

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 professional 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

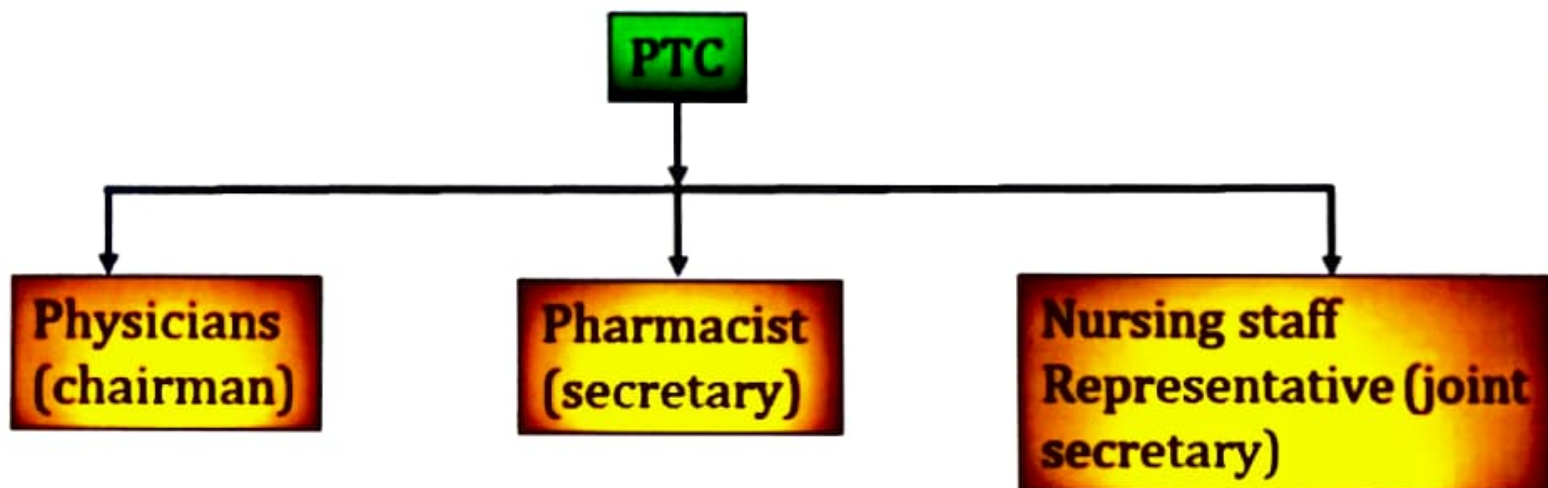
- As the **therapeutic agents** are **increasing**, the **scope**, **knowledge** and **responsibility** of the **hospital pharmacist** is also increasing.
- The **safety aspects** are more or **less taken** for granted by **pharmacy**, **medical** and **nursing staff**.
- So, one of the main **aim of 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

❑ OUTPATIENT

- 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**.

- 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**.

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**, and **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, and 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 times **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** where by they **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 0.4mg /ml**
- **Digoxino 0.25 mg /ml**
- **Heparin 10,000 units /ml**
- **Neostigmine methyl sulphate 0.25mg /ml**
- **Mannitol injection 25%**
- **Saline for injection 0.9% 30ml**
- **Water for injection 20ml**

❖ SUPPLIES FOR CABINET UTILITY ROOM

- **Oxygen catheters**
- **Razor with blades**
- **Resuscitation tube**



❖ OTHER EMERGENCY SUPPLIES

- **Burn sheets**
- **Dextran and tubing**
- **Resuscitation carts**

INFORMATION SERVICES

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**.



❑ 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 should be used when appropriate.
 - ✓ 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

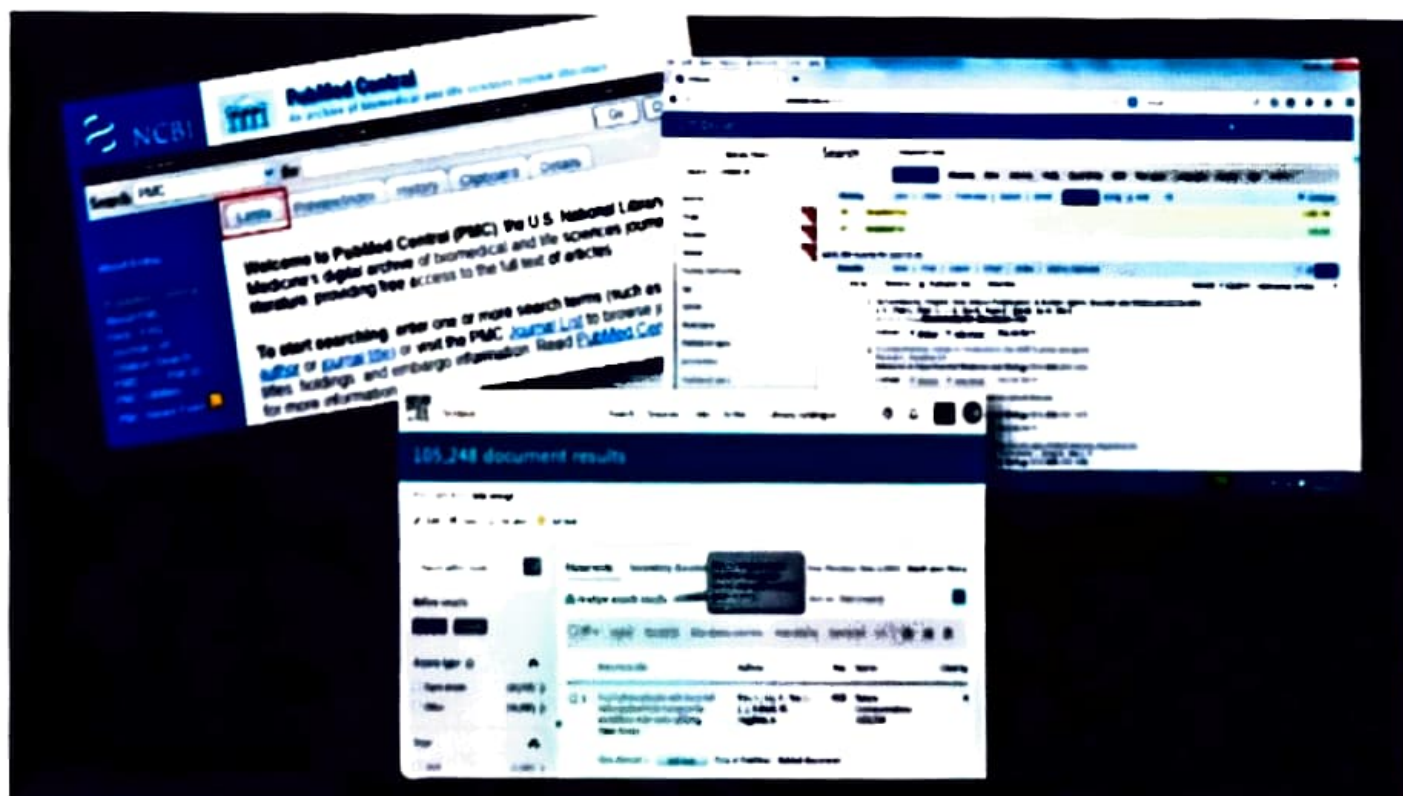
- Abstract or **index which summarizes** the information arising in **primary source**
- **Indexing and abstracting services** are **valuable tools** for quick and **selective screening** of the **primary literature** for specific information, **data, citation, and articles**
- Three types of abstracts: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

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 many 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** of the session very clearly.
- **During counseling**, the **pharmacist** should **avoid asking** questions 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. COUNSILING 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 stage**.
- ✓ **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 understating**.
- This can be assessed by **feedback questions**, such as "**Can you remember** what this medication is for?" or 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 pints 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 there 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** behavior 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

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 identifies** 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 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 patient 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

Points to be covered in this topic

INTRODUCTION

**PRESCRIBED MEDICATION ORDER
INTERPRETATION**

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 prescribers 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** are needed to 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 INTERPRETATION

- 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 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.

ABBREVIATION	LATIN NAME	INTERPRETATION
Ad lib	Ad libitum	Freely as wanted
Aa a. a.c. Ad.	Ana Ante Ante cibum Ad	Of each Before Before meals Add up to
Aq.	aqua	Water
b.i.d	Bis in die	Twice a day
Cap. C div. Dos.	Capsula Cum Divide dosis	Capsule With Divide A dose
Eq.pts Ft. Qtt. haust	Equalis partis Fiat Gutta haustus	Equal parts Make A drop drench
h.	hora	Hour

m. n.r. No. o.d. p.c.	Misce Non repetatur Numero Omne die Post cibum	Mix Not to be repeated Number Every day After meals
p.r.n.	Por.re.nata	As association requires
q.s. Q6h q.i.d. s.i.d ss	Quantum sufficient Quaque 6 hora Quarter in die Semel in die semisse	A sufficient quantity Every 6 hours Four times a day Once a daily half
Siq.s	signa	Write on the label
s.o.s Sol. Tab.	Si opus si Solution tabetta	If necessary Solution A tablet
t.i.d	Ter in die	Three times a day
trit	tritura	Triturate

LEGAL REQUIREMENTS

- A **Prn protocol** is required for **PRN medication** orders which are ordered on a **daily/regular basis**.
- So, **such medication** orders should specify the **frequency** of **administration**, **maximum daily dosage**, and the condition for which medication is **being administered**.
- The **PRN protocol** provides **additional information** regarding the **medication order** and to understand the **pharmacist** when and how much of the **prescribed medication** to give.
- The **PRN protocol** should include the following points:
 - ✓ All of the **information** is found in the **regular medication order**, along with the **following points**.
 - ✓ The **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.