Stocking and Restocking Processes

MANAGING PHARMACY INVENTORY is important to keep product numbers stable and to determine and control the stock levels required for optimal profit. Good inventory management involves having enough inventory on hand to meet the demands of the customer, yet not too much to exceed inventory goals. Pharmacies must stock, or have ready access to, all medications that may be written by the prescribers in their practice. When inventory is "too tight," a pharmacy frequently runs short of a needed medication. Running short can cause loss of a sale and/or an inconvenience to the patient/client.

Objective:

☑ Summarize stocking, restocking, and inventory management processes.

Key Terms:

🔑

carrying costs
closed-door pharmacy
controlled substances
formulary
inventory
inventory management

inventory range
just-in-time (JIT)
periodic automatic
   replacement (PAR)
perpetual inventory
procurement

receiving
restocking
stock
stocking
telepharmacy

Understanding Stocking and Restocking Processes

Inventory is a listing of the entire stock of pharmaceutical products on hand at any given time in a pharmacy location. A pharmacy's inventory is typically its largest asset (possession).

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Inventory management focuses on procurement of this stock. **Procurement** is the action of obtaining, storing, controlling (inventory), distributing, and disposing of used and unused pharmaceutical products. Too much inventory can mean less profit, but too little inventory can mean lost sales as customers and clients go to another pharmacy to obtain prescription medication. The purposes of inventory management are:

♦ To provide an adequate stock of pharmaceutical products
♦ To reduce unexpected stock outs and temporary shortages
♦ To reduce **carrying costs** (the total cost of holding inventory)
♦ To minimize time spent on purchasing tasks

STOCK CATEGORIES

Pharmacy stock is often broken into two categories: base stock and safety stock. Base stock is the part of inventory that is replenished (restocked) as it is sold. Typically, prescriptions are filled from base stock, and pharmacies keep an "adequate" supply at all times. Safety stock is held to protect against unexpected needs ("just in case"). Pharmacies keep as little safety stock on hand as possible.

A counting of the items in stock (inventory) is usually taken once each year. For example, when inventory is counted:

♦ Unopened bottles receive full credit.
♦ All opened bottles are assumed to be half full for inventory purposes.

Controlled substances are drugs whose manufacture, possession, or use is regulated by the government. These substances have a special procedure for inventory counts. A complete inventory of controlled substances must be taken every two years. An exact unit count (number of tablets or capsules) is required for controlled substances.

STOCKING AND RESTOCKING PROTOCOLS

Stock is the supply of goods and pharmaceuticals on hand for sale to customers and/or patients—typically a supply for future use. **Stocking** is placing drugs and other items onto shelves, into cabinets, under refrigeration, etc. as required for safe storage. **Restocking** is replenishing inventory levels as set by the pharmacy type. Inventory levels must be adequate but not excessive, with a rapid turnover of drug stock on the shelf to minimize the cost of doing business. According to the World Health Organization (WHO), proper drug storage techniques:

♦ Avoid contamination or deterioration
♦ Avoid disfiguration of labels

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- ♦ Maintain package integrity
- ♦ Prevent or reduce pilferage, theft, and losses
- ♦ Prevent infestation of pests and vermin

Stock by Pharmacy Type

Hospital

The hospital pharmacist is an expert on medicines as well as a supply manager who ensures that medicines are available to patients. The hospital's formulary is the foundation of medication management in that setting. The **formulary** is a list of drugs approved for use, and the cost will be reimbursed by an insurance carrier.

- ♦ In an open formulary, any medication may be purchased by the hospital.
- ♦ In a closed formulary, medications prescribed may not be purchased or covered unless they are on a restricted list of medications selected by a committee.

Private or Proprietary

A **closed-door pharmacy** is a facility unavailable to the general public. It provides medications to patients residing in various settings—most commonly long-term care settings (e.g., skilled nursing and assisted living facilities). A closed-door pharmacy must have a separate license from an existing retail pharmacy and must keep separate inventory.

Telepharmacy

A **telepharmacy** is pharmaceutical care through the use of telecommunications and information technologies to patients at a distance. A telepharmacy enables any pharmacist to connect to any pharmacy and offers patients in rural or remote communities access to the professional care they may otherwise not receive. A telepharmacy operates like a traditional pharmacy, except the pharmacist reviews and verifies prescriptions from a remote location.

FIGURE 1. A telepharmacy is pharmaceutical care through the use of telecommunications and information technologies to patients at a distance.

Recordkeeping

Every pharmacy must maintain records of all drugs and other supplies purchased and sold to know when to reorder and adjust the inventory levels of each item. Most pharmacies have a

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computerized inventory software program. When an item is sold, the software adjusts the inventory record automatically. Smaller pharmacies may keep records in a book to determine when products need to be reordered. Pharmacies usually establish an inventory range for each item. An **inventory range** is a set maximum and a set minimum number of units to have on hand for each item. Issues to consider when ordering stock are availability, demand, and projections.

♦ The time needed to order, the time needed for delivery, and the reliability of the supplier all impact the availability of an item.

♦ The clients'or patients' needs, medicines that are fast moving, seasonal diseases, and medicines that take long to be replenished all impact item availability due to demand.

♦ The ability to estimate how much medicine to order, how long the medicine will last in stock, and how long it takes for medicines to be delivered all impact item availability and projections.

Receiving

Receiving is the physical delivery of an order of products from a wholesaler or warehouse. When drugs are received, they must be carefully checked against the purchase order or requisition. Once drugs have been verified, they are physically maintained in a secure storage area. Drug storage includes several options.

♦ In automated dispensing devices, drugs are directly scanned and input into the pharmacy management system according to the type of substance.

♦ Drugs placed and maintained on pharmacy shelves are subject to stock rotation procedures, such as last in, first out (LIFO). Newly purchased drugs with late expiration dates are placed behind drugs that are already in inventory. This practice helps ensure that expired drugs are not dispensed.

♦ Drugs are arranged in alphabetical order of generic names.

♦ Each dosage form of drug is arranged in separate and distinct areas.

♦ Retail pharmacies also deal with space constraints. If a variety of stock items is a priority of the pharmacy, it is important to have

FIGURE 2. It is important to remember that the order in which products are received is not necessarily the order in which they expire. It is important to always check the expiration dates and to make sure the dates are visible while the products are in storage.

enough empty space to separate distinct merchandise lines. NOTE: Sufficient empty space should separate one drug or dosage from another on the pharmacy shelf.

INVENTORY MANAGEMENT PROCESSES AND SYSTEMS

Inventory management is managing and controlling the ordering, storage, and use of stock. It is a critical component of a well-managed pharmacy. Inventory management processes help to determine when products need to be purchased and how much of each product to order. A variety of processes and tools can be used to ensure an accurate inventory is taken.

FIGURE 3. Medications can be packaged in a way in which individual doses of patient medications are prepared by the pharmacy and delivered in individual packets to the patient. Carded blister packs are most commonly used to package medications because of their durable, airtight, and tamper-proof qualities.
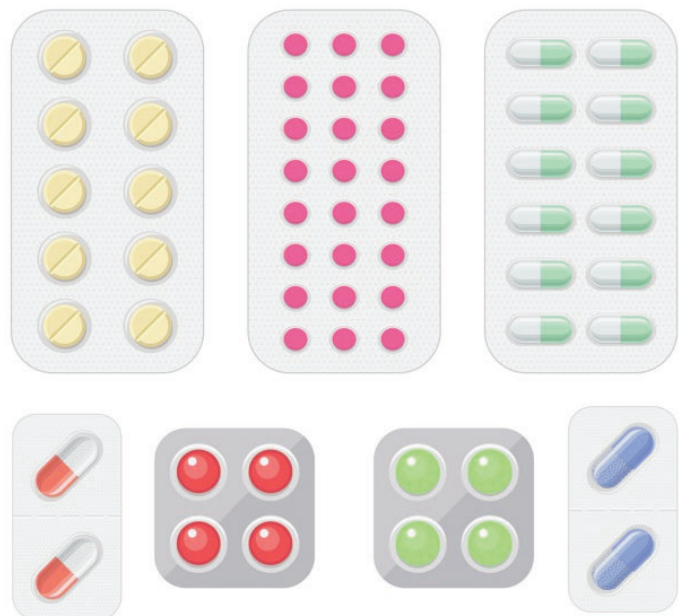
Inventory Types

The manner in which inventory is controlled depends on the type of pharmacy, location, business, and more.

Just-in-Time (JIT)

Just-in-time (JIT) is an inventory management strategy that orders and receives a product only as needed and not before—just before it is to be used. This process minimizes tying up funds for long periods and reduces the cost associated with inventory management. JIT often means that a pharmacy does not hold safety stock that lowers the inventory carrying costs. Just-in-time ordering prevents overstock and out-of-stock conditions. NOTE: This system is best implemented when supplies are readily available and pharmaceutical needs can be accurately predicted.

Periodic Automatic Replacement (PAR)

Periodic automatic replacement (PAR) is an inventory management system in which a set amount of a drug is automatically reordered. In automatic reordering systems, when a drug falls below a predetermined quantity (reorder point), it is automatically reordered. A PAR level system determines the minimum level of inventory necessary to be on hand for a specific time period and requires automatic replenishment if the level of inventory falls below that level. Target levels (reorder points) are usually based on historical data.

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Minimum and Maximum

Minimum and maximum is an inventory management system in which predetermined numbers (minimum and maximum) of medications are to be kept on a shelf. The smaller the range, the more accurate the quantity to be stocked. This method eliminates guesswork based on the individual ordering of the medication. The system is based on historical data for the pharmacy and current trends.

FIGURE 4. A successful business depends on the ability to maintain adequate records of items sold, received, and in inventory. When selecting an inventory method, pharmacists look at the advantages and disadvantages of each method.

ABC

ABC is an inventory management method that identifies and defines each item based on its usage. Products are ranked based on their purchase history and dollar amount of total annual costs. ABC analysis divides an inventory into three categories:

♦ "A" items are goods for which the annual consumption value is the highest and typically account for 20 percent of the total inventory. These items are important because of the high demand. These are fast-moving items.

♦ "B" items are goods that have a medium consumption value and typically account for 30 percent of the total inventory.

♦ "C" items have the lowest consumption value and typically account for 50 percent of the total inventory. These are the fast-moving products. These items are marginally important and are usually stocked with low quantities because of the high carrying cost associated with the stock levels.

The 80/20 Rule

The 80/20 Rule is an inventory management strategy that indicates 80 percent of a pharmacy's drug costs are derived from 20 percent of the medicines carried. Most businesses see 80 percent of their sales come from roughly 20 percent of their customers. This type of inventory focuses on control of the top 20 percent of the items carried.

Perpetual Inventory

Perpetual inventory is an inventory management method that continuously records the available quantity of a particular medication as prescriptions are filled. After each prescription is filled and dispensed to the patient/client, the amount of medication used for the prescription is removed from the inventory to ensure the quantity on hand is always current on the computer. Deliveries and returns are recorded as they occur. NOTE: Federal law requires the use

CAREER CONNECTION: Pharmacy Purchaser

In the pharmacy, inventory includes all of the medications and medical supplies used in the daily operation of the pharmacy. The management of inventory in the pharmacy comprises a large portion of the pharmacy technicians' responsibilities. Visit the American Society of Hospital Pharmacists (ASHP) website at http://www.ashpmedia.org/pai/docs/Case-Study-Pharmacy-Purchaser-Advanced-Technician-Role.pdf to read the case study about an advanced pharmacy technician role in inventory management: pharmacy purchaser. Compare and contrast how this new role compares to the traditional role of the pharmacy technician in inventory management.

of this inventory for schedule II controlled substances. However, using this system for all medications ensures an accurate reflection of the current stock in the computer system.

Summary:

It is critical for pharmacies to maintain a thorough understanding of and count of current inventory. Inventory management processes help to determine when products need to be purchased and how much of each product to order. To minimize costs, inventory levels must be adequate, not excessive. Underestimating inventory levels can cause shortages, which inconveniences customers and can reduce business and revenue. A variety of different processes and tools are used by pharmacies to ensure an accurate inventory is taken. Pharmacies need to evaluate which process will be most advantageous for them.

Checking Your Knowledge:

1. Explain the purpose of inventory management.
2. Explain how a formulary is used to manage hospital pharmacy inventory.
3. Explain how closed-door pharmacies and telepharmacies differ from traditional pharmacies.
4. Explain stock rotation.
5. Explain at least three inventory management processes.

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Expanding Your Knowledge:

Call your local pharmacy and hospital pharmacy. Arrange to interview a practicing pharmacy technician at each site. Ask the person to explain his or her role in inventory management. Explain how each role differs based on the pharmacy setting.

Web Links:

Inventory Control in Pharmaceutical Supply Chain

http://www.linkedin.com/pulse/inventory-control-pharmaceutical-supply-chain-pinto

Hospital Pharmacy Shelves

http://www.pharmacist.com/what-s-your-hospital-pharmacy-shelves-waynesboro-s-pentz-saves-big-dollars-keeping-tabs-inventory

Telepharmacy

http://blog.telepharm.com/the-4-different-types-of-telepharmacy

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