

Supply Chain And Inventory Control

Unit -3

Supply chain and Inventory -

control

* supply chain of drugs -

Unit -3

* Preparation of drug lists -

① High Risk drug list -

- High risk medications are drugs that cause harm/side effect
- cause exist ant risk high

Hospital Pharmacy | D Pharm 2nd Year

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Unit - 3

Supply chain and Inventory - control

* supply chain of drugs -

- Manufacturing (उत्पादन)

↓
Distribution (वितरण)

↓
Wholesaler (बड़े विक्रेता)

↓
Retailer (छोटे विक्रेता)

↓
Patients (मरीज)

* Preparation of drug lists -

① High Risk drug list -

- High risk medications are those which cause body or harmful side effect

एक ही

↓

नए दवाइयों का उपयोग करना शुरू करना

• list of high risk drugs -

- Sedatives (अपहारी)
- Promethazine

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- Oxytocin (शिशुदायी)
- Insulin (इंसुलिन)
- Anaesthetics
- Narcotic drug.
- chemotherapy.
- Anti-coagulant.

② Emergency drugs -

- ये वो drugs हैं जिन्हें requirement immediately होने में emergency conditions में किसी patient को harm हो निसबत से prevent करने में सक्षम है

• Emergency drugs list -

- Heponin (हेपेरिन)
- Digoxin (डिगॉक्सिन)
- Procainamide
- Atropine sulphate
- Neostigmine
- Phenobarbital
- Aminophylline

③ Schedule H1 drugs -

- ये वो sensitive antibiotics and habit forming drugs हैं जिनके

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नहीं सार्वत side-effect cause करती है



गौर से without prescription and supervision में सार नहीं

- schedule 11 drug list -

Alprazolam

- codeine
- Rifampin
- Tramadol
- Diazepam
- Ethambutol
- Hydrochloride

अतः

④ NDDPs drugs -

(Narcotic drug and psychotropic substances)

* Narcotic drug -

- ये all drugs हैं जो pain में relieve करती हैं and sleep cause करती हैं।
- Medically strong As a painkiller, cough depressant etc में सार में use सार नहीं है।

* Psychotropic substances -

- ये all drugs हैं जो

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Nervous system on function on
change on and mood on
Alten on /

- NDPS drugs -
- Alprazolam
- codeine
- Morphine
- Tilidine
- hydrocodone
- Oxazolam
- Barbitol
- Letazolam
- etc.....

⑤ Reserved Antibiotics -

• If all antibiotics are used
treatment on for reserved
are not used on /

• If other antibiotics fail on and
not start use on on /

- Reserved Antibiotics list -
- Daptomycin.
- Dalbavancin.
- fosfomycin
- Plazunam
- ceftazoline

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- Tigecycline
 - fano banam.
 - colistin
 - Polymixin
 - etc.....
- (complete)

* Procedure of drug Purchase →

* Purchase (varian) -

- Purchasing or means external network or different types or medicine or gain or or or or

* Purchase Procedure -

- Hospital Pharmacy or drug purchase or following steps involved or -
- 1) Purchase Request form

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- 2) Quotation Invitation
- 3) Purchase order form
- 4) Return of goods
- 5) Payments.

① Purchase Request form -

- वरग- Pharmacist on person नि² Authorized एडर ए अ- वरग- Purchase request form prepare order ए/
- Find set form अ² Purchase department अ² provide order ए with quality, Quantity, price, use etc... अ² ए/

② Quotation Invitation -

- then ए form approval अ² Administration अ² send ए/ एडर ए and finally purchasing officer अ²
 - then purchasing officer set form अ² different suppliers अ² send order ए quotation अ² अ² ए/ एडर ए
- ## ③ Purchase order form →
- Purchase order form वरग- commercial document एडर ए

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and first official offer is by
buyer or after issue letter and
shall as per/

④ Return of goods -

- After received materials damaged
on requirement of according
of of of supplier and
back/ Return and per and

⑤ Payment →

- And finally purchasing officer suppliers
of amount pay order

* Tender/ e-Tender Process -

* Tender - (e-tender)

- Tender process is by
Hospital drugs and tender
different supplier and and
of tender by e-tender time period
submitted order and

* e-Tender →

- of process and received
tenders and sent and received
and by electronics.

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- 4) Lead time
- 5) Buffer stock
- 6) Reorder quantity level
- 7) Inventory turnover.
- 8) FIFO and LIFO Methods.

① ABC Analysis →

- Always better control.
- It is a technique used to inventory and value of accompany determine order etc.

② VED Analysis →

- It is divided into three category of drugs etc.
- V → vital
- E → Essential
- D → Desirable.

③ Economic order quantity (EOQ) →

- EOQ, items and cost optimum quantity order etc. not cost point in time it order and order etc.
- Over spending and avoid order etc.

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• Ordering cost →

like - traveling cost etc...

• Carrying cost →

like - transportation change, Insurance,

Storage expenses etc..

• EOQ formula →

$$EOQ = \sqrt{\frac{2 \times D \times C_o}{h}}$$

where -

D = Annual demand (units)

C_o = ordering cost per order.

H = Holding cost.

* calculation of number of orders →

• order of stock per year.

$$= \frac{\text{Annual demand}}{EOQ}$$

④ Lead time → (time - time)

• lead time or means order

order or supply or

order or gap order or

⑤ Re-order Quantity Level →

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- The material on quantity was definite figure of the self with the order sent on the order
- And the new order materials on minimum quantity of the order
- The re-order minimum and maximum quantity of the order
- Reordering level = Maximum consumption \times Maximum reorders period.

⑥ Inventory Turnover \rightarrow

- Inventory turnover was the number of times the inventory of the hospital/company is used in a period of the year
- $$I.T = \frac{\text{cost of goods sold}}{\text{Average Inventories}}$$
- * Advantages \rightarrow
 - long storage of the

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Inventory expiring out risk
minimum एई गीर एई

* Disadvantages →

- नई slow moving items गी represent
एई ordr/

⊕ FIFO And FEFO Method →

- FIFO (first In first out) -
गी stock warehouse गी first गीर एई
गी warehouse एई वेई गीर एई
- FIFO रीग- method एईए- एई गीर एई

• And first use गीर गीर एई
गिरीर expiring एईए- गीर एई
product गीर गीर out गीर
गीर एईए

• FEFO → (first expired first out)

- नई रीग- method एईए- एई
गिरीर गीर product expiring गीर
pass गीर एई गीर use first
गीर गीर एई

* Advantages -

- FIFO method bulky material
and high unit prices material

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के लिए suitable है।

• FIFO method सबसे ही best product

को avoid करने में helpful है।

• operate करने में है।

• सबसे में है।

• customer satisfaction rate increase

है।

के---

* disadvantages →

• नए market price increase होने

के नए issued price में दुर्घटना

में product same वे ही ही है।

price पर sale है।

(complete)

Thank you 😊

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Inventory Management of Central Drug stores

* Introduction →

- Inventory management is a process of identifying different types of action taken and inventory and manage cost of inventory like - ordering, storing, using and selling/distribution.

* Advantages →

- If inventory is managed order is so drug distribution interrupted will not be/

- If purchasing economy is maintained order is/

- If cost of ordering is chance of reserves order is/ etc.....

* Disadvantages →

- Cost of pharmaceuticals is ordering is a challenge and expensive is/

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- સર્કલ ટ્રાઇન અને સ્કિલ્ડ ઇન્ડિવિડુઅલ્સ ઓફ રીક્વિરમેન્ટ ઈદર ડે/

સ્કે.....

* Objectives →

- સ્ટાફ ઓફ ડેમન્ડ ઓફ અકોર્ડિંગ મેડિકેશન્સ ઓફ ઈસ્ટ્રીક્ટ/

સ્કે.....

* Some Points -

① Storage conditions →

- ડ્રગ્સ કમ્પાઉન્ડ્સ ઈન્ડિવિડુઅલ્સ (સોલ્યુશન્સ, કેમિકલ્સ સ્કે...) ઓફ વેરિઅસ સ્ટોરેજ

કોન્ડિશન્સ ઓફ રૂમ ટેમ્પરેચર ઈન્ડિવિડુઅલ્સ ઈન્ડિવિડુઅલ્સ ઓફ અકોર્ડિંગ.

g) Room temperature →

- મોસ્ટલિય ફાર્માસ્યુટિકલ્સ ઓફ રૂમ ટેમ્પરેચર ઈન્ડિવિડુઅલ્સ સ્ટોરેજ ઈન્ડિવિડુઅલ્સ

- રૂમ ટેમ્પરેચર ઓફ ડેફાઇન્ડ ઈન્ડિવિડુઅલ્સ ઈન્ડિવિડુઅલ્સ ટેમ્પરેચર બેટ્વેન ૨૦-૨૫°C.

b) cool storage conditions -

- ઓફ ડેફાઇન્ડ બેટ્વેન ૮-૧૫°C

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- Antibiotics and hormones etc...

set room temperature ur stored

part urid ei

etc...

c) cold storage conditions -

- if temperature 2-8°C or

air ei

- set temperature ur vaccines

and vitamins etc... stored part

urid ei

d) fridge storage conditions →

- fridge storage condition or

temperature b/w 4-8°C

or defined part urid ei

* Methods of storage -

- All medications or set

label ur set guidelines or

according store part urid ei

g) storage of tablet →

- Tablets or cool and dry

place ur store part urid ei

- Dark place ur/

- set light and moisture or

or protect part urid ei

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b) Storage of capsule -

same

c) Storage of ointment →

- ointment and highly closed containers in store in air tight

• sunshine in protect in air tight

etc...

d) Storage of Paste -

- Paste and well closed containers in stored in air tight

• Moisture in product in air tight

e) Storage of Emulsion -

- Emulsion and in light containers in stored in air tight

• light and heat in protect in air tight

f) Storage of Symples -

- Symples and well closed containers in store in air tight

g) Storage of Injections →

- store below 30°C
- light in protect and

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* Distribution of drugs -

- Distribution of means patients of drugs provide on the way of
- It two types is divided of
- 1) out-patient distribution →
 - out-patient of of in hospital is admit of drugs of
 - of of
- 2) In-patient distribution →

- of drug distribution of patient of in hospital is admitted of

* Maintaining cold chain →

- cold chain system of temperature of controlled of
- Manufacturing, Warehousing of
- of potency of
- like - Vaccines (stored at

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2) Ice-line Refrigerator (ILR) →

- Ice-line refrigeration was compact - wants eldr & in^{er} cold water, Ice and icepacks v^{er} m^{er} in^{er} n^{er} d^{er}।
- Star electricity supply fail e^{er} n^{er} d^{er} star help v^{er} star temp v^{er} n^{er} d^{er} maintain v^{er} n^{er} d^{er}।
- In^{er} v^{er} n^{er} d^{er} temp maintain v^{er} n^{er} d^{er}।

* Walk-in cold Rooms (WIC) -

- walk-in cold rooms v^{er} n^{er} d^{er} rooms el^{er} & n^{er} d^{er} v^{er} n^{er} d^{er} consistant and comfortable temperature n^{er} d^{er} guarantee d^{er}। v^{er} n^{er} d^{er}।

- star use large scale v^{er} n^{er} d^{er}।

(complete)

**Expiry Drug Removal Handling
And Disposal**

* What is drug expiry →

- Expiry was date after which drug is use after expiry of harmful effect is

Example -

- After expiry date - 20/03/2022
is not drug use date

After use not stand is
not use

* Removal And Handling of expired drug -

- Expired drug on damaged drugs are use after which drug is not use

- Expiry drug are category according and dosage forms are based on separated form is

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- dosage forms like - liquid, solid, semi-solid etc---
- if drugs are stored in original & are (out of use) are label clearly marked
- Dangerous drugs are very carefully handled before use
- Expired drug are safely disposed in special disposal container. Inert poisons are harmful etc

etc-----

* Disposal of Expired drugs -

- Drug disposal are methods International Authorities are are recommended before use
- 1) Returning to the Manufacturer →
 - are Method of are expired drug are manufactured are Return are before use
- Manufacturer are are disposal are are good method are

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2) Landfill method -

- set method of expired drug in ground of car etc and municipal waste etc cover and etc etc

3) Waste Immobilization -

- set encapsulation in acid etc set expired drug in heat plastic on steel drum etc etc

then set drum in cement and water and mixture add and etc

↓
then seal on land of inside car etc etc

* Disposal of Narcotic drugs -

- Narcotic drugs of Pharmacist on police or supervision in disposed part etc

like - opium, Heroin etc...

* Methods -

- waste encapsulation.
- Return to manufacturer.

3) waste incineration.

at.....

* Disposal of cytotoxic drugs -

- s-t anti-cancer drug w/ onef E/
- w/ cell multiplication on growth onf E/

* Methods -

- 1) Return to manufacturer.
- 2) waste encapsulation.
- 3) Incineration at high temperature.

Documentation

Purchase And Inventory -

* Purchase document →

① Request for information - (RFI)

• n^o document for use by information of industry of

② Request for Proposal → (RFP) -

- RFP w/ formal document of buyen

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ଶିକ୍ଷାରେ ବ୍ୟବହାର କରିବା

- Purchasing need କି clean କରିବା କି

ପଦ୍ଧତି

- ଉତ୍ପାଦନ କି ବ୍ୟୟ କି need

କିମ୍ପାରେ ବ୍ୟୟ କରିବା

ଅଥବା

* Inventory control documents -

inventory control କି ପଦ୍ଧତି

ନିମ୍ନଲିଖିତ ଦଲ୍ଲେଲ୍ ବ୍ୟବହାର କରିବା

କିମ୍ପାରେ କରିବା -

① Stock Requisition (SR) →

(କ୍ଷେତ୍ର) କାର୍ଯ୍ୟ

- ଯି ଷ୍ଟକ କି Reserved

quantity କିମ୍ପାରେ କି କି

କିମ୍ପାରେ କି ଦିଆଯିବା କି ପଦ୍ଧତି

କିମ୍ପାରେ କରିବା

୨) Pick and Issue (PI)

୩) Stock issue confirmation

୪) Over the counter (OTC)

୫) Stock Return (SR)

୬) Inventory Adjustment (IA)

୭) Stock Return.

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7) Inventory Adjustment.

8) Physical inventory purchase.

9) stock transfer issue.

10) stock transfer Receipt

etc.....

Unit - 3

(complete)

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THANK YOU.

By Dr Firoz khan

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