.
- Well-conducted **randomized controlled trials** provide the most reliable source of information.

ADVANTAGES

- Most current evidence
- Provide data on **new drugs**

- Can personally assess **validity of studies**

DISADVANTAGES

- May not lead one to best decision because of limited scope
- Data can be **poor or controversial**
- Every study has **limitations**
- Too **complex for patients**

2. SECONDARY SOURCES

- Abstract or index which **summarizes the information** arising in primary source.
- Indexing and abstracting services are valuable tools for quick and selective screening of the primary literature for specific information, data, citation, and articles.

Three types of abstracts:

1. **Telegraphic abstract** (only string of words)
2. **Indicative abstract** (structured in sentence)
3. **Informative abstract**

ADVANTAGES

- Can construct searches to find specific information at high granularity.

DISADVANTAGES

- Often require **more expertise** to use than primary to tertiary resources

- Retrieved references must be **filtered for quality**
- Must track down resources before looking for answers

3. TERTIARY SOURCES

- Information contained is well established and easily accessible and is processed via primary literature.
- Does not provide updated information.
- Reference books
- Drug compendia
- National list or WHO model list of essential drugs
- National, international, institutional or WHO treatment guidelines
- Drug formularies
- Drug bulletins

- Pharmacopoeias

ADVANTAGES

- Provide comprehensive information
- Information reflects views of multiple experts in field
- Fast, easy to use, and may be good for patients

DISADVANTAGES

- Usually at least **2 years out of date** by publication
- High dependency on interpretation of authors

4. OTHER SOURCES

- Libraries
- Research associations
- Government bodies
- Information centre in industry
- Analyst labs
- Poison centres

COMPUTERISED SERVICES AND STORAGE AND RETRIEVAL OF INFORMATION

- Systematic process of collecting and cataloging data so that they can be located and displayed on request.

- Computer and data processing techniques have made possible to access the high speed and large amounts of information for government, commercial, and academic purposes.
- A branch of computer or library science relating to storage, locating, searching and selecting, upon demand, relevant data on a given subject.

STORAGE

- It can refer to a place like a storage room where **paper records** are kept.
- It can also refer to a **storage device** such as a computer hard disk, CD, DVD, or similar device which can hold data.

TYPES OF INFORMATION STORAGE MEDIA

- Hard drive
- Floppy disk
- CD and DVD
- USB flash drive

Hard drive

- It is always inside the computer.
- It stores all the programs that the computer needs to work.

Floppy disk

- It is portable storage medium.

- Put it into the computer save your information.

CD AND DVD

• It is a portable storage

• It allows you to save information on it.

USB FLASH DRIVE

• It is very easy to carry

• It holds more data than a floppy disk

• It is very small device than others

RETRIEVAL OF INFORMATION

• An information retrieval system is an information system, that is a system used to store items of information that need to be processed, searched, retrieved, and disseminated to various user populations.

MAJOR COMPONENTS OF IR

• Database

• Search mechanism

• Language

• Interface

Database

• A system whose base, whose key concept is simply a particular way of handling data and its objective is to record and maintain information.

Search mechanism

• Information organized systematically that can be searched and retrieved when a corresponding search mechanism is provided.

Language

• Information relies on language when being processed, transferred or communicated.

• Language can be identified as natural language and controlled vocabulary.

Interface

• Interface regularly considered whether or not an information retrieval system is user friendly. Quality of interface checked by interaction mode.

• Determines the ultimate success of a system for information retrieval.

RETRIEVAL TECHNIQUES

Major retrieval techniques are:

1. Basic retrieval techniques
2. Advanced retrieval techniques

1. BASIC RETRIEVAL TECHNIQUES

Boolean searching

• Logical operations are also known as Boolean operators

• The AND operate for narrowing down a search

• The OR operate for broadening a search

• The NOT operator for excluding unwanted results

Proximity searching

• A proximity search allows you to specify how close two (or more) words must be to each other in order to register a match.

• There are three types of proximity searches:

• Word proximity

• Sentence proximity

• Paragraph proximity

Range searching

• It is most useful with numerical information. The following options are usually available for range searching:

• Greater than (>) less than (<)

• Equal to (=)

• Not equal to (/= or 0)

• Greater than equal to (>=)

• Less than or equal to (<=)

2. ADVANCED RETRIEVAL TECHNIQUES

Fuzzy searching

• It is designed to find out terms that are spelled incorrectly at data entry and query point.

Query expansion

• Query expansion is a retrieval technique that allows the end user to improve retrieval performance by revising search queries based on results already retrieved.

INFORMATION RETRIEVAL SYSTEM

• Online systems

• CD – ROM systems

• OPAC

• Web information retrieval systems

COUNSELING (PART - 3)

Points to be covered in this topic

⟶ PATIENT COUNSELING

⟶ STEPS

⟶ SPECIAL CASES THAT REQUIRE THE PHARMACIST

PATIENT COUNSELING

• Patient counseling refers to the process of providing information, advice and assistance to help patients use their medications appropriately.

• The information and advice is given by the pharmacist directly to the patient or to the patient's representative, and may also include information about the patient's illness or recommended lifestyle changes.

• During counseling, the pharmacist should assess the patient's understanding about his or her illness and the treatment, and provide individualized advice and information which will assist their medications in the patient to take their medications in the most safe and

effective manner.

• Good communication skills are required to gain the patient's confidence and to motivate the patient to adhere to the recommended regimen.

OBJECTIVE

1. Patient should recognize the importance of medication for his well being.
2. A working relationship and a foundation for continuous interaction and consultation should be established.
3. Patients understanding of strategies to deal with medication side effects and drug interactions should be improved.
4. Should ensure better patient compliance.
5. Patient becomes an informed, efficient and active participant in disease treatment and self care management.
6. The pharmacist should be perceived as a professional who offers pharmaceutical care.
7. Drug interactions and adverse drug reactions should be prevented.

COMMUNICATION SKILLS FOR EFFECTIVE COUNSELLING

Counselling process uses following

1. VERBAL COMMUNICATION

- Language
- Tone

- Volume
- Rate of speed

2. NON VERBAL COMMUNICATION

- Body language
- Movement
- Proximity
- Eye contact
- Facial expression

COMMUNICATION DURING DRUG THERAPY

- Purpose of medication
- How medication work
- Dose and duration of therapy
- Goals of therapy
- Adverse effect and how to deal with them
- Specific drug issues

QUALITIES OF A GOOD COUNSELLOR

- Be a good listener
- Be flexible

- Be empathetic
- Be non judgement
- Be tolerant
- Communicate confidently

STEP DURING PATIENT COUNSELLING

1. Preparing for the session
2. Opening of the session
3. Counselling content
4. Closing the session

1. PREPARING FOR THE SESSION

- The success of counseling depends on the **knowledge and skill** of the counselor.
- The **pharmacists should know as much as possible** about the patient and his/her **treatment details**.
- If the patient is receiving a medication which is **unfamiliar to the pharmacist**, then a **drug information reference** should be consulted before counseling commences.

2. OPENING OF THE SESSION

- The first phase of **counseling is used information gathering**.
- The pharmacist should **introduce him or herself** to the patient and **greet them by name**.

- It is the **best to use titles such as Ms., Mrs. and Mr.** and then switch over to the **first name**.
- The pharmacist should **identify the purpose the session very clearly**.
- During counseling, the pharmacist should **avoid asking question in a direct or embarrassing way**, show **excessive curiosity**, discuss the patient's **personal problems**, pass **moral judgments**, **interrupt** when the patient is speaking, make **premature interpretations** or argue with the patient.

3. COUNSELLING CONTENT

Topics commonly covered include

- Name and strength of the medication.
- The reason why it have been prescribed (if known), or how it works.
- How to take the medication.
- Expected duration of the treatment.
- Expected benefits of the treatment.
- Possible adverse effects.
- Possible medications or dietary interactions.
- Advice on correct storage.
- Minimum duration required to show therapeutic benefit.
- What to do if a dose is missed.

- Special monitoring requirements, for example, blood tests.

4. CLOSING THE SESSION

- Before closing the session, it is **essential to check the patient's understanding**.
- This can be assessed by **feedback questions**, such as
    - "Can you remember what this medication is for?"
    - "For how long should you take this medication?"
- During the discussion some of the patient's information needs may have been cleared, but the patient may have **new questions or doubts**.
- Before final closure and if time permits, **summarize the main points in a logical order**.
- If appropriate the pharmacist can supply their **telephone number** to encourage the patient to **make contact** if they need advice or information.

SPECIAL CASES THAT REQUIRE THE PHARMACIST

Following are some special cases/situations that require the pharmacist to play a major role:

1. PATIENT CARE

- There is a **significant and positive impact** of pharmacists on patient care and **therapeutic outcome** through effective patient counseling.

2. UNDERSTANDING OF THE THERAPY

- Pharmacists can provide **better information** and **effectively understand the patient** on the drug therapy.

3. PROPER USE AND MANAGEMENT OF ADVERSE EFFECTS OF THE MEDICATION

- Pharmacist has **more information and knowledge** about the proper uses and **adverse effects of the medicine**.
- So, he can provide information effectively to the patients.

4. IMPROVING PATIENT ADHERENCE AND MOTIVATING TO TAKE AN ACTIVE ROLE IN HEALTH

- Pharmacist has a **great role in the improvement of patient adherence**.
- He plays an **active role in health education**. During the dispensing of the drug, the pharmacist provides **behavioral and emotional support**.
- Sometimes pharmacist also collaborates with patients to incorporate the **medication regimen in their daily schedule**, particularly when there is a **complex therapeutic regimen** and in **elderly patients**.

OUTCOMES OF PATIENT COUNSELING

• There may be **better patient sympathy for their illness and the role of medication in its treatment**.

• There is **enhancing in the professional relationship between the patient and pharmacist**.

• There is **improved medication compliance**.

• There is more **effective drug treatment**.

• There is a **reduction in the incidence of medication errors, unnecessary medical costs**.

• There are **better managing approaches to the adverse effects of medication**.

• There is improved in the **quality of life of patients**.

EDUCATION AND TRAINING PROGRAM IN THE HOSPITAL (PART - 4)

Points to be covered in this topic

➞ INTRODUCTION

➞ ROLE OF PHARMACIST

➞ INTERNAL AND EXTERNAL TRAINING PROGRAM

➞ SERVICES TO THE NURSING HOMES

➞ CODE OF ETHICS FOR COMMUNITY PHARMACY

➞ ROLE OF PHARMACIST IN THE COMMUNITY HEALTH EDUCATION

➞ ROLE OF PHARMACIST IN THE INTERDEPARTMENTAL COMMUNICATION

INTRODUCTION

• In the **hospital management system**, proper **implementation of education and training programs on safe patient handling to all hospital staff including a physician** can result in a **reduction in the incidences of unsafe movement of the patient by their colleagues**.

• Several **training programs** can be **conducted in the form of a safe patient handling education program, demonstration on the use of the equipment and its maintenance in the safe handling of patients, and conduct of national conferences**.

OBJECTIVE

• **Appropriate education & supervised training** are prerequisites for **pharmacists to take clinical responsibilities**.

• It is **not possible for a single pharmacist** to acquire the **knowledge & expertise to advise consultants from many different specialties**.

• **Specialization** is common among **clinical pharmacists**, where pharmacists focus on **one or more specialized areas**.

• **Training programs** also need to reflect the **multilingual employee population** **in so any hospitals today**.

• **Hospital training programs** have always covered issues such as **compliance and clinical competency**, but **increasingly hospitals are developing programs around newly sought-after skills**, such as **customer service and patient-centered care**.

TO PREPARE THE EMPLOYEE FOR THE NEED OF ORGANIZATION

⬇

TO PREVENT OBSOLESCENCE

⬇

TO PREPARE EMPLOYEES FOR HIGHER LEVEL TASKS

⬇

TO DEVELOP THE POTENTIALITIES OF PEOPLE FOR THE NEXT LEVEL JOB

⬇

TO ENSURE ECONOMICAL OUTPUT OF REQUIRED QUALITY

ROLE OF PHARMACIST

• To instruct on all medicine including; **pharmacokinetic properties, adverse drug reactions, and drug interactions**.

• To **instruct and educate on the proper use of all medicines**.

• To **monitor products sold directly to the public, prescription trends, and the selection, management, and procurement of drugs by government and local purchasing agents**.

• **Development and drafting of rules** for controlling the **manufacture, distribution, and supply of drugs**.

• **Training, supervision, and guidance** to community health workers with pharmacy tasks.

• Participate in **education program** related to different **medical area** such as **psychiatric, physical, rehabilitation**, special education program like **diabetic or cardiac patient**.

• Involve in **external and internal teaching activity**.

INTERNAL AND EXTERNAL TRAINING PROGRAM

INTERNAL TRAINING PROGRAM

• **Training of student nurses**

• Seminar for **graduate nurse, house staff and medical staff**

• **Training undergraduate students in hospital pharmacy**

• **Patient teaching programme**

• **Training clinical pharmacist**

• **Training residents in hospital administration**

EXTERNAL TRAINING PROGRAM

• Any teaching activity performed by **pharmacist outside the hospital**

• Participation in **seminar, refresher course**

• Participation in activities of **nursing, dietary, oxygen therapy and medical technology**

• Preparation of **manuscript for publication in professional press**

• Obtain various **grant-in-aid** to support research in **drug distribution techniques or prescription techniques**

• Participate in **educational activities organized during annual session of professional bodies** such as **Indian pharmaceutical congress**.

SERVICES TO THE NURSING HOMES

• **Nursing homes** delivered the **services of residential care** for **elderly or disabled people**.

• Some nursing homes also deal with providing the services of **short-term rehabilitative stays** after **operative surgery**, **illness**, **or injury**.

• Services may include; **physical therapy, occupational therapy, or speech-language therapy**.

• They also provide other kinds of services such as; **strategic activities and daily housekeeping maintenance services**.

• The **practice nurses** are **centered in the surgeries** and they wear a **uniform of dark blue color**.

• The practice nurses are a **multi-skilled team**; either they work alone or together with the **general practitioners**.

• They check all **health requirements** in surgery, offer **health education**, nurse triage, and look towards patients with **chronic diseases** such as; **asthma, diabetes, high blood pressure**, and provide a wide range of treatment services such as; **vaccinations**, **children's immunizations, dressings, and cervical smears**.

• The nurses also **deliver advice on contraceptives use, menopausal issues**, and the **hacking of general wellbeing**.

• The **practice nurse** also works as a **healthcare assistant** and helps the **doctors and other nurses** in the preparation of **smears and other procedures** in the hospital.

CODE OF ETHICS FOR COMMUNITY PHARMACY

• The code **defines and seeks to clarify the obligations of pharmacist** to use their own knowledge and skills for the **benefit of others**, to **minimize harm**, to **respect patient autonomy** and to provide **fair and just pharmacy care** for their patients.

• For those **entering the profession**, the code **identities the basic moral commitments of pharmacy care** and serves as a **source for education and reflection**.

• **Professional ethics** are defined as rules of **"conduct or standards"** by which a professional community regulates its actions and sets standards for its members.

Principles

✓ **Principle 1** – pharmacists respect the **professional relationship** with the patient and acts with **honesty, integrity and compassion**.

✓ **Principle 2** – pharmacist honor the **individual needs, values and dignity** of the patient.

✓ **Principle 3** – pharmacist support the **right of the patient to make personal choices** about pharmacy care.

✓ **Principle 4** – pharmacist provide a **complete care** to the patients and actively supports the patients right to **receive competent and ethical care**.

✓ **Principle 5** – pharmacists **protects the patients right of confidentiality**.

✓ **Principle 6** – pharmacists respect the **values and abilities of the colleagues and other health professionals**.

✓ **Principle 7** – pharmacists endeavour to ensure that the **practice environment contributes to safe and effective pharmacy care**.

✓ **Principle 8** – pharmacists ensure **continuity of care** in the event of **job action, pharmacy closure or conflict with moral benefits**.

ADVANTAGES

• The code provide **clear direction for avoiding ethical violations**.

• The code tries to **provide guidance** for those **pharmacists who face ethical problems**.

ROLE OF PHARMACIST IN THE COMMUNITY HEALTH EDUCATION

The following are described the **main roles of pharmacists** towards community health education:

1. PROCESSING OF PRESCRIPTIONS

• Pharmacist **verifies the prescription order** for its **originality, correctness and drug safety**.

• A pharmacist also **checks the patient medication record** before **dispensing medication according to prescription**.

• While dispensing the medication, the pharmacist ensures the **correct quantity and strength of medication dispensed**.

2. CARE OF PATIENTS OR CLINICAL PHARMACY

• The pharmacist tries to **gather and integrate the patie nt information concerning drug history**, explains the **proposed dosage regimen and method of drug administration**.

3. MONITORING OF DRUG UTILIZATION

• The pharmacist can **contribute to the monitoring of drug utilization** such as; **monitoring and analyzing the adverse reactions** associated with **prescription drugs**.

4. SMALL-SCALE MANUFACTURE OF MEDICINES

• Pharmacists play a **great role in the manufacturing of medicines** as per the **guidelines of good manufacturing and distribution practice**.

• Pharmacists have **expertization in the preparation of medicine**.

• So, they can do this **service anywhere in the pharmacy** and can adjust the **drug formulation according to the need of the individual patient**.

5. TRADITIONAL AND ALTERNATIVE MEDICINES

• Pharmacist is also involved in the **dispensing of traditional and homeopathic medications** as prescribed by **health care professionals**.

6. RESPONDING TO SYMPTOMS OF MINOR AILMENTS

• The pharmacist received various kinds of **inquiries on the symptoms from the public** and asked for **advice on medications for the same**, in such cases when **indicated pharmacist refers such inquiries to consultants or health care professionals**.

7. INFORMING HEALTH CARE PROFESSIONALS AND THE PUBLIC

• The pharmacist can **collect and maintain information on all medicines** especially for the medicines which are **newly introduced**.

8. HEALTH PROMOTION

- The pharmacist can **participate** in the various **local and national health promotion campaigns**, **wide range of health-related topics** such as **national program of leprosy, HIV/AIDS, tuberculosis**, etc. and **drug-related topics** such as; **alcohol abuse, rational use of drugs, abuse of organic solvent, use of tobacco, warning of drug use during pregnancy, poison prevention**, etc.

9. DOMICILIARY HOSPITALIZATION OR TREATMENT

- Pharmacist is also involved in the **delivery of the health care services** including the **supply of medicines to a residential home for disabled, elderly, and long-term patients**.

10. AGRICULTURAL AND VETERINARY PRACTICE

- Pharmacists are also involved in the **providing of animal medicine (veterinarian medicines) and medicated animal feed**.

ROLE OF PHARMACIST IN THE INTERDEPARTMENTAL COMMUNICATION

1. Departmental administration
2. Interdepartmental activity
3. Inpatient drug distribution and control
4. Ambulatory patient services
5. Clinical services

6. Drug information services
7. Education and training
8. Technology and quality control activity

PRESCRIBED MEDICATION ORDER AND COMMUNICATION SKILLS (PART - 5)

Points to be covered in this topic

- **INTRODUCTION**
- **PRESCRIBED MEDICATION ORDER INTERPRETENTATION**
- **LEGAL REQUIREMENTS**
- **COMMUNICATION SKILLS**
- **COMMUNICATION WITH PRESCRIBER AND PATIENTS**

INTRODUCTION

- Prescribed medication order is the **written directions** which are the **primary means by which prescribers communicate with pharmacists** regarding the **specific treatment regimen for a patient**.
- The prescriber may also give **medication orders verbally or non-verbally** to a **registered/licensed pharmacist or nurse**.

- While the **medications are sold only on clear, complete, and signed prescription orders**.

Medication orders must have the following points

✓ Patient name

✓ Name of medication

✓ Strength of medication

✓ Dose

✓ Dosage form

✓ Time or frequency of administration

✓ Route of administration

✓ Quantity to dispense

✓ Prescriber name and signature

✓ Refill authorization

✓ Date

- **PRN medication orders** should specify the **frequency of administration**, **maximum daily dosage**, and **condition for which the medication is being administered**.

PRESCRIBED MEDICATION ORDER INTERPRETENTATION

- Drug use is a **complex process** and there are many **drugs related challenges** at various levels involving **prescribers, pharmacists, and patients**.
- While **medications misadventure** can occur anywhere in the **health care system** from prescribers to the dispenser to administration and finally to **patient use**.
- While many errors can be **preventable** and pharmacists play an **important role** in the appropriate **dispensing of prescribed medications**.
- By interpreting the **proper abbreviation involved in the prescription** one can **effectively interpret the prescription and avoid errors**.
- The following table mentioned the **interpretation of commonly used abbreviations and Latin terms while prescribing**.

Common Abbreviations

Abbreviation	Latin Name	Interpretation
Ad lib	Ad libitum	Freely as wanted
Aa	Ana	Of each
a.	Ante	Before
a.c.	Ante cibum	Before meals
Ad	Ad	Add up to
Aq	aqua	Water

Abbreviation	Latin Name	Interpretation
b.i.d	Bis in die	Twice a day
Cap	Capsula	Capsule
c	Cum	With
div	Divide	Divide
Dos	dosis	A dose
Eq. pts	Equalis partis	Equal parts
Ft	Fiat	Make
gtt	Gutta	A drop
haust	haustus	Drench
h	hora	Hour
m	Misce	Mix
n.r	Non repetatur	Not to be repeated
No	Numero	Number
o.d	Omne die	Every day
p.c	Post cibum	After meals

Abbreviation	Latin Name	Interpretation
p.r.n	Pro re nata	As association requires
q.s	Quantum sufficient	A sufficient quantity
q6h	Quaque 6 hora	Every 6 hours
q.i.d	Quarter in die	Four times a day
s.i.d	Semel in die	Once a daily
ss	semisse	half
Sig.s	signa	Write on the label
s.o.s	Si opus si	If necessary
Sol	Solution	Solution
Tab	tabetta	A tablet
t.i.d	Ter in die	Three times a day
trit	triturate	Triturate

LEGAL REQUIREMENTS

- A **PRN protocol** is required for **PRN medication orders** which are ordered on a **daily/regular basis**.

- Such medication orders should specify the **frequency of administration, maximum daily dosage**, and **condition for which medication is being administered**.
- The **PRN protocol** provides **additional information regarding medication order** and helps the pharmacist understand **when and how much of the prescribed medication to give**.

PRN protocol should include

✓ All information found in the **regular medication order**

✓ **Specific signs and symptoms** for which the medication should be given to a patient

✓ **A maximum daily dosage.**

✓ **Any special instructions, for example, when to call prescribing practitioner or nurse.**

COMMUNICATION SKILLS

• Communication skills are the capability to use language in precise and express information in an easy way to understand with patients and family members, other physicians, nurses, pharmacists, and other health care providers.

• Effective communication skills are a critical element for patients, pharmacists, and doctors.

• Communication skills may be verbal or non-verbal way. Following are the three main goals of communication:

✓ Creating good interpersonal relationships.

✓ Facilitating the exchange of information.

✓ Including patients in decision making.

• Poor communication skills between pharmacist and patient may lead to the following:

✓ Inaccurate patient medication history.

✓ Inappropriate therapeutic decisions.

✓ Leads to patient confusion, patient disinterest, and patient non-compliance.

COMMUNICATION WITH PRESCRIBER AND PATIENTS

1. MEDICATION HISTORY INTERVIEWS

• The following information is recorded while communicating with patients:

✓ Currently or recently prescribed medicines.

✓ OTC medicines purchased.

✓ Vaccinations.

✓ Alternative or traditional remedies.

✓ Description of reactions and allergies to medicines.

✓ Medicines were found to be ineffective.

2. PATIENT INFORMATION LEAFLET (PILs)

• Practitioners should use the following outline key information to help/assist the patients and their caregivers/family members in the effective, clear, and safe uses of medicines.

✓ Trade and a generic name.

✓ Indications for which the medicines are being taken.

✓ Dosage administrative advice and instructions.

✓ Information on the action required if a dose is missed.

✓ Common or serious side effects may occur due to drug administration.

✓ Storage condition for prescribed medications information.

✓ Action to be taken if a side effect is an experience.

✓ Name and contact details of the hospital/physician or health care provider should be provided.

✓ Author and date of publication of the information.