

Purchasing and Inventory Management

Author:

Donna West, PhD

Assistant Professor

UAMS College of Pharmacy

Learning Objectives

- Explain why purchasing and inventory management are important to a pharmacy, both financially and operationally
- Describe 4 criteria that are used to select a supplier
- List the 6 purchasing steps
- Explain terms of sale: discounts and dating

Learning Objectives

- Define procurement and carrying costs
- List the 2 goals of inventory management
- Calculate inventory turnover rate and interpret the rate
- Describe 3 methods of inventory control

Profits Effected by Change in COGS

Profits have the potential to increase/decrease by 15% for every 1% change in COGS

Sales:	\$2,000,000
Cost of Goods Sold:	<u>\$1,440,000</u>
Gross Margin:	\$ 560,000
Gen Admin expenses:	\$ 452,000
Marketing expenses:	<u>\$ 25,000</u>
Net income before taxes:	\$ 83,000

Profits Effected by Change in COGS

Decrease COGS by 1%:

Sales:	\$2,000,000
Cost of goods sold:	\$1,425,600
Gross Margin:	\$574,400
Gen Admin expenses:	\$452,000
Marketing expenses:	\$25,000
Net income before taxes:	\$97,400

Purchasing and Inventory Management

- Purchasing Obj.
 - Right product/variety
 - Right quality
 - Right price
 - Right time
 - Right quantity
- Inventory Control Obj.
 - Minimize investment
 - Minimize purchasing (procurement) and carrying costs
 - Balance supply with demand

Importance of Purchasing

Purchasing may be perceived as just a routine house-keeping chore to keep inventory on the shelf, but because inventory represents the largest investment a pharmacy has, purchasing is actually an investment process

Purchasing Function Steps

1. Conducting market research to determine the needs/desires of patients and prescribers and to identify the pharmacy's image and business goals
2. Formulating effective purchase policies
3. Selecting dependable sources of supply
4. Negotiating favorable purchase terms
5. Transferring the title of the merchandise from the supplier to the pharmacy
6. Receiving, marking, and stocking the merchandise

Market Research: What to Buy?

- What do your patrons want/need?
 - Usage reports
 - Other pharmacies
 - Pharmacy employees
 - Questionnaires
 - Sales representatives
 - Published reports -Top 100 drugs
 - Formularies

Market Research: Example

- Trade area made up of predominantly younger families: health-related items for children
- Trade area of older families, elderly: home health care department or DME

Market Research: Pharmacy Image

- What type of products might you have if you want to provide asthma disease state management?
- What type of products might you have if you want to be known as the diabetes specialty shop?

Market Research

- Patient and prescriber needs
- Pharmacy's business goals and image
- Potential sales
- Space limitations
- Personal philosophy

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Open-to-Buy Purchase Budget

- Controls the total dollar investment in inventory

Open-to-Buy Purchase Budget

1. Forecast purchase budget for each month in the next fiscal year based on sales and cost of goods sold (COGS) data from the previous year
2. Each month's forecasted sales is then multiplied by the COGS percent to calculate monthly adjusted purchase budget
3. At the end of each month, the month's actual sales and purchases are recorded. Next month's purchases are then adjusted based on the past month's actual sales and purchases

Open-to-Buy Purchase Budget

- If sales were greater than predicted, the next month's purchase budget may be increased to accommodate increased sales
- Alternatively, if the sales were lower than expected then the purchase budget for the next month would be decreased

Open-to-Buy Purchase Budget: Example

- If January Sales = \$234,567 and January COGS = \$206,987; then the Gross Margin = \$27,580, which is less than 12% of sales
- Would you increase your spending on inventory next month, keep it the same, or decrease spending?

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Criteria for Supplier Selection

- Promptness
- Frequency of delivery: JIT
- Return goods policy
- Frequency of out-of-stock situations
- Good service relations
- Price and financing
- Value-added services

Sources: Where to Buy?

- Wholesalers
 - Full-service: delivery, financing
- Manufacturers
- Rack jobbers
- Cooperatives
- Buying groups

Wholesalers



Wholesaler Services

- Storage of goods until they are wanted
- Rapid delivery upon order - just-in-time delivery - offering next-day delivery during the week
- Payment options: financing through the extension of credit

Wholesaler Services

- Help with advertising and promotion: wholesaler will provide promotional material as well as private label goods - often associated with higher gross margins
- Store layout and design
- Check merchandise and update shelves

Wholesaler Programs

- Automatic substitution programs
- Backorder programs
- Pharmacy ownership programs

Rack Jobbers

Arrange with the pharmacy manager to stock and maintain a specified assortment of goods in a fixture located in the pharmacy (e.g. eyeglasses display)

Manufacturers

- Not as common today
- Large minimum purchases
- Wholesaler has next-day delivery and other value-added services

Central Purchasing Groups

- Purpose is to pool the buying power of independent pharmacies together in order to obtain better prices and discounts from suppliers
 - Pharmacy buying groups
 - Cooperatives

Selecting a Source

- Sales representative
- One supplier, multiple suppliers

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Purchase Terms

- Salability

Purchase Terms

- Good relationship may lead to:
 - Prompt delivery
 - Special buying opportunity
 - Information

Purchase Terms

- Price
 - Terms of Sale
 - Discounts
 - Dating
- Negotiating price
- Gather as much price information as possible

Trade Discount

\$12.00 Suggested retail price

X .333 Pharmacy's discount

\$ 4.00 **Pharmacy's margin**

\$12.00 Suggested retail price

- 4.00 Pharmacy's margin

\$ 8.00 **Pharmacy's cost**

Quantity Discount

- These discounts have been offered as an incentive for purchasing large quantities
 - Non-cumulative quantity discount
 - \$12 per dozen
 - Minus 10% if purchase 3 dozen at one time
 - Minus 12% if purchase 6 dozen at one time
 - Cumulative quantity discount
 - Generic rebates

Cash Discount

- A small discount offered on invoices for the prompt payment of invoices
- A common discount is 2/10 net 30 which translates into a 2% discount if paid within 10 days of date of invoice, the net amount due in 30 days

Cash Discounts

- If the term 2/10 E.O.M., net 30 appears on the invoice dated April 30, the manager may deduct 2% from the invoice if he/she pays it by May 10

Cash Discounts: EFT

- EFT Prepay weekly: 1.5% cash discount
- EFT every 7 days: 1.25% cash discount
- EFT every 14 days: 1.15% cash discount

Serial Discounts

\$500.00 Invoice amount

X .30 Trade discount percent

\$150.00 Trade discount allowance

\$500.00 Invoice amount

-150.00 Trade discount allowance

\$350.00 Balance

Serial Discounts

\$350.00 Balance

X .10 Quantity discount percent

\$ 35.00 Quantity discount allowance

\$350.00 Balance

- 35.00 Quantity discount allowance

\$315.00 Balance

Serial Discounts

\$315.00	Balance
<u>X .02</u>	Cash discount percent
\$ 6.30	Cash discount allowance

\$315.00	Balance
- <u>6.30</u>	Cash discount allowance
\$308.70	Amount pharmacist pays

Dating

- Refers both to the time before which the specified amount of discount may be taken and to the time at which payment becomes due
 - Prepayment
 - Collect-on-delivery (C.O.D.) dating
 - Delayed or future dating

Dating

- Extra datings
 - 2/10 E.O.M., 60 days extra
 - Pharmacist has 60 days before the ordinary dating of 2/10 E.O.M. Net 30 begins
- AOG: arrival of goods
- ROG: receipt of goods
 - 2/10 ROG , Net 30
 - Pharmacist can deduct 2% within 10 days of receipt of goods or otherwise pay net within 30 days after receipt of goods

Purchase Terms

- Consider all purchase terms:
 - Discount
 - Payment date
 - Credit extension policy
 - Returned goods policy

Returned Goods Policies

- Merchandise returned within 60 days of date of invoice and is saleable - 100% credit
- Merchandise returned after 60 days and is saleable - 85% credit
- Merchandise with less than 6 months of good dating - 75% credit
- Partial, merchandise with less than 3 months of good dating - non-returnable

Returned Goods Policies

- Closely monitor
- Have staff member responsible for checking the shelves periodically for out-of-dates and items that are not selling

Returned Goods Service Companies

- Familiar with policies
- Evaluate pharmacy periodically (usually twice a year)
- Charge 9-15% fee
- Return the appropriate goods and return your money from the goods within 30-60 days

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When You Receive the Goods, You Should:

- Count the shipment
- Check for damage
- Check the invoices
- Mark the merchandise/computer prices
- Stock the products/rotating stock

Purchasing and Inventory Management

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Inventory Management

Practice of planning, organizing, and controlling inventory so that it contributes to the business' profitability



Total Inventory Costs

Acquisition costs +

Stock-out costs +

Carrying costs +

Procurement costs

Acquisition Cost

- Amount the pharmacy pays for the product
 - e.g., cimetidine for \$50 with no discount, the acquisition cost is \$50

Stock-out cost

Cost of not having product on the shelf
when a patient needs or wants it

Carrying Costs

- Refers to the storage, handling insurance, and the cost of capital to finance the inventory
 - Loss, theft, damage
 - Storage
 - Capital costs/opportunity costs

Procurement Costs

- Costs required in placing orders, receiving them, stocking the shelves, and processing the accounts payable
 - Check inventory
 - Purchase
 - Receive and check in merchandise
 - Mark/stock merchandise
 - Pay for the merchandise

Why Do We Hold Inventory?

- To guard against fluctuations in demand
- To guard against late deliveries
- To take advantage of bulk discounts/sales

Two Goals of Inventory Management

- Minimize total investment in inventory (minimize carrying and procurement costs)
- Carrying right mix of products to satisfy patient demand (balancing supply and demand)

Inventory Management

- Keep costs down
- Improve cash flow
- Improve patron service
- Forecast consumer needs
- Promote good relationship with supply sources

Inventory Management: Keep Costs Down

- Inventories can have a significant impact on a pharmacy's financial statements.
 - Lower procurement and carrying costs
 - Increase sales by avoiding stock-outs

Inventory Management: Cash Flow

- Prompt payment
- Reduce cost of goods sold, improve gross margin
- Opportunity costs

Inventory Turnover Rate (ITOR)

- Describes efficiency with which inventory is used
- $ITOR = COGS / \text{Average Inventory}$

2001 NCPA Digest ITOR

$$\text{ITOR} = \frac{\$1,761,620}{188,643} = 9.3$$

Two Advantages of Increasing ITOR

1. Reduced investment in inventory frees capital for other profit-making ventures
2. Increased return on investment in inventory

Inventory Return on Investment

= Net Profit/Average Inventory

= \$74,055/\$188,643 (2001 NCPA Digest pharmacy)

= 39% return on investment

If increase ITOR and decrease average inventory, then return on investment increases

= \$74,055/\$171,031 (decrease inventory by increasing ITOR)

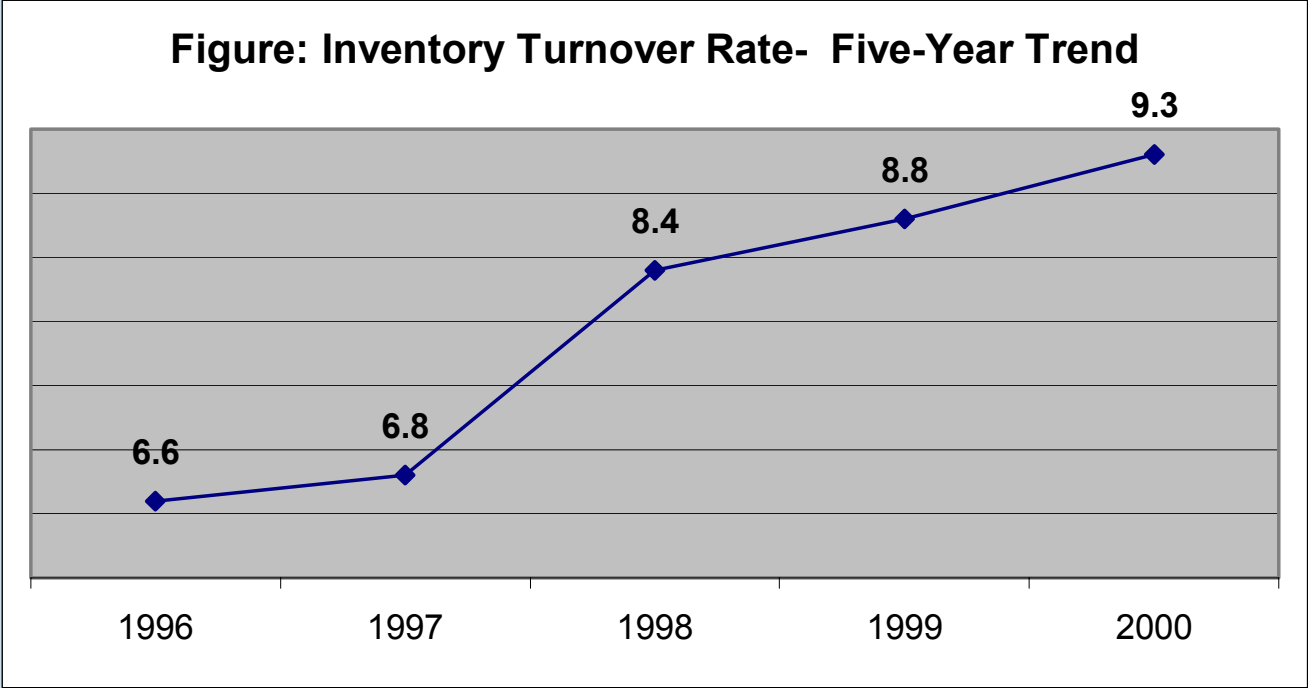
= 43.4% return on investment, an increase of 4%

Comparison of High and Low Turnover Pharmacies

(2001 NCPA Pharmacia Digest)

	High Turnover	Low Turnover
Total Sales	100% (\$2,569,859)	100% (\$1,590,152)
Total Expenses	15.1%	19.3%
Total Inventory	6.7%	16.1%
ITOR	12.0 times	4.3 times

ITOR Trend Over Past 5 Years



Source: 2001 NCPA-Pharmacia Digest

Prerequisites of Inventory Management

1. What to buy?
2. Where to buy?
3. How much and when to buy?

What To Buy?

- Product considerations
- Manufacturer considerations
- Competitor considerations

Where To Buy?

- Consider
 - Order cycle time
 - Variations in order cycle time
 - Minimum order required

How Much and When?

- Right amount of inventory on hand
- Difficult to determine

Kinds of Inventory

- Cycle stock: This is the inventory we keep on hand to fulfill orders
- Buffer/safety stock: This is inventory we keep around in case of demand/supply fluctuation
- Anticipatory/speculative stock: Inventory that is kept on hand because of expected future demand

Stock Depth Considerations

- Average demand
- Review time
- Lead time
- Safety stock (review time + lead time)

Formula to Set Order Point

$(\text{Review time} + \text{lead time}) \times \text{average demand} + \text{safety stock}$

Economic Order Quantity (EOQ) Model

$$Q = \sqrt{\frac{2(c)(D)}{I}}$$

Q = Economic order quantity

c = Procurement cost per order

D = Demand for product

I = Carrying cost

Inventory Control Methods

- Visual: Look at the number of units in inventory and compare with list of how many should be carried, then order more if needed
- Periodic: Count stock on hand at predetermined intervals and compare to minimum desired levels, then order if needed
- Perpetual system: Monitor inventory at all times

Computerized systems

- Integrate information, inventory, and cost data and allow for generation of reports and analyses



Computer Reports

- 80/20-monthly report
- Purchase-trend report
- 12-month sales analysis

Computerized Systems

- Web-based
- E-procurement

Computerized Systems

- Perpetual inventory
- Automatic purchasing

Perpetual Inventory Systems

- Record purchasing and sales data
- Interface inventory system with dispensing system
- Point-of-sale

Conclusion

- To have on hand the minimum quantity of goods needed to meet demand
- With purchasing, it is critical to have right products at right time at right price
- Must select supplier that provides quality products and value-added services
- Take advantage of discounts; will improve cash flow
- Computerized inventory systems can be used to manage inventory efficiently