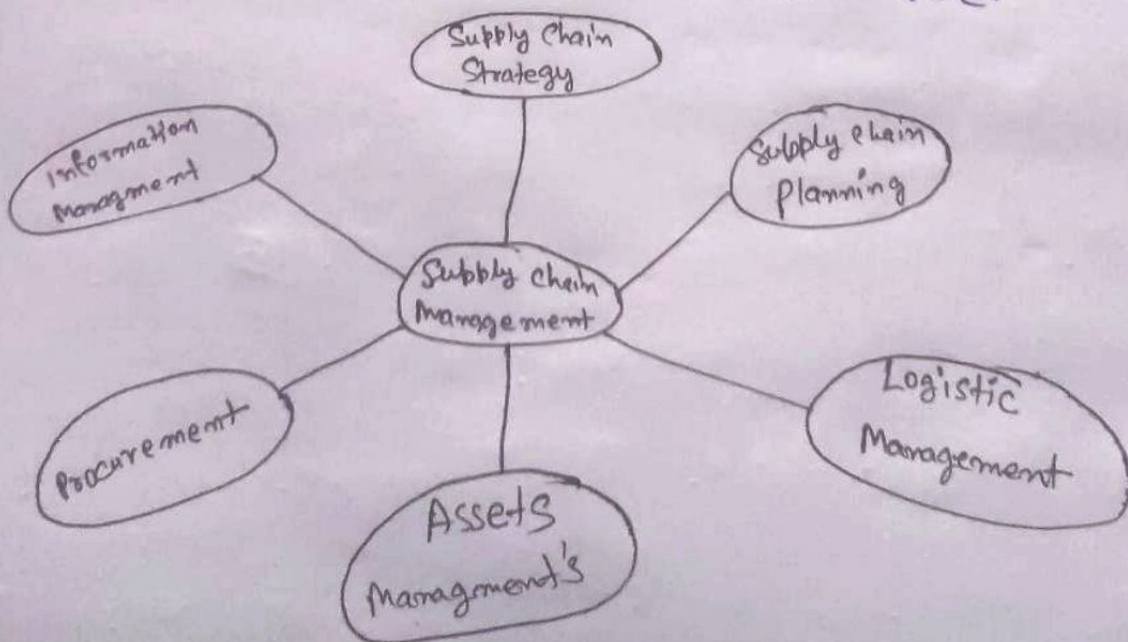


Supply chain and inventory Control

⇒ Health Care organizations all over the world are looking for ways to improve working efficiencies and reduce budget's without affecting patient's care and facilities. A Supply Chain comprises of all stages associated with satisfying customer demand. A supply chain includes Supplier, transporter's, warehouses, retailer and customer.

Definition: Supply Chain is the activities required by the organization to deliver goods or services to the consumer or a supply chain contains a series of steps involved to get a service or product to the end user.



⇒ The main steps of effective management of medicines supply are: -

- 01) Preparation of drug list.
- 02) procedure for drug purchases (procurement), storage, - dispensing.
- 03) Inventory Control techniques.
- 04) Inventory Management

High Risk medicine or High Alert Medication:

- ⇒ A high-alert medication is a drug that has a high risk of causing harm to patients when misused.
- ⇒ Although any medication used improperly can cause harm more commonly and the harm, they produce is likely to be more serious and leads to patient suffering and additional costs associated with care of these patients.

List of high alert / risk medication:

- 01) adrenaline 1mg/ml inj.
- 02) Cobra antivenom inj.
- 03) Dextrose 30% inj.
- 04) Dextrose 50% inj.
- 05) Digoxin 0.5mg/2ml inj.

06) Dobutamine 250mg/20ml inj.

07) Dopamine 200mg/5ml inj.

08) Heparin 5000 unit/ml inj.

09) Actrapid 1000 unit/10ml inj.

10) Midazolam 5mg/ml inj.

11) Morphine 10mg/ml inj.

12) Noradrenaline 5mg/5ml inj.

Top 5 high risk medication:

1) Insulin: Hypoglycemia is the most common complication of any insulin therapy.

Factors Contributing to harm.

⇒ Complexity of dosing frequent monitoring, pharmacokinetics differs based on insulin type

⇒ Many insulin products available (look alike - sound alike names)

⇒ Lack of dose check system.

⇒ Incorrect rates being programmed into an infusion pump.

⇒ 2) Opiate and Narcotics:

Factors Contribution harm:

- ⇒ Calculation error
- ⇒ IV to PO Conversion error
- ⇒ Error Converting potency when changing from -
- one narcotic to another,
- ⇒ Many dosages forms.
- ⇒ Parenteral narcotics stored in nursing area
as floor stock.
- ⇒ Confusion between hydromorphone and Morphine.
- ⇒ Patient Controlled analgesia error regarding -
- Concentration and rate.
- ⇒ Adverse effect:
- ⇒ Respiratory depression ⇒ Lethargy
- ⇒ Confusion

3) Injectable Potassium Chloride or phosphate

Risk Factor:

- ⇒ Storing Concentrated Potassium Chloride/phosphate
outside of the pharmacy. Request for usual -
- Concentration.

Advers effect: - muscular or Respiratory paralysis, Mental -
- confusion.

⇒

4) injectable anti-coagulant:

Common risk factor

- ⇒ Narrow therapeutic range
- ⇒ Complex dosing
- ⇒ Patient Compliance
- ⇒ Many interaction
- ⇒ Other prescription medication
- ⇒ Herbal product
- ⇒ Food.

5) Sodium chloride Solution above 0.9%.

Common risk factor

- ⇒ Storing Sodium chloride Solution in nursing unit. (above 0.9%)
- ⇒ Large number of concentration/Formulation available.
- ⇒ No double check system in place.

Strategies to avoid errors involving high risk medication.

Storage: All high medication containers, product package and loose vials or ampoules stored must be labeled as high alert medication. All personnel should read the high alert medication labels carefully before storing to ensure medication are kept at the correct place.

Use: - TALL-man lettering to emphasize difference in medication name (e.g. - Dopamine and Dobuta-
-mine)

Prescribing: Do not use abbreviation when -
- Prescribing high alert medications do not use trailing zero when prescribing.

e.g. - 500mg can be mistaken as -
- 50mg).