CHAPTER 9

PHARMACY INVENTORY MANAGEMENT

Learning Outcomes

After completing this chapter, you will be able to

■ Describe the formulary system and its application in a purchasing and inventory system.

■ Execute lending and borrowing pharmaceutical transactions between pharmacies.

■ Apply the proper principles and processes when receiving and storing pharmaceuticals.

■ Discuss the process for managing medication inventory.

■ Identify products that require special handling.

■ Complete the appropriate processes in the management of disposal of pharmaceutical products.

■ Define medication reconciliation and medication therapy management.

■ Describe the differences among various types of community and ambulatory practice care settings.

■ Describe the technician’s evolving role in community practice settings.

■ Differentiate between questions technicians can answer and those reserved for a pharmacist.

Purchasing and inventory control processes impact the ability of the system to provide the right drug, to the right patient, in the right amount, in the right dosage form, by the right route of administration, and at the right time and frequency (known as the 5 rights). Therefore, an effective purchasing and inventory control system requires the understanding and active participation of all pharmacy staff.

This chapter describes the basic principles of pharmaceutical supply chain management. It applies to all types of pharmacy settings including decentralized, centralized, home infusion, and ambulatory care pharmacy operations.

Pharmacy technicians are often principally involved in procuring medication and related supplies for the pharmacy. Many hospitals must maintain compliance with the regulatory standards of the Centers for Medicare & Medicaid Services (CMS) and also strive to maintain accreditation by organizations such
as The Joint Commission (TJC). Regulatory standards on medication management are intended to guide operational procedures and promote consistently safe practices related to the procurement, storage, prescribing, dispensing, administration, and monitoring of pharmaceuticals. Pharmacy technicians are such an important part of preparation and dispensing of medications; their knowledge and performance in adhering to established standards are critical to the success of the pharmacy department.

PURCHASING AND INVENTORY CONTROL SYSTEM

Some pharmacies employ a few specialized individuals charged with managing the purchasing and inventory process of pharmaceuticals. Others employ numerous individuals in the role. The state-of-the-art practice involves the use of automated technology to manage the processes of purchasing and receiving pharmaceuticals from drug wholesalers. This technology uses sophisticated software algorithms often involving robotic devices, barcode scanning, and computer integration. These systems are highly automated, yet they require a human interface to oversee and manage the process. Other practices simply use technology, including product barcodes and hand-held computer devices that enable electronic data transmission in this process of procurement, purchase order generation, and electronic receiving of medication and related supplies. Using computer technology for these purposes has many apparent benefits including up-to-the-minute product availability information, comprehensive reporting capabilities, accuracy, tighter inventory control, and operational efficiency. It also enables compliance with various pharmaceutical purchasing contracts intended to facilitate best pricing and control drug expenditures.

NATIONAL DRUG CODE

All commercial pharmaceutical manufacturers are required to register pharmaceuticals with the U.S. Food and Drug Administration (FDA). This FDA Drug Registration and Listing System (DRLS) is a database that utilizes a unique identification number, called the National Drug Code (or NDC number), to uniquely identify drug products that are intended for human consumption or use.

The NDC number appears on the manufacturer’s label and follows a 10-digit format: either 4 4-2 (four digits-four digits-two digits), 5-3-2, or 5-4-1.

- The first set of digits identifies the specific drug manufacturer or labeler of the product and is assigned by the FDA.
- The next segment of digits is the product code, denoting the formulation, dosage form, and strength.
- The final segment identifies package type and size.

The NDC number is particularly useful in precisely identifying drug products in the processes of dispensing, placing orders, and addressing drug recalls.

FORMULARY SYSTEM

The formulary is the cornerstone of the purchasing and inventory control system. The Pharmacy and Therapeutics (P&T) Committee develops and maintains the formulary. This group generally comprises medical and allied health staff such as physicians, pharmacists, nurses, and administrators. These professionals collaborate to ensure that the safest, most effective, and economical medications are included on the formulary.

The products on the hospital formulary dictate what the hospital pharmacy should purchase and keep in inventory. Third-party prescription drug benefit providers will also establish plan-specific formularies for their ambulatory patients. Ambulatory (retail) pharmacy staff frequently encounter insurance plan-specific drug formularies in serving their patients and adjust their inventory accordingly. Most retail pharmacies do not rigidly restrict items in their inventory because, in this setting, inventories are largely dependent on the dynamic needs of their patient population and their patients’ respective insurance plans. Therefore, the concept of formulary management differs greatly depending on the practice setting (e.g., that of the hospital compared with that of the retail pharmacy).