

# Introduction to Hospital Pharmacy

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# Outline

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- Background
- Classification of hospitals.
- Organizational pattern.
- Administration.
- Clinical departments.
- Pharmaceutical services division.
- Nursing, dietetic, pathology, blood bank, radiology and other - supportive services.
- Drug information center.
- Poison control center and antidote bank.
- Education and research.

# Background

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- Hospital is defined as an institution for the care, cure and treatment of the sick and wounded, for the study of the diseases, and for the training of the doctors and nurses.
  
- Functions of a hospital:
  1. Patient care: The primary function of the hospital is to provide observational, diagnostic, therapeutic and rehabilitative, preventive care to the patients.
  2. Public health: Promoting public health is an important activity of hospitals (prevention is always better than cure).
  3. Hospitals through their public health activities help the community reduce the incidence of sickness, disease, injury, accidents and epidemics.

# CLASSIFICATION OF HOSPITALS

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## **A. According to the ownership (Jordan):**

1. Government or Public Hospitals.
2. Military Hospitals.
3. Non-Government Hospitals (private).
4. University hospitals.

## **B. According to the size (U.S.A):**

1. Small hospitals (< 100 beds).
2. Medium hospitals (100 to 499 beds).
3. Large hospitals: ( $\geq$  500 beds).

# CLASSIFICATION OF HOSPITALS

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## C. According to the specialty (UK):

1. General Medical & Surgical Hospitals.
2. Psychiatric Hospitals.
3. Hospices & Palliative Care Centers.

# CLASSIFICATION OF HOSPITALS

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**D. Hospitals are classified into primary, secondary and tertiary based on bed capacity.**

1. Primary hospitals (less than 100 beds):

- providing preventive care, minimal health care and rehabilitation services.
- they are a basic level of contact between individuals and families with the healthcare system.
- they include general practitioners, family physicians and physiotherapist.
- the basic services provided by them are immunization, maternal and child health services, curative care services and prevention of diseases.
- the staff includes a medical officer, a staff nurse and paramedical support staff.

# CLASSIFICATION OF HOSPITALS

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## 2. Secondary hospitals (>100 beds but less than 500 beds):

- preferred with a medium size city, country or district.
- they are responsible for providing complete health services and medical education and also conduct research on regional basis.
- these hospitals include cardiologists, urologists, dermatologists and other such specialists.
- the services are provided by medical specialists.
- the services include acute care, short period stay in hospital emergency department for brief but serious illness.
- there may be providers who remain in contact but do not work in hospitals such as psychiatrists, physiotherapists, respiratory therapists etc.

# CLASSIFICATION OF HOSPITALS

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## 3. Tertiary hospitals (more than 500 beds):

- these are comprehensive or general hospitals of the city at national or regional level.
- they are responsible for providing specialist health services and play a vital role with regard to medical education and scientific research and they also serve as a medical hub providing care to multiple regions.
- the Patients are admitted into these centres on a referral from primary or secondary health professionals.
- they offer personnel facility as well as facilities for advanced medical investigation and treatment.
- they provide advanced diagnostic support services, specialized intensive care and special services such as neurosurgery, cancer management, cardiac surgery etc that cannot be provided by primary and secondary health centres.

# Structural components of organizations

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## 1. Formalization

- Rules, Guidelines, Policies.

## 2. Centralization

- Distribution of power.
- Decision making.

## 3. Specialization

- Division.
- Medical and Nursing staff.

## 4. Complexity

- Multiple disciplines.

## 5. Configuration

- How these different disciplines work together.

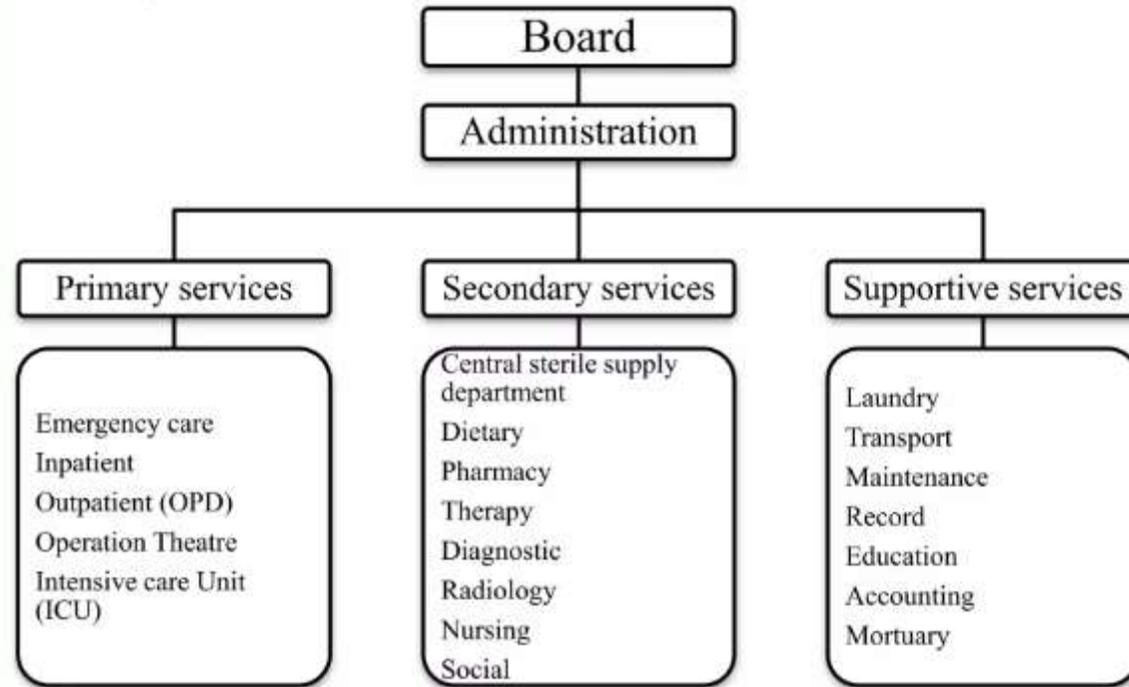
# ORGANISATION OF A HOSPITAL

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- A formal system of interaction and coordination that links the tasks of individuals and groups to help achieve organizational goals.
  
- **Purpose:**
  - ✓ Channel information to managers.
  - ✓ Distribution of Authority.
  - ✓ Interrelationship among different units.

# ORGANISATION OF A HOSPITAL

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# ORGANISATION OF A HOSPITAL

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## Key points:

- Hospital organization base on the following principles:
  1. Team co-ordination: an individual supervises a professional team of medical/paramedical staff.
  2. Division of services: hospital undertakes a variety of activities-diagnosis, observational, treatment, rehabilitation or prevention.
  3. Homogenous approach: hospitals can cater to the needs of both ambulatory and bed patients.
  4. Evaluation of services: the services provided are rated in terms of quality and adequacy.

# ORGANISATION OF A HOSPITAL

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5. Administrative responsibility: responsibilities pertaining to management and professional duties are to be assigned properly.
6. Budget preparation and financing: there should be a budgeting and planned program for capital financing.
7. Talent search : a hospital should be staffed by competent medical experts and non-medical staff and for attaining this objective, the best talents available should be recruited.
8. Governing body: each hospital has a top management which directs its course of action, provides policy guidelines and exercises overall supervision.

# ORGANISATION OF A HOSPITAL

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- The management/governing Body/ corporation: the legal status of a hospital is maintained by a society, or trust, or company named as board of trustees/ board of governors/ board of directors.
- Their chief objectives are as follows:
  - responsible for functioning of hospital to provide high quality of patient care.
  - maintain a standard of all the available facilities.
  - remove all possible ambiguities and confusions.

# ORGANISATION OF A HOSPITAL

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➤ Their chief duties are as follows:

- adopt by laws in accordance with legal requirements and its responsibility to community.
- provide a procedure for selection of employees.
- adopt schedule of meetings and define attendance requirements and methods for documenting governing body proceedings.
- requires that medical staff establishes mechanisms designed to assure achievement and maintenance of high standards.
- shall appoint a chief executive officer whose qualifications, responsibilities, authority and accountability shall be defined in writing.
- provide institutional planning to meet the health needs of the community.

# ORGANISATION OF A HOSPITAL

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- The management/governing Body/ corporation is responsible for constituting various committees such as:
  - ✓ Executive committee:
    - takes decision to form committees and task committees.
    - they can act autocratically in emergencies.
  - ✓ Joint conference committee:
    - it is a combination of the representatives of the board and clinical services with the administrator as its secretary.
    - it is a liaison committee.
  - ✓ Professional committee:
    - it is made of selected board members who study and make recommendations on all dimensions.
    - the primary aim of this committee is to upgrade the quality of healthcare.

# ORGANISATION OF A HOSPITAL

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## ✓ Finance committee:

- it is constituted to review the budget planning, financial statements and related problems.
- the financial resource of a hospital exerts influence on every patient, employees, trustees and the people who avail the service of the hospital.
- the sources from which the income may be derived for the hospital are:
  - 1) charges received from the patient (either paid by himself or by third party coverage such as insurance scheme) against the hospital bills for the services rendered by the hospital to the patient.
  - 2) incomes derived from central government such as in government hospitals.
  - 3) incomes derived from investment funds.
  - 4) incomes received from research projects.

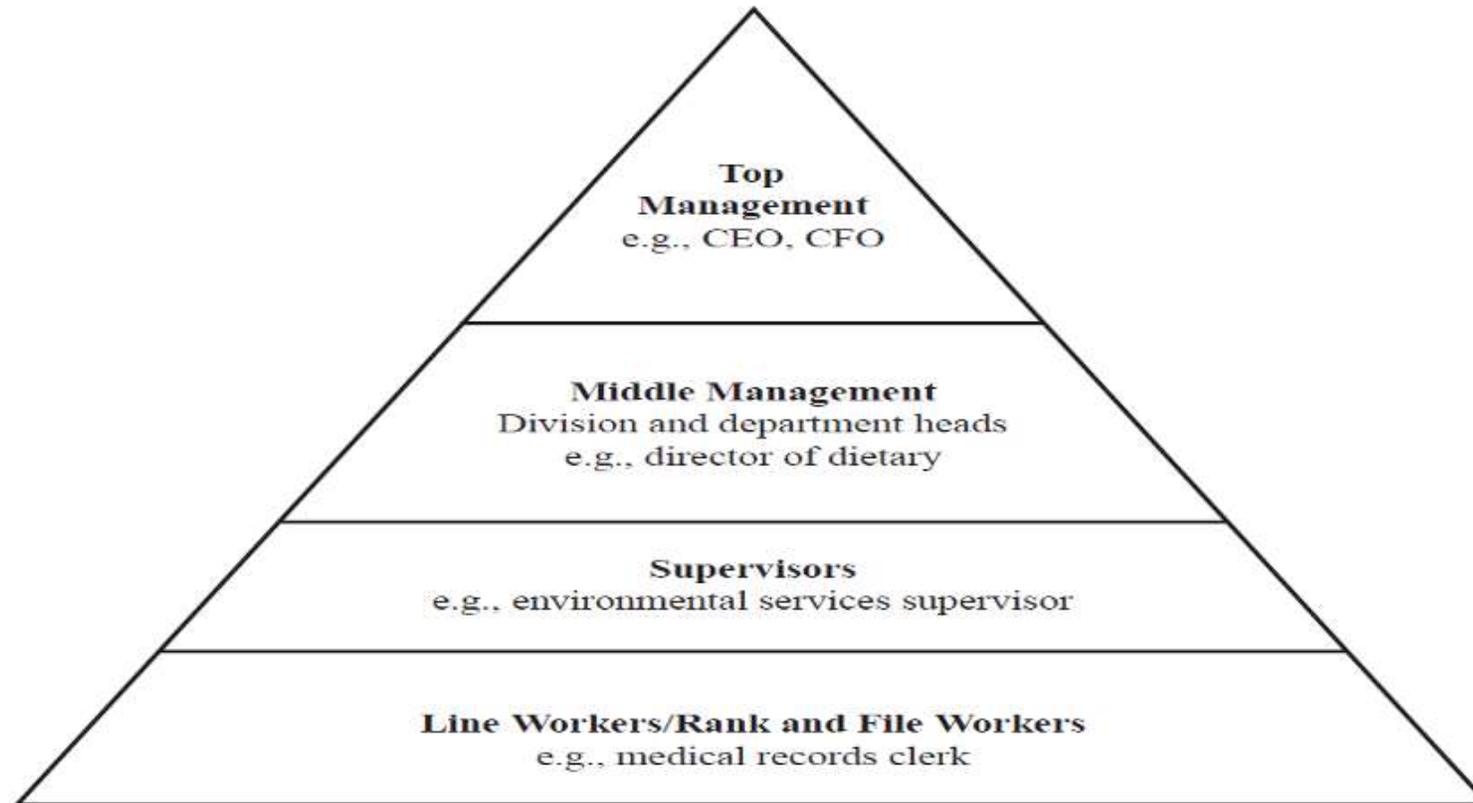
# ADMINISTRATION

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- The administrator is selected by the board to run the hospital.
- The administrator is a link between the board and the clinical services and between the board and all other employees.
- The chief functions of the administrator includes:
  - the administrator is privileged to attend the meetings of the governing body and medical staff.
  - the administrator frames the overall administrative policies.
  - the administrator is empowered to modify the internal organisation of the hospital.
  - the administrator prepares a budget based on the approval of the governing body.
  - the administrator ensures compliance of all the legal formalities.

# ORGANISATION OF A HOSPITAL

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# HUMAN RESOURCE DEPARTMENT

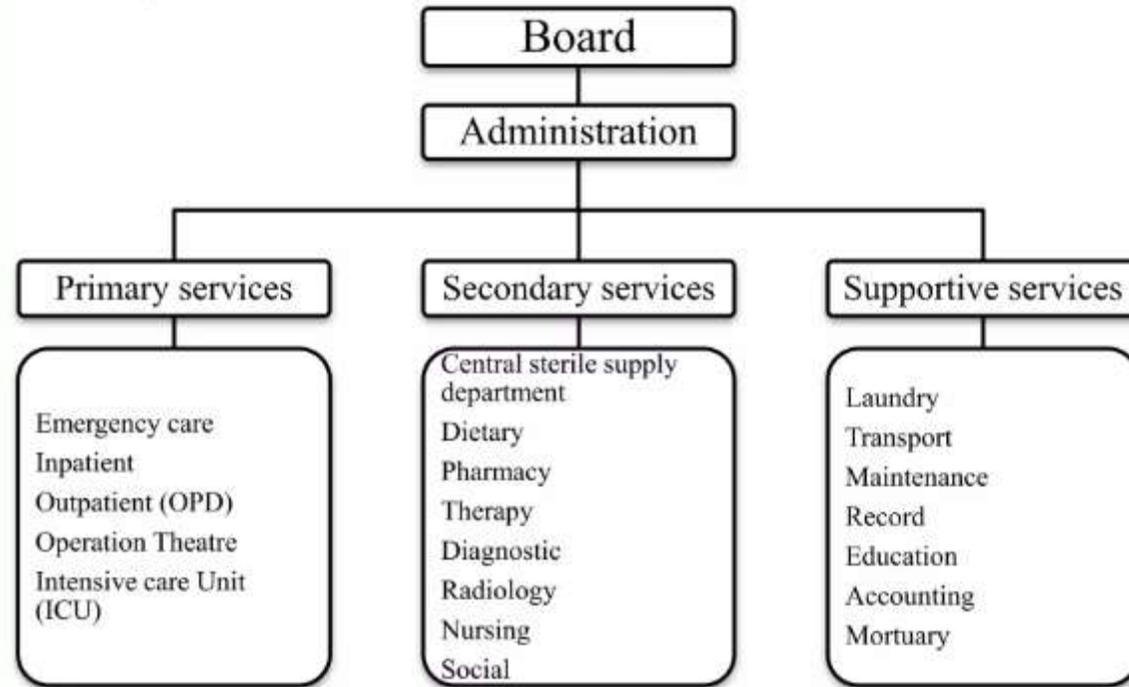
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This department is responsible for managing the human resources of the hospital, which includes services such as:

- recruitment of new staffs for the hospital.
- addressing the grievances of the staff.
- arranging training facilities.

# ORGANISATION OF A HOSPITAL

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# CLINICAL DEPARTMENTS

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➤ General medicine services:

- general diagnosis.
- general medical and nursing care.
- psychiatry, cardiology, neurology, pulmonology, blood bank, urology, endocrinology, gynecology, orthopedics, immunology, gastroenterology, nephrology.

➤ Surgical departments:

- Surgical services includes general surgery, neurosurgery, cardiovascular and thoracic surgery, ophthalmic surgery, orthopedic surgery, plastic surgery.

# PHARMACEUTICAL SERVICES DIVISION

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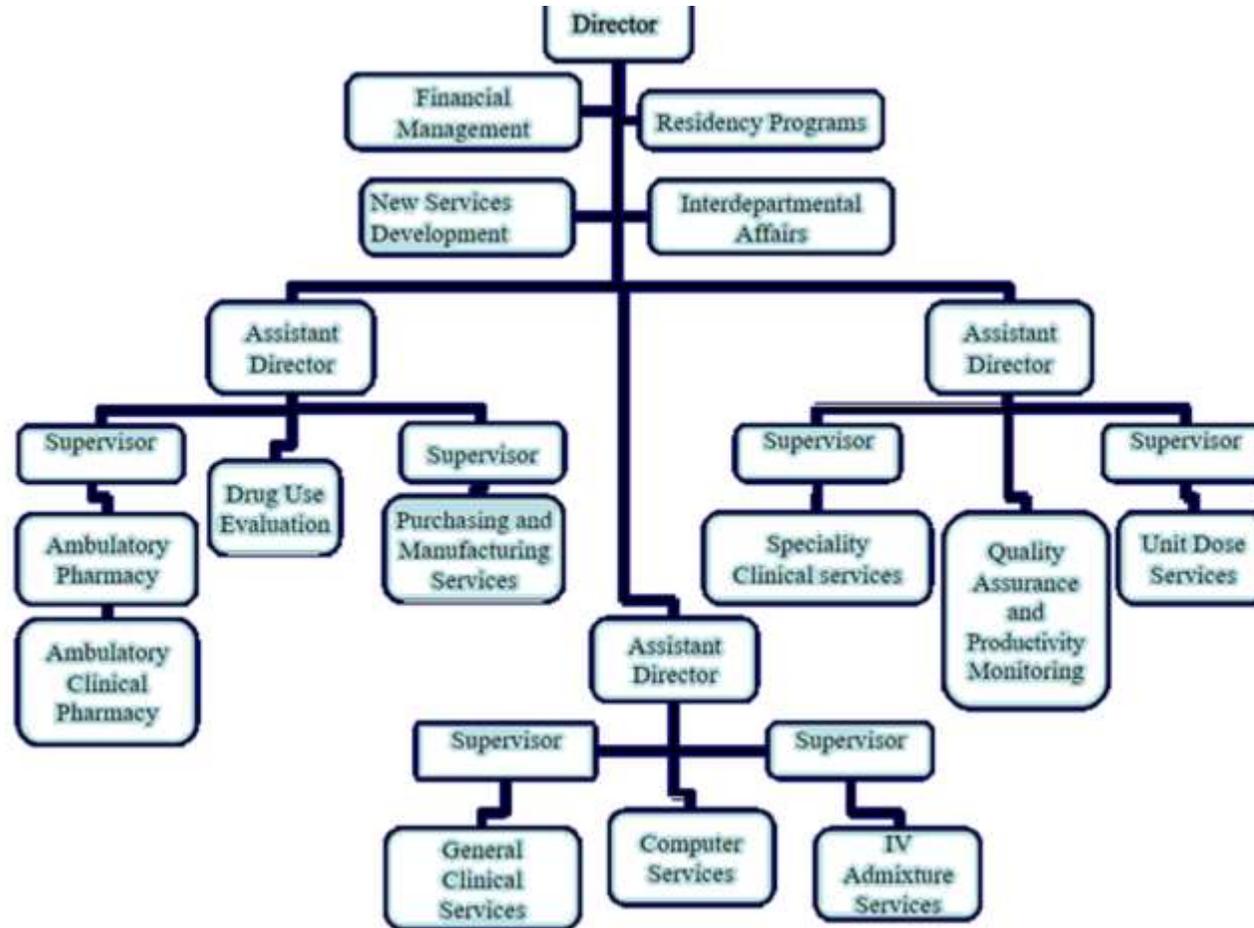
- Providing and managing all aspects of drug use product and clinical pharmaceutical services:
  - to provide optimal drug therapy for all patients.
  - to ensure the highest quality and most cost-effective care.
  - the expansion of clinical pharmacy services to improve drug therapy.
- Organizational structure of the dept. of pharmaceutical services:
  1. Director of pharmaceutical services:
    - responsible for all pharmaceutical services delivered in the institution - Including dept. staff, faculty members, and other healthcare professional such as nurses in the absence of a pharmacist.

# PHARMACEUTICAL SERVICES DIVISION

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- responsible for developing policies and procedures.
  - responsible for the implementation of the practice standard.
  - manage the services that include the preparation of drugs, the provision of clinical services, teaching and research.
2. Pharmacy managers:
- the size and nature of department's management depend on the number of personnel and the scope of services.
  - represent the second level of management.
3. Director/ director assistant/ supervisors:
- the third level of management is the supervisors.

# PHARMACEUTICAL SERVICES DIVISION



# PHARMACEUTICAL SERVICES DIVISION

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- Personnel in a dept. of pharmaceutical services Professional:
  1. Pharmacist: general, clinical, specialist, resident.
  2. Technical: pharmacy technicians.
  3. Support: IT, secretaries, buyers, clerks.

# PHARMACEUTICAL SERVICES DIVISION

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- Scope of pharmaceutical services provided in institutions Pharm. Services offered in hospital may be categorized as:
  - Product.
  - Clinical.
  - Teaching.
  - Research.
  - Hospitalized patients.
  - Ambulatory patients.

# NURSING SERVICES DIVISION

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➤ Nursing Services , help the managers to:

1. Maximum comfort and happiness by way of pleasant surroundings.
2. Qualitative/comprehensive care to the patient.
3. Care based on the patient's needs.
4. Accurate assessment of illness.
5. Adequate material resources at all times.
6. Health education to the patient and attendants.
7. Managerial skills as and when required.
8. Privacy at all levels.

# DIETETIC SERVICES DIVISION

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- A specialized team of certified dietitians ensures that each patient receives the appropriate diet according to his/ her medical conditions and following the treating physician's recommendations.
- A specialized team of certified dietitians works closely with an expert chef and the kitchen staff to prepare fresh daily meals for each patient.
- The team follows the recommended instructions by the treating physicians with various choices presented to the patients. They also follow up on any comments or changes requested by the physicians or the patient to ensure the highest medical benefit and patient satisfaction.

# PATHOLOGY, BLOOD BANK AND RADIOLOGY SERVICES DIVISIONS

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## ➤ Pathology and clinical biochemistry services:

- medical testing of various samples of blood, urine, sputum, feces etc. for the presence of pathogenic infection or abnormalities in biochemical parameters such as blood glucose, urea, creatinine etc. are carried out.
- these departments works under qualified pathologists and biochemist who are assisted by several medical technologists and technologies.

## ➤ Blood donation and transfusion.

## ➤ Radiology:

- consists of radiologists, radiotherapist, technicians, isotope pharmacists and nurses.
- primarily meant for radio-diagnostic and radiotherapy services.

# DRUG INFORMATION CENTER

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- Information is regarded as a powerful tool in decision making management.
- Drug information system is often regarded as an integral part of pharmaceutical care which has to be managed by a pharmacist as one of his/her roles or functions as a member of the healthcare team.
- Drug information: is the provision of written and/ oral information, or advice about medicines, and pharmacotherapy, in response to a request from other healthcare providers, organization committees and consumers. This may consist of general information promoting the safe and effective use of medicines.

# DRUG INFORMATION CENTER

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➤ Drug information activities:

- Information retrieval using appropriate sources.
- Critical review, analysis and interpretation of the literature.
- Effective provision of verbal and written information to the public, patients and healthcare practitioners.
- Drug policy management e.g. drug selection, formulary management and drug use evaluation (DUE).
- Adverse event management e.g. detection, evaluation and reporting of adverse drug reactions. Drug product problems and medication errors.

# DRUG INFORMATION CENTER

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## Information required by healthcare professionals include

- Drug Choice: This includes teratogenicity in pregnancy or lactating mothers.
- Dose of a particular drug.
- Dosing intervals.
- Route of administration.
- Adverse drug reactions.
- Drug-drug interactions.
- Drug-disease interactions.
- Drug-food interactions.
- Duration of therapy.
- Formulation.
- Drug storage.
- Cost.

## Information requested by patients

This group of people often required information relating to either over the counter (OTC) or prescribed drugs in the following areas

- What the drug is for and its work?
- How much to take?
- When to take?
- Length of time until treatment begins to work and expected duration of therapy.
- Side effects.
- Over the counter drugs to avoid.
- Storage.

# DRUG INFORMATION CENTER

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- A drug information Centre is a service unit operated by trained healthcare professionals, who are committed to providing drug information as it relates to therapies, Pharmacoeconomics, education and research programs.
- A drug information centre should provide information proactively as well as respond to queries.
- The centre is expected to have trained staff with access to both texts and computers.
- The activities of the centre should include sending staff out to provide information and developing, producing and disseminating drug bulletins based on modern communication principles and teaching.
- Location: drug information centre can be established in an accessible hospital or university department or any other designated centre in a country.

# POISON CONTROL CENTER

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- Poison control centre is a facility that provides immediate, free, and expert treatment advice and assistance in case of exposure to poisonous or hazardous substances.
- Poison control centre answer questions about potential poisons in addition to providing treatment management advice about household products, medicines, pesticides, plants, bites and stings, food poisoning, and fumes.
- More than 72% of poison exposure cases are managed simply by phone, greatly reducing the need for costly emergency room and doctor visits.
- Resources: Micromedex's poisindex, Clinical Toxicology Of Commercial Products by Gosselin, Smith, and Hodge, internal protocols, journals, medical literatures

# POISON CONTROL CENTER

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## Poison information specialists

- They directly interact with the public and health care professionals.
- Poison information specialists must be both clinicians and counsellors. They must elicit a complete history, correctly assess the potential severity of exposure using the most appropriate management plan to the caller.
- In addition, poison information specialists must be able to focus callers who are unable to give cohesive history.
- Specialists should be able to communicate in a calm , reassuring manner at all levels of education.
- Both nurses and pharmacists are suitable poison information specialists.

# EDUCATION AND RESEARCH

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- Hospitals are the best centres for initiating educational programs for doctors, nurses, pharmacists, laboratory technicians, dieticians and other health care professionals.
- Hospitals are involved in conducting in-service training and residency programs for the health care professionals.
- Many courses like medical, dental, nursing, pharmacy, radiology, laboratory technology, physiotherapy etc. are being conducted in hospitals.
- Hospitals are the best suited centres to carry on research activities on health-related issues and subjects.
- Research is essential to control the new diseases and to develop newer techniques and methodologies in the treatment.
- Research will help to improve the services of the hospital.

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# Thank you

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