Part 3
Chapter 8: Planning indivisible services and departments
Out Door Patient services is defined as a part of hospital, with the physical facilities and medical services staff.

All patients get their impression of the hospital from out patient department.

The OPD is first point of contact of patient.
Different factors to be considered in OPD Planning

- Projected demand for out patient
- Types of patient’s in OPD
- Units of services rendered in OPD
Different factors to be considered in OPD Planning

- Services times required for OPD care
- Daily and hourly capacity envisaged
- Holding and lifting capacity of OPD
Types of patient’s visiting in OPD

- Emergencies and accident cases
- Referred patients
- Un Referred patients
Units of services rendered in OPD

- Units of service is a measurable part of volume of service, which may be diagnostic like blood, urine test.
- This is an important aspect from planning perspective.
- For example: amount of space required in "Well baby clinic"
Services time require in OPD care

Service time to time taken by physician, to diagnose patient’s illness and instructions given by him or her explaining the way to take medication and other precaution, related to his illness.

For example: if a Physician/doctor takes 15 minutes to complete examine a patient, maximum 4 patients can be examined in one hour.

One can schedule appointments accordingly.
Room Hour: means the number of doctor’s examination and consulting rooms available multiplied by the number of scheduled clinic hours.
Daily and hourly capacity envisaged (room hour)

- Average service time can be calculated in minutes
- For example in one hour 5 patients visit any physician’s cubical in one hour, then physician’s cubical is occupied by 12 minutes /patient
Holding and lifting capacity of an OPD

- At any one time, the OPD will have certain patients but accompanied by more number of relatives and friends.

- The size of OPD depends upon
  - Land available
  - Location of hospital
Stairways

- There should be two stairways leading from top to ground floor, which exist in separate areas of building
- Hospital lift: Minimum two elevators are required for any hospital between 150-200 bedded
- Safety devices such as dual control, self locking procedures, telephone alarm
Planning

- It depends upon the no of beds
- Category A 25-50 bedded, and B 51-100 OPD may be located on ground floor
- Category C, D and E may be distributed to two or more floors or locations
OPD Services

Location of OPD

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Planning the different physical facilities of OPD

- They are considered under four groups of areas
  - Public
  - Clinical
  - Administrative
  - Circulation
Planning the different physical facilities of OPD

Public areas of OPD

They are further divided into following areas
- Traffic
- Main entrance
- Reception and information
- Registration and records
Planning the different physical facilities of OPD

Non Clinical areas of OPD
- Entrance hall
- Waiting area
- Public toilet
- Snack bar
Planning the different physical facilities of OPD

Construction room of OPD

- The cubical should provide accommodation to doctors chair, patients examination bed, and equipment for examination
- Cubical should be around 160Sqft
- On average each cubical should be able to handle 100 cases per day
Planning the different physical facilities of OPD

Special examination room in OPD

- Certain departments like Medicine, Eye, Orthopedics need separate room for checking
- Average cubical should be around 120-160Sqft according to need
Planning the different physical facilities of OPD

Treatment area in OPD

- Treatment/Dressing room
- 10 to 20% patients require injection
Planning the different physical facilities of OPD

Treatment area in OPD

- 30 to 40% patients require lab tests and X rays
Planning the different physical facilities of OPD

Treatment area in OPD

- 5 to 10% patients require dressing and other treatments
Planning the different physical facilities of OPD

Treatment area in OPD
- Dental clinic
Planning the different physical facilities of OPD

Treatment area in OPD
Surgical Clinic
Planning the different physical facilities of OPD

Clinical areas in OPD

Medical
- Surgical
- Orthopedics

Eye
- ENT
- Dental

Gynaecological
- Pediatric
- Skin
Planning the different physical facilities of OPD

Non Clinical areas in OPD

Ancillary facilities
- Injection
- Pharmacy

Auxiliary facilities
- Laboratory
- Blood bank

Health Education
- Social service
- Preventive medicine
Planning the different physical facilities of OPD

Solutions for effective functioning

- Within OPD, physical facilities should be placed such that smooth flow of operations and easy quick intercommunication is maintained.
- Services common to both patient and doctor should be readily and easy accessible from OPD.
Planning for hospital emergency services

Hospital reception and help desk

- Reception and enquiry counter can be in combined form for small hospital, but for 100 bed or more, it must be separate

- Registration counter
  - Separate counter for old and new cases
  - Ask to take token no
  - Patients directed to respective OPD
Planning for space allocation and location for casualty

Casualty Space

- As a thumb rule for daily 100 patients load casualty space of 100 square meters is required
- Located on the ground floor
- Separate entrance
- Direct access from main road
Planning for physical facilities

Casualty waiting area
- Reception and waiting area
- Help desk/information desk
- Separate toilet for men and women
- A public telephone
Planning according to different function of hospital causality

Cubical in Casualty
- Examination of Cubical
- Treatment Cubical
- Operation Theater
- Observation Cubical
Planning according to different function of hospital causality

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Hospital ambulance service

Specification of an Ambulance

- 116 inches in length
- 69 inches in height
- 25 inches unobstructed area of head end
- 15 inches unobstructed area of foot end
- 12 inches of clear aisle space to allow patient care
In-patient Hospital services

- A hospital in patient service may be reflected as section, unit or even a floor of hospital, where patients are admitted according to their:
  - Need
  - Diseases
  - According to ages
Planning in patient services

Classification In-patient Hospital services

- General ward
- Specialty ward
- Recovery
- Intensive care
Planning in patient services

Classification of ward accommodation

- Sanitary
  - Toilet block
  - Dirty utility
  - House keeper
Planning in patient services

Classification of ward accommodation

- Auxiliary
  - Ward panty
  - Day room
  - Conference room
  - Stretcher trolley
Planning in patient services

Classification of ward accommodation

- Primary
  - Bed accommodation
  - Nursing Station
  - Treatment
Planning in patient services

Classification of ward accommodation

- Auxiliary
  - Doctors room
  - Nurses room
  - Stores
  - Clean utility
Nightingale Ward
L shaped ward
Circular ward
Square shape ward

Diagram showing a nursing station and a bed.
Ward Areas sharing relationship

WARD

*Staff base*

Nursing working areas

May include:
- clean utility room
- treatment room
- special procedures room

Staff base

Ancillary accommodation may include:
- pantry
- toilets
- safai closets
- day areas
- dirty utility rooms

Can be shared by two wards

May serve several wards on another floor

Shared accommodation may include:
- reception
- waiting
- attendant
- overnight staff
- staff office
- seminar room
- supplies
Planning for different parameter of ward design

- Ceiling height
- Width of corridors
- Windows
- Doors
Planning for different parameter of ward design

- Dado
- Noise reduction
- Ward ventilation
- Lighting
Planning for different parameter of ward design

- Sanitary facilities
  - Wcs and bath room
  - Wash basin
  - Dirty utility room
  - Janitor’s room
  - Water and electricity supply
Planning for different parameter of ward design

- Ancillary accommodation with ward
- Bed side lockers and build in cupboard
- Locker room for staff
- Wheel chair/trolley
Planning for different parameter of ward design

- Duty doctors room
- Nursing station
- Treatment room
- Ward pantry
Nursing Services

- Patient Care
  - Welcome patient
  - Preparation of bed
  - Care at time of discharge
Nursing Services

- Staffing Norms of nurses
- For critical case (ICU, CCU, NICU) 1 nurse per bed
- High dependency ward
- Low dependency ward
- OT
- Delivery suit
**Types of Nursing Services**

- Bed nursing
- Bed path, mouth care, sponging
- Collection of pathological specimen like blood, urine etc
- Testing blood test such as glucometer
Types of Nursing Services

- Generalized nursing
- Wound care, suction, oxygen therapy
Types of Nursing Services

- Specialized nursing
- Pediatrics nursing
- Infection control
- Maternity
- Cardiac
Role and functions

- Critical care has been defined as the provision of sophisticated life support system, with appropriate life support system
- The aim to support life in crisis, prevent life threatening conditions
ICU size

- The number of beds in an ICU is variable from hospital to hospital.
- The 1968 report of study had recommended that 10% of beds should be kept as emergency cases.
- Because ICU services are expensive, no hospital can afford to have excess beds.
Types of ICU unit
Depends upon types of patients admitted, intensive care unit can be classified as
- MICU-Medical
- SICU-Surgical
- IICU-Coronary
- BICU-Burns
- PICU-Pediatric
Design and layout of ICU unit

- The ICU unit is preferably located on ground floor with convenient access from Operation theater.
Design and layout of ICU unit

- The design of ICU should take into considerations the integration and smooth functioning of three areas:
  - The patient area
  - The staff
  - Support
Design and layout of ICU unit

- The design of ICU unit should meet following basic requirements
- Direct observation of patients by nursing and medical staff
Intensive Care Services

Design and layout of ICU unit
- Surveillance of physiological monitoring
- Provision and efficient use of routine and emergency
- Recording and maintenance of patient information
Design and layout of ICU unit

- The essential planning features is a fully observable bed area with adequate space for positioning of equipment.
- Each patient can be accommodated in a series of partitioned rooms or in a cubical separated by curtains.
Design and layout of ICU unit

- There should be minimum distance of 8 feet
- The bed must have oxygen outlet
Central Nursing Station

- The Central Nursing Station should be located so as to allow an unobstructed view of each patient.
- Bed should be such that the patient can see the nurse bit but not other patient.
Monitoring Equipment

- ECG Recorder
- Intravascular pressure monitoring device

- Pulse Oxi meters
- Spiro meters and peak flow meter

- ECG monitor
- Temperature monitor
Cardio Vascular Therapy

- CPR Trolley
- Defibrillators
- Pacemakers
- Infusion pumps
Respiratory Therapy

- Ventilators
- Oxygen Therapy devices
- Ambu bag
- Nebukisers
Equipment for a tertiary unit

- Dialysis equipment
- Radio graphical equipment
- Laboratory equipment
- Miscellaneous equipment
Medical Staff

- ICU in charge
- Senior resident
- Junior resident
- Nursing staff
- Auxiliary personnel
Ancillary and support staff

- Air Conditioning
- Lighting and Electrification
- Diagnostic support
- Equipment maintenance
- Standby generator
- Visitor lounge
The policies and procedures should cover following aspects

- **Types of patients admitted**
  - Refusal of admission
  - Admission procedure

- **Arrangement if bed not available**
  - Responsibility of the admitting unit
  - Daily rounds of consultant

- **Daily rounds of in charge**
  - Daily rounds of officer ICU
  - Documentation of patients
The policies and procedures should cover following aspects:

- **Discharge of patient**
  - Length of stay
  - Withdrawal of life support

- **Equipment maintenance**
  - Turnover of nurses
  - Staff Complaints

- **Patient Complaints**
  - Visitors time
  - Infection Control
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Types of patient's visiting in OPD:
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- Referred patients
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Summary

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Summary

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- The number of beds in an ICU is variable from hospital to hospital.
- The Central Nursing Station should be located so as to allow an unobstructed view of each patient.
End of Chapter 8

Thank You