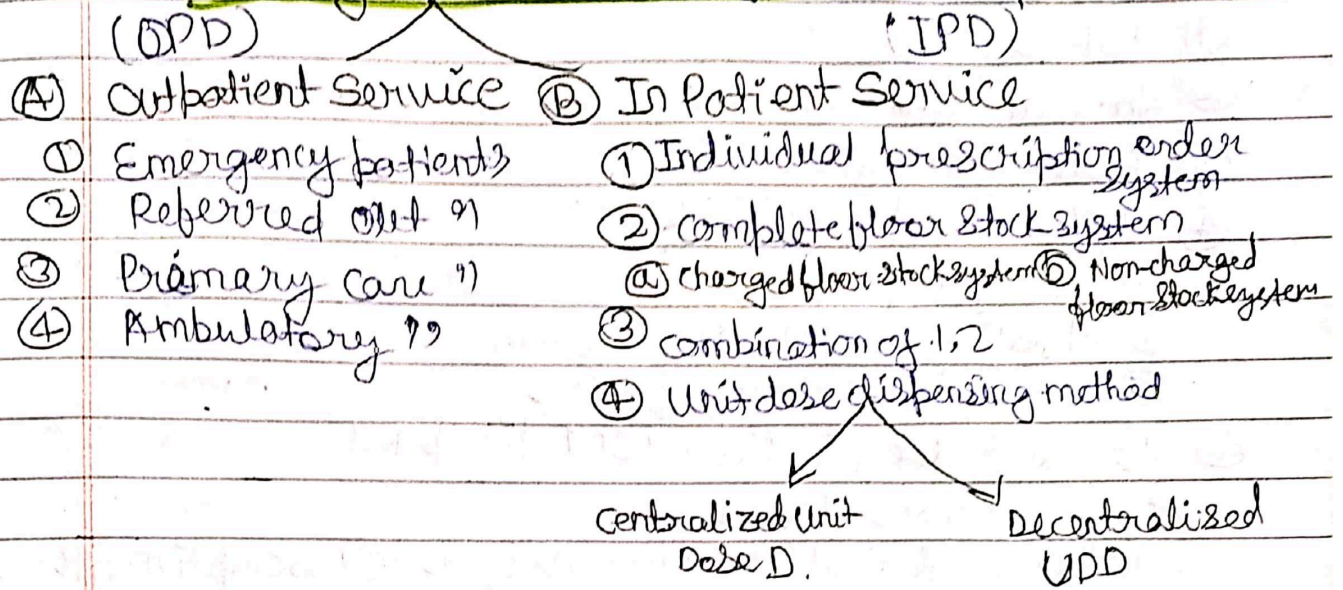


UNIT-II

Drug Distribution System in Hospital-



Hospital Formulary:

Objectives →

- (1) Information Drug Product
- (2) Information of Hospital Policies
- (3) Special information

(A) Entries in Formulary

- Generic name
- Common name
- Dosage form strength
- Packaging
- Formulation
- Adult & Pediatric dose
- Route of administration
- Cost

(B) Indexes

- Generic/brand name
- Therapeutic Pharmacological Index.

Contents of Hospital formulary →

- ① Title page
- ② Name and title of PTC members
- ③ Table of contents
- ④ Info on Hospital policies
 - Ⓐ PTC of Hospital
 - Ⓑ objectives of formulary system
 - Ⓒ Hospital pharmacy services
- ⑤ Product accepted for use in hospital -
 - Ⓐ Generic/Brand name
 - Ⓑ Pharmacological index with cost codes
 - Ⓒ Description of the drug
- ⑥ Appendix -
 - Central equipment list
 - guidelines for calculating pediatric dose
 - schedule for standard drug administration

Purpose of TDM →

- # To confirm 'effective' conc.
- # To investigate unexpected lack of efficiency
- # To check compliance
- # To avoid or anticipate toxic conc.
- # Before increasing to unusually large
- # Limited side - in toxicology - drug screen

TDM

- Is defined as the use of drugs conc. in the body fluids as an aid to management of patients receiving drug therapy for the cure, alleviation or prevention of disease

20 therapeutic drugs which are routinely

- #
- Antihypertensive
 - Antidiabetic
 - Anticoagulant

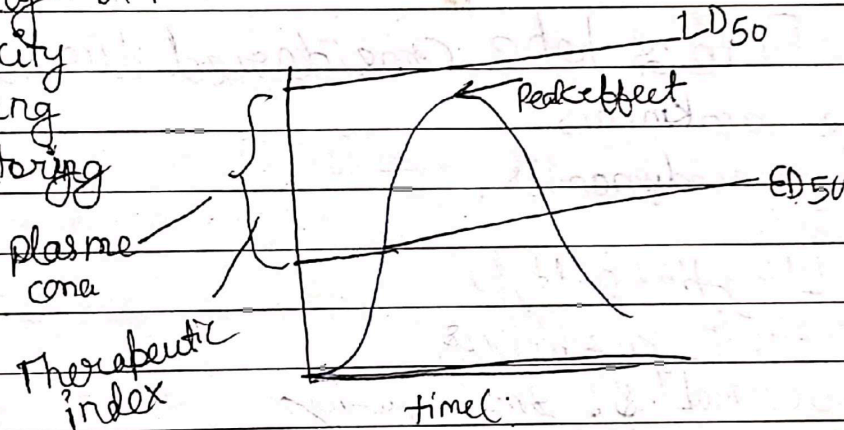
(TDM are not done)

- ① Effect not monitorable
- ② Narrow therapeutic index
- ③ Inconsistent Plasma

- TDM is a measurement of specific drug at time intervals to maintain a relative constant conc. of medicine in the blood.
- Goal - to individualize regimens for optimal patient benefit

Need of TDM →

- ① Toxicity
- ② Dosing
- ③ Monitoring



Drugs required for TDM

objective →

- ① Anti-epileptic
- ② Anti-arrhythmia
- ③
- ④
- ⑤
- ⑥
- ⑦

• To attain

How to perform TDM

- ① Sample collection
- ② Analysis - HPLC, GLC, TLC, GC mass spectroscopy, Radioassay
- ③ Interpretation of Result -

T.D.M. In India → (Issues)

- ① Alternative system of medicine
- ② Tropical disease, nutritional deficiency
- ③ Poor O.C and drug assay
- ④ Lack of training & skills
- ⑤ Lack of funding

Factors to be considered during the TDM

- ① Pharmacokinetics
- ② Pharmacodynamics
- ③ Dose
- ④ Sampling time and type
- ⑤ Genetic polymorphisms
- ⑥ Other variables: smoking drug
- ⑦ Testing methodology

Pharmacokinetic factors of TDM

- ① Bioavailability
- ② Vol^m of distⁿ and distⁿ
- ③ Clearance
- ④ half-life
- ⑤ Protein binding of drugs.

Hospital Formulary

- The hospital formulary is a list of pharmaceutical agents with its important information's which reflects the current clinical views of the medical staff.
- The hospital formulary is defined as a list of drugs in the hospital.

Origin

- The first scientific hospital formulary in India was published in 1968 by the pharmacy department of CMC Vellore
- The first HF for a govt. teaching hospital in India was published in 1974 at Govt. Medical College Hospital, Trivandrum

Objectives of HF

- Enable rational prescribing of drug in specific situation
- Drug product listing
- To help in finance and administration i.e. cost and management problem
- To provide basic therapeutic info
- To provide information on hospital policies governing use of drugs
- To provide special info about drugs.

Need for HF

- Rising no. of new drugs manufactured and marketed by drug companies.
- Rising influence of add on drugs which includes scientific and unscientific, ethical and unethical.
- The increasing complexity of untoward effects of modern potent drugs newer sales
- The public interests getting possible.

Advantages of HF

- ① Therapeutic
- ② Economic
- ③ Educational

Organization of HF →

- ① Hospital policies and procedures concerning drugs.
- ② Drug products listing
- ③ Special information
 - Alphabet
 - Alphabetically with therapeutic uses
 - Drug use
 - Description of PTC
 - Hospital regulations about prescribing & dispensing
 - Pharmacy record
 - Information on drug families

#. Formulary → A formulary consists of lists of drugs by their generic names followed by information on strength, form, posol.

- It is prepared locally by its own clinical staff.
- Information provided is subject to local needs and desires.

Drug List →

- #. Where as drug list consist of agents with generic name followed by data on strength and form only.
- #. It is prepared by country's outstanding clinicians, pharmacists and pharmacists.
- #. A/c to their pharmacological properties Formula.

Guideline Principles for Addition or Deletion of Drugs in HF →

- Whether medical staff considers drug to be proved clinical values based on their experience with it.
- Drugs must be recognized by pharmacopoeias and formulary approved under drug and C act 1940.
- The manufacturer of drugs should have licensed under drug and cosmetics act 1940 and should not be punished for any serious offence.
- A drug or products having secreted composition are not admitted in formulary.
- Some hospitals develop policy that no preparation of multiple compositions maybe admitted.

Medical Adherence → It is defined as the exact or extent to which a patient medication taking behaviour conforms with the intention of the health advice he/she.

Benefits of MA

- Enhances patient safety
- Reduces health care costs
- Improves long term therapies
- Good investment for tackling chronic conditions

Medication Non-Adherence →

- ① Intentional medication non-adherence - Active process whereby the patient chooses to deviate from the treatment regimen.
- ② Unintentional medication non-adherence - Passive process in which the patient may be careless or forgetful about adhering to treatment.

Causes of Medication Non-Adherence →

- ① omitting a dose or doses
- ② Prematurely discontinuing medication
- ③ Taking doses at the wrong time
- ④ taking medication with prohibited food
- ⑤ Increased hospital readmission
- ⑥ Poor disease progression
- ⑦ Poor health care tools
- ⑧ Poor quality of life
- Patient death

Measurement of Patient Medication Adherence →

- ① Medication Event Monitoring Systems (MEMS)
- ② Morisky's Medication Adherence Scale (MMAS)