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**Diploma in Pharmacy 2<sup>nd</sup> Year  
Hospital & Clinical Pharmacy  
Chapter 1 : Hospital Pharmacy**

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# HOSPITAL & CLINICAL PHARMACY

## Chapter 1

### Hospital Pharmacy

#### Hospital

- Hospital is a complex organisation.
- It is an institute of providing health to individuals with the help of complex and special scientific equipments in the presence of trained staff well-educated in the problems of modern medical science.
- As per WHO, hospitals are reservoirs of critical resources and knowledge.
- They can be classified according to the interventions they provide, the roles they play in the health system and the health and educational services they offer to the communities in and around them.

#### HOSPITAL PHARMACY

- Hospital Pharmacy is a healthcare service provider in which medicines storing , compounding , dispensing are performed and medical devices and advices are provided to patients with safe and effective manner.
- or
- Hospital pharmacy functions for receiving, storing and dispensing drugs and medicines to patients. The hospital pharmacy may also manufacture pharmaceuticals and parenteral products.
  - The department provides a range of pharmacy services for the hospitalised and ambulatory patients, including purchase manufacture, compounding, storage, dispensing, distribution, and maintaining record for the same.

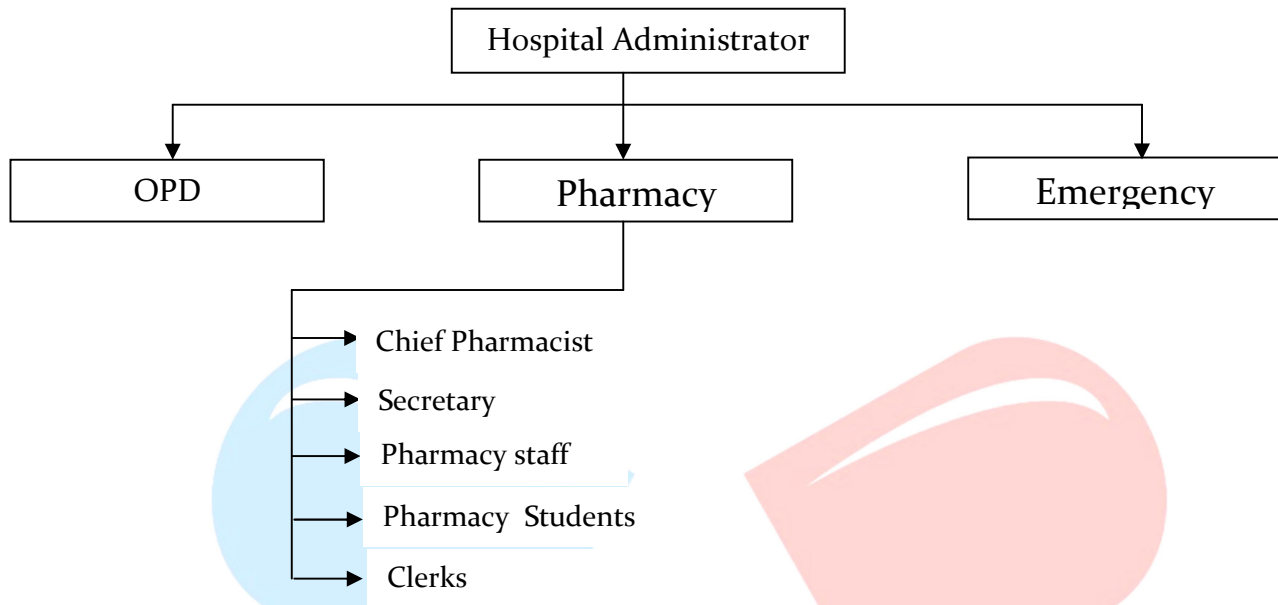
#### Scope of Hospital Pharmacy

- It attains supply of drugs, chemicals, biological and pharmaceutical formulations only from licensed vendors and manufacturers
- It inspects the received items and maintains an inventory for the same.
- It dispenses drugs, chemicals, and pharmaceutical preparations to the patients.
- It keeps a record of all the narcotic drugs and alcohol received and issued.
- It predicts the demand for drugs, chemicals, antibiotics, biologicals, radio pharmaceuticals, etc. and takes suitable steps to fulfil the demand.
- It keeps a record of each supply dispensed.
- It manufactures large volume parenterals and other drug preparations in case of unavailability, high cost, or lack of authentic vendors or cautious.
- It discusses about the drug related information with the medical staff residents nurses, health care team, and the patients.
- It participates in minimising the incidence of illness, and improves the general health of the population.

## National and International Scenario of Hospital Pharmacy

- ❖ The third-largest group of healthcare professionals in the world is pharmacists, and during the past ten years, the field has undergone steady growth.
- ❖ Conventionally, the only role of pharmacist is to manufacture and dispense drugs. But this role is now evolving and the pharmacist play a role of essential team member in the care of patients.
- ❖ In many parts of the world, the focus has switched from product-centered services to patient-centered services (patient education and counseling, illness prevention, health promotion, various disease states management, and offering specialised clinical advice to other healthcare professionals) as a result of complexities caused by a growth in variety of drugs and poor compliance.
- ❖ The pharmacy profession still lags behind in developing nations in comparison to industrialised nations in that neither the general public nor healthcare professionals have ever regarded pharmacy specialists as a component of healthcare team.
- ❖ To reduce the responsibilities of doctors and enhance the standard of care, many industrialised countries, like Australia, United Kingdom, and United States, have also granted pharmacists the right to write prescriptions.
- ❖ Pharmacists have been granted the ability to prescribe medications for some diseases in nations, like UK.
- ❖ The WHO adopt the Good Pharmacy Practice Guidelines which was created by the FIP declares that a pharmacist's top priority should be patient welfare.
- ❖ Hospital pharmacists are expected to deliver high-quality patient care by implementing both clinical and standard pharmacy services.
- ❖ But, due to differences in healthcare structures, public policies, economic resources, cultural norms, and educational systems, the nature and scope of provided services may change across different locations.
- ❖ Pharmacists in India have the potential to play a larger role in patient care, but it can be challenging to define those obligations and get hospital administrators, the government, and patients to acknowledge them.
- ❖ The clinical pharmacist's role is still not well understood by the healthcare professionals and community in India, where the pharmacy profession is more industry-centered than patient-centered.

# Organisational Structure of Hospital Pharmacy



## HOSPITAL PHARMACIST

- Hospital pharmacists are engaged in hospital pharmacy services in public sector.
- They are skilled in practice of medicines and dispense prescriptions, purchase, manufactures, and performs quality test of all medicines used in a hospital.
- Being the members of healthcare team, they coordinate with medical and nursing staff for better treatment of patient.
- They help and refer knowledge to patients on their medicines.

## Professional Responsibilities of a Hospital Pharmacist

- ✚ To follow the hospital's policies and convey other for that.
- ✚ To maintain accuracy of dosage are prescribed.
- ✚ To provide drug information and way of administration to new staff or of new drugs to all staffs.
- ✚ To remain updated about new drugs ( effect , side effect etc ).
- ✚ To give instructions to the patients for self administered drugs.
- ✚ To take parts in new research and development.
- ✚ To educate and make trained the Pharmacists and pharmacy students are taking practical training .

## Qualifications & Experience Required for a Hospital Pharmacist

- The chief Pharmacist must have minimum postgraduate degree in pharmacy , especially in Pharmacology or Hospital Pharmacy .
- Manufacturing chemist should have graduate degree in pharmacy with minimum 18 month experience in drug manufacturing .
- dispensing pharmacist should have minimum diploma in pharmacy .
- Ph.D degree holder is preferred in all categories .

### A Chief Pharmacist must have these qualities

#### → Administrative and Management Ability :

- a) A pharmacist should have the ability of planning , implementing the pharmacy policies and ability of making budget , stock control .
- b) He / she should have ability to interview and select staff for pharmacies .
- c) He / she should have ability to manage staffs and distribute works between them .

→ **Manufacturing Ability :** He should be able to manufacture drug in case of shortage or high cost of drugs than normal .

→ **Knowledge :** He / she must have complete knowledge about drug action , side effect , routes of administration , and quality control .

→ **Research ability :** He should have ability to research and develop new drugs .

→ **Teaching Ability :** He should have ability to give lecture to the nursing staff and students are under training .

## Job Specifications for a Hospital Pharmacist

- Hospital pharmacists are employed by both the MOH and the private sector's hospital pharmacy services.
- They are responsible for dispensing drugs, performing quality checks, formulating and reformulating dosage forms, monitoring and reporting drug safety, creating medication budgets, storing medication, and in planning of drug quantities for hospitals

### Hence, hospital pharmacists perform the following tasks per days

- Constantly supervising pharmacy-related services and logistics
- Writing prescriptions and assuring the effectiveness and safety of drugs
- Preparing each drug and adapting dosage forms to the specific circumstances
- Reporting all the possible Drug Related Problems (DRPs) to the Saudi Food & Drug Authority (SFDA)
- Communicating to healthcare providers regarding DRPs.
- Attending pharmacy-managed clinics and clinical rounds led by each healthcare provider.
- Providing sufficient data on drug consumption.
- Keeping a track of drug inventories and creating medication budgets.
- Offering services for drug information
- Offering pharmacy-related training to under- and post-graduate students

## Work-load Requirement for a hospital pharmacist

- Work load means how much work can a person do in a specific time .
- The work-load of pharmacist is observed / analyzed by work characteristic .

### Some characteristics are following :

- Working hours per week .
- Numbers of hours that a person spent working alone in his or her department .
- Numbers of prescription filled by a pharmacist daily .

The number of pharmacist needed for a hospital is determined using the number of beds .

BED Strength	No of Pharmacist Required
Up to 50 beds	3
Up to 100 beds	5
Up to 200 beds	8
Up to 300 beds	10
Up to 500 beds	15

**Note :** Pharmacists They may be increased and reduced as required .

## Inter-professional Relationships of a Hospital Pharmacist

- The relationship between two or more professionals is called Interprofessional relationship .
- To get good result it is necessary to maintain positive relationship between various professionals , as doctor prescribed drugs , pharmacist dispenses , and nurses give to patients .

### Following are the three commonly used techniques

- ◇ Initially, the issue should be discussed with the pharmacy and therapeutics committee and then advice should be given to the medical staff.
- ◇ Requesting the administrator to inform the medical staff about the issue.
- ◇ Informal discussion with the medical staff about the issue.

## GOOD PHARMACY PRACTICE (GPP), IN HOSPITAL

→ It is a pharmacy Practice that responds to the need of people who use the pharmacist 's services , to provide them optimal ( best ) and evidence based care at standard level.

### Aim

- ❖ The goal of pharmacy practice is to offer drugs and other healthcare goods and services and guide people and society about the effective method of using them.

### Good Pharmacy Practice Requirements

The main Important part of pharmacy activity to help patients through :

- The supply of medicines and healthcare products.
- The provision of appropriate information and advices to the patients.
- The administration of medicines.

### Role of Pharmacist in Satisfying GPP Requirements

→ Roles of pharmacists in GPP are to prepare , obtain , secure , distribute , administer , dispense and dispose of medical products at the standard level .

## HOSPITAL PHARMACY STANDARDS

### FIP (International Pharmaceutical Federation) Basel Statements

- ⇒ The International Pharmaceutical Federation (FIP) is a global organisation that represents pharmacy, pharmaceutical sciences, and pharmaceutical education. It was established in 1912 in The Hague, Netherlands, with its headquarters in The Hague.
- ⇒ The main aim of FIP is to represent and assist pharmacy and pharmaceutical sciences worldwide
- ⇒ In 2008, a conference was conducted in Basel, Switzerland by the FIP which included hospital pharmacists from all over the world to talk about the future of hospital pharmacy.
- ⇒ In 2014, again a conference was held in Bangkok to launch revised Basel statement that included 65 statements.

**These statements cover the following 6 areas of hospital pharmacy (FIP Basel Statement)**

1. Procurement
2. Influences on prescribing
3. Preparation and delivery of medicines
4. Administration of medicines
5. Monitoring of medicines use
6. Human resources, training and development



## AHSP (American Society of Health-System Pharmacy)

- The American Society of Health-System Pharmacists (ASHP) represents all pharmacists who provide patient care in hospitals, health systems, ambulatory clinics, and other healthcare settings covering complete drug use.
- This organisation is made up of more than 60,000 members, including pharmacy technicians, pharmacists in training, and professional pharmacists.

### Purpose

- Improve Medication use and enhance patient Safety.
- Provide Good Pharmacy Service
- Effective Treatment
- Reduce Drug Adverse Effect

### Minimum Standards Required

- ✓ Knowledge of the abbreviation and symbols used in prescription.
- ✓ Knowledge of all medications handled in pharmacy department.
- ✓ Knowledge of Production.
- ✓ Knowledge of Dispensing, labeling, Packaging.
- ✓ Knowledge of Dosage Calculation.
- ✓ Knowledge of administration.

## NQAS (National Quality Assurance Standards) Guidelines

- The NQAS programme was initiated by the Ministry of Health and Family Welfare with the goal of highlighting top-performing facilities and enhancing the public hospitals reliability in the community.
- While establishing National Quality Assurance Standards (NQAS), the requirements for public health facilities and international best practices are considered.

### Organisational Structure

- 1) **The State Quality Assurance Committee (SQAC)** is a state-level organisation responsible for policy decision, providing guidance, and also for QA initiatives, including their successes and failures. At the state level, the committees' main responsibility is to regulate, guide, and monitor the districts' QA initiatives.
- 2) **District Quality Assurance Committer (DQAC)** is a districy level organisation having District Quality Assurance Unit (DQAU) as a functional body that performs various duties according to the units TORs.

## Some Area where they focus

- ❖ Service Provision , Patient right , infection control , quality management ,
- ❖ hand washing Facilities .
- ❖ Postpartum care ( hormonal level and uterus size return to a non pregnant state after 6 weeks of childbirth )
- ❖ oxytocin administration within 60 seconds of childbirth .
- ❖ Availability of curtains etc .

## NABH (National Accreditation Board for Hospitals & Healthcare Providers) Accreditation

- National Accreditation Board for Hospitals and Healthcare Providers (NABH) is a constituent board of Quality Council of India (QCI) that has been established to create and operate Hospital Accreditation Program for healthcare organisations.
- The board is designed to meet consumers highly wanted needs and to provide benchmarks for health industry development.
- The board has complete operational autonomy in its operation while receiving support from all stakeholders, including business, consumers, and the government.

## Aim

- To operate accreditation and allied programs along with stakeholders focusing on patient safety and quality of healthcare, based upon national/international standards, through process of self and external evaluation

## Benefits of Accreditation

- ✓ High-quality medical care and patient safety are the results of accreditation. The patients receive services from licensed medical personnel.
- ✓ Patients' rights are valued and protected.
- ✓ It is possible to assess patient satisfaction.
- ✓ The team is contented because it encourages constant learning
- ✓ A healthcare organisation's accreditation encourages ongoing development.
- ✓ It helps the organisation show its dedication to providing high-quality treatment.
- ✓ It also gives healthcare organisations the chance to compare themselves to the best

## NABH Standards for Hospitals

### 1. Legal requirements :

- Qualified Pharmacists should have their certificate displayed in the pharmacy.
- Schedule H and X drug should only be sold by retailer , when they prescribed by a licenced medical professional.
- The pharmacy should not sold the physician samples.
- the NDPS medications should be kept in locked container and a register should be available to keep record of every issue of NDPS medications.
- All the legal document should be updated during valid time.

### 2. Access to Medications :

- The pharmacy should stock only those medicines which are listed on the hospital's formulary ( list of medicines )
- The pharmacy in-charge should be aware of the procedure for obtaining medications
- the room and area where the medications are kept should be clean and free from vermin and bugs.
- the proper security like CCTV and entry restriction should be available in pharmacy.

### 3. Medicine Safety :

- Refrigerator should be available for the drugs are not stable i n room temperature.
- personal items like food drinks should not be kept in the refrigerator is used for drugs
- LASA drugs should be stored separately or colour - coded.
- A list of high risk drugs should be identified and made easy available.

### 4. Other safety :

- Fire safety like fire extinguisher should be available.

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