

PROCUREMENT & WAREHOUSING OF DRUGS AND PHARMACEUTICALS

RESEARCH DOCTOR PHARMA

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Procurement is defined as a process of acquiring supplies through purchases from the manufacturers, their agents like distributors or from private or public suppliers.

•Purchasing of medicines starts with the framing of buying policies and ends with receiving, stocking, and payment

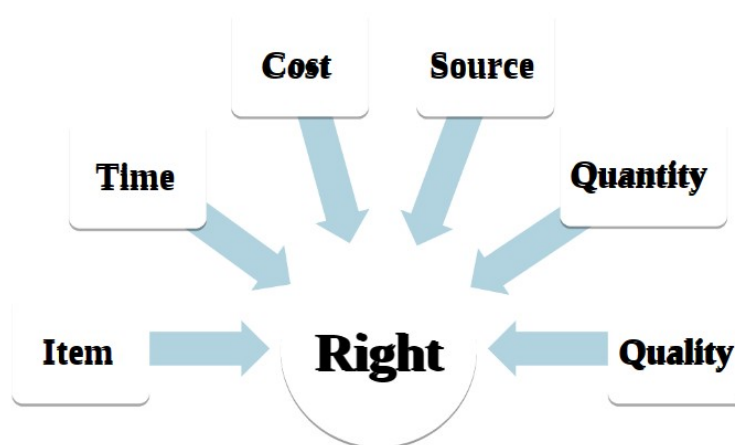
COMPONENTS OF A GOOD DRUG PROCUREMENT POLICY FOR HOSPITALS

•The important components of an efficient and effective drug procurement policy or programs are the following:

- i. Effective & efficient agency to handle procurement, storage and distribution.
- ii. Adequate budgetary allocation.
- iii. Essential drug list (EDL) or a priority drug list and its periodic review for addition and/or deletion
- .iv. Effective and transparent tender/purchase system
- .v. Scientifically designed warehouses with facilities for proper storage
- vi. Effective logistics and management information system (MIS).
- vii. Efficient quality assurance set up.
- viii. Effective outsourcing-MIS, transport, communication and information.

STRATEGIES FOR GOOD PROCUREMENT

•The efficiency of a procurement system depends on the capability of the purchasing agency to ensure the following six 'rights' as part of the purchasing strategy



In order to achieve these 'rights,' the procurement wing has to analyse the following questions with the help of necessary supporting data and details before finishing an order.

- ☐ What to order ?
- ☐ Whom to order from ?
- ☐ How much to order ?
- ☐ At what cost ?
- ☐ What standards to set ?
- ☐ When to order ?

Procurement of cost effective medicines in the right quantities

- It is always a good strategy for the hospitals, whether government or private, to have an essential drug list with the priority items and their specifications.
- Procedures should be established to ensure that the quantities for the items are finished in a scientific and rational manner so that excess stock accumulation or shortage of the item will not occur.ii. Indenting of items and quantity.
- The success of the procurement service depends on its ability to use the available budget in the most economical manner.
- Items to be ordered should be selected based on their priority.

There are three types of intends.

i. Annual indents

ii. Supplementary indents

iii. Emergency indents

- Annual indents- are made for a period of one year prior to the beginning of the financial or calendar year based on parameters like previous years consumption, stock in hand and the estimated requirement for the coming year.
- Supplementary indents are prepared for items or quantities that could not be foreseen at the time of submission of annual indents.
- Emergency indents can be prepared at any time after annual indents, for items of immediate and necessary requirement.

iv. Ensuring timely deliver of the ordered items

- The purchasing agency should take all precautionary steps to ensure timely delivery of the ordered items to the specified centres like central or regional stores or institutions.

- Monitoring of the supply order is essential

iv. Fixing lowest possible total cost

- The procurement system has to achieve the lowest possible total cost.

- The following factors have to be considered while arriving at the total cost.

- ☐Unit costs

- ☐Visible costs

- ☐Hidden costs

- ☐Inventory holding costs

- ☐Operating costs

- ☐Capital costs

Methods of procurement

1. Direct purchase from the manufacturer or their regional centres

2. Direct purchase from wholesalers and stockists

3. Purchase from rack jobbers

4. Purchase through bids

5. Purchase through competitive negotiation

6. Purchase through a contract

7. Local purchase

8. In house manufacture of medicines in the hospitals.

1. Direct purchase from the manufacturer or their regional centres

- The simplest method of purchase is direct purchase.
- Direct purchase from manufacturers are economical and safe. However there may be variations in quality, packing, etc of same items of different manufacturers.
- As far as possible two or more parties should be selected for the purchase of every item so that even if one party fails to supply, the other party can be contacted immediately. This is useful in the case of strikes, lockouts and other similar situations.
- If the purchases are in large quantities, the manufacturers will supply directly or through their depots to the hospitals. Otherwise will route the supply through their local distributors.

2. Direct purchase from wholesalers and stockists

- In India about 90 per cent of merchandise sold in retail through community pharmacies is supplied by wholesalers.
- The wholesaler anticipated the need of pharmaceutical items in the market, obtain the necessary items, and makes them available at the appropriate time.
- The wholesalers ensure rapid delivery upon order and generally provide credit facilities to satisfy and attract the retailers.

3. Purchase from Rack jobbers

- The rack jobbers are special type of wholesalers dealing with only limited number of pharmacy items.
- The rack jobbers arranges with the pharmacy manager, to stock and maintain a specified assortment of goods in a fixture or rack located within the pharmacy.
- They guarantee a specific mark up percentage to the pharmacy and select the items, arrange suitable displays and make necessary alterations if needed on the pharmacy premises.
- The rack jobbers do not have a significant role in government hospitals, though they are an integral part of the suppliers for hospital pharmacies and community pharmacies in most of the countries in the world.

4. Purchase through bids

- Bid or tender is an offer (a certain price) to make a supply of certain specified or listed items for a particular amount or cost based on specific terms and conditions. It is made through:
a. Open tenders
b. Restricted tenders
c.

Quotation invitations

□ Open tendering is a formal procedure by which quotations are invited from the manufacturers or their representatives on local, regional, national or international basis subject to the terms and conditions specified in the tender invitation

In the case of restricted tenders, interested suppliers must be approved in advance, often through a formal pre-qualification process. In the case of medicines, factors like GMP, WHO certification, ISO certification, past supply information, financial capacity etc are considered as parameters for prequalification process.

□ Quotation invitation is a relatively simple process whereby the parties are requested to give their rates for the required items generally avoiding most of the formalities involved in tenders.

5. Purchase through competitive negotiation

• In competitive negotiation, the buyer approaches a limited number of suppliers, generally not less than three and not more than ten, for their price quotations. These parties may be local, national or international.

• Buyers may also bargain with these suppliers after obtaining their quotations to achieve specific price or service arrangements. This bargaining process is the essence of negotiation.

6. Purchase through a contract

• Here the items are purchase through an agreement executed with the manufacturer or their agent.

• Prices for the purchase of medicines, hospital items and other merchandise items required for the hospitals or institutions can be fixed on a contract basis. The contract can be of different types including:

i. Fixed quantity contract

□ This type of contract is entered into for the supply of a definite number or quantity of specified items within a specific period or time. The firm has to fix the rate in conformity with the purchaser's requirement as to place and time of delivery.

ii. Running contract : It means a contract extending over a period of time. For a estimated or variable quantity of items.

iii. Rate contract: This type of contract is for the supply of items at the specified rated during the period covered under the contract.

7. Local purchase

- The local purchase (LP), which is also known as emergency purchase (EP), is made to meet an emergency situation.
- LP is made from a local retailer/wholesaler/manufacturer at their price.
- If a particular item that is essential for the hospital is out of stock and is urgently required, it is procured through emergency purchase without observing the normal procedures.
- There is a prescribed limit on emergency purchases like 10 per cent of the total allotted budget, for the purchase of medicines for a particular hospital.
- It is always advisable to maintain a separate register for the LP showing details of the item, quantity and reason for each purchase.

8. In house manufacture of medicines in the hospital

- Many hospitals (government and private) have established manufacturing unit attached to the hospital under the hospital pharmacy services.
- Selected items required for the hospital are manufactured in these in house manufacturing units.
- However, some hospital pharmacies, like the one attached to CMC, Vellore and others manufacture a large number of items required for the hospital.

WAREHOUSING

Proper drug storage

- Storing of drugs before distribution or sale is called warehousing.
- Maintaining proper storage condition for pharmaceutical products and paramedical is vital to ensure their quality, safety and efficacy.

Storage conditions

- Storage is the physical process of storing or housing materials in a specified area.
- Each material has its own storage requirements and knowledge is necessary as to how and where they are to be stored.
- Medicines are items which require careful, scientific and systematic storage.
- The shelf life of a drug is very much influenced by its storage conditions.

- Under **schedule P** of D and C act 1945 storage condition of various drugs are specified.
- Eg: VACCINES
- **Vaccines must be kept at controlled temperatures** from time of manufacturing to time of administration. In the case of polio vaccine if stored at

Temperature	Shelf life
-20°C	24 months
0°C	6 months
4°C	3 months

Some of the storage conditions seen on drug labels are

- ☐ Keep in a cold dry place
- ☐ Keep in a cool dark place
- ☐ Keep in a cool place (do not freeze)
- ☐ Store away from sunlight
- ☐ Store below 40°C. Do not freeze.
- ☐ Store in a cool dry place protected from light
- ☐ Store in a dry place at 20°C-80°C.
- ☐ Store at room temperature.

Recommended storage conditions

- The 1996 edition I.P specifies storage condition as
 1. Cold place
 2. Cool place

3. Room temperature
4. Warm place
5. Excessive heat
6. Controlled room temperature
7. freezer.

Design and layout of a drug store

- ☐ Should have a neat and tidy premises with sufficient built up area having either false ceiling (if room is AC) or concrete ceiling and ventilation. ☐ Floor should be cleanable ☐ Should have sufficient lighting
- ☐ Should be intact and free from gaps to prevent ingress to rodents, insects, birds, lizards etc.
- ☐ Should have sufficient furniture.
- ☐ Should be a separate area for rejected/ damaged and date expired items. ☐ Should have adequate washing and draining facilities
- ☐ Sufficient reference books have to be provided
- ☐ Safe lockers and shelves for keeping records
- ☐ A complaint register to register the complaints of hospital staff and patients or their relatives

Pest control

- Pests are a serious problem in Indian hospital and community pharmacy stores
- Termites may attack the wooden shelves and cupboards and rats may damage any items particularly sweet items
- Rat traps, rat baits may be useful for controlling rats. Insecticidal sprays are useful to kill insects
- Proper precautions should be taken to avoid contamination of medicines while engaged in pest control

Fire precautions

- Combustible trashes like papers, boxes, carton and other packing wastes should be kept separately
- Wastes should be kept in waste bins and should dispose it daily
- Fire extinguishers and fire detecting equipments should be installed

- Careful handling of combustible and inflammable materials and checking of electrical connections regularly are essential

DRUG STOCKING

- After purchasing is over hospital pharmacist has to look after another important function i.e stocking
- When to store how to store are important factors to be considered during stocking
- In the Central pharmacy or Pharmacy main store, all drugs are displayed or kept in different ways regarding the most easiest way to dispense. Methods of stocking
- Alphabetically
- Therapeutic class wise
- Solid dosage forms are separated from remainder
- Stocks can be arranged into various areas like tablets, capsules, injections, laboratory items, surgical items etc.
- Inflammable and explosives should be kept in accordance with fire regulations•Stock should be arranged in such a way that the labels are clearly visible.To uphold quality standards in drug storage room:
- Rotate stock so that the stock closest to expiry date is kept in front.
- Maintain FIFO / LIFO procedure.
- Make sure that there is no expired drugs on the shelves.

Expiry dates

- Expiry date means that drug can not be used after this date due to the chance of chemical degradation, harmful to patient or low potency.
- Oldest stock should always be used up first. When new stock is received ,old stocks should be brought to the front of the shelf and new ones should be placed at the back
- Drugs with life less than one year should be stored in separate shelves to facilitate regular checking.
- According to the D and C act 1945 pharmacist or chemist should strictly remove expired items from shelf and keep them in a separate place marked as-"Expired drugs, not for sale".

Controlled drug regulations

Double lock container

- Must be kept in a locked cupboard or cabinet.
 - The cabinet should be made of metal and fixed to the wall or floor. A designated person at the practice should be nominated as responsible for the CDs and appoint key holders.
 - The keys should be kept in a safe place and no unauthorised members of staff should have access to the keys. For home visits doctors should carry CDs in a lockable bag.