Chapter 3

Administration and Management of Pharmacy Practice

Learning Outcomes

After completing this chapter, the technician should be able to:

- Define the benefits of joint commission accreditation and certification.
- Give examples of policies and procedures relating to the practice of pharmacy.
- Differentiate between quality control and continuous quality improvement mechanisms.
- List the elements required by federal law to be on a prescription label.
- List exemptions to the Poison Prevention Packaging Act.
- Discuss special handling requirements for controlled substances.
- Discuss the regulatory authority of state boards of pharmacy.
- Discuss the elements of effective communication utilized in pharmacy practice including oral, written, and electronic means of communication.
- State the intent of the Omnibus Budget Reconciliation Act of 1990 (OBRA 90) and describe the requirements it mandates.
- State the intent of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and describe the requirements it mandates.
- Discuss pharmacy record-keeping requirements.
- Discuss the rules and regulations governing billing and reimbursement procedures.
- Describe the correct procedures for cleaning and maintaining equipment used in compounding.

This chapter applies to Section III of the PTCB exam, Participating in the Administration and Management of Pharmacy Practice.

Pharmacy Operations

Pharmacy technicians play an integral role in the daily operation of pharmacy services in both community and hospital practice settings. They must know the regulations for regulatory agencies, standards utilized for scheduled drugs, and the rules and regulations that govern billing and reimbursement. This chapter will serve to familiarize you with many of the normal operation procedures for pharmacy practice.

Preparing for Accrediting and Regulatory Agency Visits

Regulatory and accrediting agencies make site visits to inspect and verify that their published standards of care are being met. They meet with health care providers to determine how patients are being cared for in the institution. As part of this site visit, the evaluation team may review documented guidelines and policy and procedure manuals. The preparation for the site visits is frequently a multidisciplinary effort in which technicians often participate as a key member on the health care team.

One of the most recognized accrediting agencies for hospitals is The Joint Commission (TJC; formerly known as the Joint Commission on the Accreditation of Healthcare Organizations, or JCAHO). The Joint Commission is an independent, not-for-profit organization that accredits

and certifies more than 15,000 health care organizations and programs in the United States. It publishes guides and checklists on how to prepare for on-site inspections. Pharmacy technicians need to be familiar with and trained on these published requirements and standards.

The benefits of Joint Commission accreditation and certification include:

- strengthening community confidence in the quality and safety of care, treatment, and services
- providing a competitive edge in the marketplace
- improving risk management and risk reduction
- providing education on good practices to improve business operations
- providing professional advice and counsel, enhancing staff education
- enhancing staff recruitment and development
- recognition by select insurers and other third parties
- fulfillment of regulatory requirements in select states

Policies and Procedures

Policies and procedures (P&P) are documents that provide guidance about expectations of the behavior of employees of the hospital, business, or pharmacy department. General P&P cover areas such as hiring requirements and employee benefits. Pharmacy P&P cover issues concerning the delivery of efficient, quality drug therapy, including the following:

- correct aseptic (sterile) technique when compounding intravenous (IV) admixtures
- good compounding practices
- repackaging processes
- monitoring patients for drug allergies
- proper handling of cancer chemotherapeutic agents
- distribution and control of all drugs used in the organization
- procedures for ensuring that patients receive the correct drugs
- use of investigational (experimental) drugs
- management of toxic or dangerous drugs
- provision of pharmacy services in the event of a disaster
- identification of medications brought into the organization by patients
- management of drug expenditures and the pharmacy budget
- staffing levels
- identification of prescription forgeries and theft prevention strategies
- billing procedures and maintenance of customer accounts
- inventory control and maintenance procedures
- management of medical equipment

Many accrediting organizations, such as the Joint Commission (TJC; formerly known as the Joint Commission on the Accreditation of Healthcare Organizations, or JCAHO), and professional organizations, such as the American Society of Health-System Pharmacists (ASHP), require that pharmacy departments develop and maintain P&P manuals. Pharmacy department P&P are developed by the director of pharmacy or the pharmacist-in-charge or owner in a retail establishment (or by corporate headquarters for a chain store). These documents are generally revised and updated annually and are compiled in a readily available manual or kept available online for easy access by all employees.

Quality Assurance Mechanisms

Quality control and continuous quality improvement (CQI) programs are also required by many of the accrediting agencies, such as the JTC and the Centers for Medicare and Medicaid Services (CMS; formerly the Health Care Financing Administration, or HCFA). Quality improvement is good practice, even if it is not required by regulatory oversight. The following are just a few examples of quality control and quality improvement activities:

- completing refrigerator temperature logs
- documenting inspections of nursing units and other medication stock areas
- decreasing legibility errors by working with local physicians to provide electronic prescription transmission
- improving medication turnaround time in the hospital by automating dispensing
- decreasing wrong-drug/wrong-patient errors through the use of bar code identification systems
- updating patient files at each prescription encounter to ensure that patient information is correct

Quality can be ensured through the use of quality control and through continuous quality improvement methods.

Quality Control

Quality control is a set of procedures followed during the manufacturing of a product or provision of a service to ensure that the end product or service meets or exceeds specified standards. Checks and balances usually occur at critical points in the process. The start of any quality control program requires complete written procedures and training for all staff members involved in that procedure. Although quality control identifies and prevents errors or defects, it does not always identify or correct the underlying cause.

Quality Improvement

Quality improvement (QI) is a scientific and systematic process involving monitoring, evaluating, and identifying problems and developing and measuring the impact of the improvement strategies. It requires that decisions be based on facts (data).There are numerous QI models used today, including Six Sigma, Zero Defects, Total Quality Management (TQM), and Continuous Quality Improvement (CQI).[16] There are also many tools used to identify problems, collect data, and analyze data. An example of a tool involving statistics is a run chart, which tracks patterns and trends over a period of time.

Technicians play key roles in many of the performance-improvement activities such as participating on performance improvement teams to collect and analyze data. Technicians may also assist in database management for quality improvement services such as adverse drug reaction reports, medication error reports, and medication use evaluations.

Medication safety is an emphasis in all areas of pharmacy; it is at the heart of all processes involving and applying performance improvement.

Compliance with Federal and State Law

Although states have the primary authority to regulate pharmacy practice, pharmacy is also subject to a number of federal laws. Examples of federal laws include:

- Food, Drug, and Cosmetic Act (FDCA)
- The Controlled Substances Act
- The Omnibus Budget Reconciliation Act of 1990

Prescription Label Requirements

The FDCA requires that all retail prescription labels have the following information:

- name and address of pharmacy
- prescription number
- date of prescription filling or refilling
- name of prescriber
- name of patient
- directions for use
- cautionary statement (as indicated on the prescription)

Medication orders in long-term care facilities and hospitals are different from retail prescriptions; therefore, the labels do not require the same information. Labels on medicines in long-term care facilities or hospitals may not include quantity dispensed, cautionary statements, original filling date, prescriber's name, or even the name and address of the pharmacy. Most states have rules for what must appear on prescription or medication order labels. Therefore, the technician should review the state's rules regarding labeling.

Prescription Refill Requirements

A prescription can usually be refilled as many times as the prescriber indicates on the prescription, within a time period determined by the state. This time period is usually 1 year from the date the prescription was written. If the number of refills does not appear on the prescription, it is assumed that refills are not authorized.

Patients who do not have refills on a prescription may request that the pharmacist ask the prescriber to authorize refills. An emergency supply of medication, usually not more than a 72-hour supply, may be dispensed to a patient if the pharmacist is unable to obtain refill authorization and determines that the patient may suffer harm if a lapse in therapy occurs.

Poison Prevention Packaging Act

The Poison Prevention Packaging Act was enacted to reduce the number of poisonings in children from drugs and chemicals. The law requires that all prescriptions and most over-the-counter drugs be dispensed in containers with child-resistant closures, unless the drug or container falls under one of the many exceptions. These child-resistant prescription containers cannot be reused for refills. This law usually applies to retail settings. It does not apply to the dispensing of prescriptions to inpatients in long-term care

facilities or hospitals, but it does apply to prescriptions dispensed to those patients upon discharge. Therefore, when filling a prescription for a patient who is being discharged from the institution to return home, the drug must be dispensed in a container with a child-resistant closure.

Some drugs, such as nitroglycerin, oral contraceptives, and other drugs packaged for patient use by the manufacturer (such as prepackaged methylprednisolone) do not require the child-resistant container. The list, with exceptions, of drugs that require safety closures is available from the U.S. Consumer Product Safety Commission's Web site, http://www.cpsc.gov/CPSCPUB/PUBS/384.pdf.

Because many patients do not have children at home or may have a disease that impairs their ability to open child-resistant containers, the patient, caregiver, or physician may request that the prescription be dispensed in a non-child-resistant container. Federal law does not require a written request to have the prescription dispensed in a non-child-resistant container. However, physicians who make this request must do so on a patient-by-patient basis and not in the form of a blanket request for all or a group of patients.

Prescription Drug Information for Patients

Pharmacists provide patients with different types of written information for their prescription drugs. Patients are provided with printed information about their **dispensed medication** called *consumer medication information* or *CMI.* In addition, the FDA requires pharmacists to provide patients with *patient package insert ("PPI")* with the dispensing of certain prescription drugs such as estrogens and oral contraceptives.

Controlled Substance Regulations

The Federal Controlled Substance Act was enacted to protect the public by controlling the flow of dangerous drugs into the community. The United States Department of Justice Drug Enforcement Agency (DEA) takes responsibility for vigilance over the distribution of these drugs in research, institutions, and the community. This agency plays an important role in creating the rules that govern the practice of pharmacy.

Drugs that are watched by the DEA are called *controlled substances.* Controlled substances are divided into five categories, or schedules. Schedule I drugs are substances with a high abuse potential and no legitimate medical purpose. Schedule II drugs are those with high abuse potential and a recognized medical purpose. Schedules III, IV, and V drugs have legitimate medical purpose but less abuse potential. For all practical purposes, Schedules III, IV, and V drugs are treated the same from a regulatory perspective.

To order a prescription for a controlled substance, the prescriber must be registered with the Department of Justice and be issued a DEA registration number. Similarly, to dispense a controlled substance, a pharmacy must have a DEA registration number.

Schedules of Controlled Substances

Schedule II

Some examples of single-entity Schedule II narcotics include morphine, codeine, hydrocodone, and opium. Other Schedule II narcotic substances and their common name-brand products include hydromorphone (Dilaudid®), methadone (Dolophine®), meperidine (Demerol®), oxycodone (Percodan®), and fentanyl (Sublimaze®). Some examples of Schedule II stimulants include amphetamine (Dexedrine®, Adderall®), methamphetamine (Desoxyn®), and methylphenidate (Ritalin®). Other Schedule II substances include cocaine, amobarbital, glutethimide, pentobarbital, and secobarbital.

Schedule III

Some examples of Schedule III narcotics include products containing less than 15 milligrams of hydrocodone per dosage unit (Vicodin®, Lorcet®, Tussionex®) and products containing not more than 90 milligrams of codeine per dosage unit (codeine with acetaminophen, aspirin, or ibuprofen). Other Schedule III substances include anabolic steroids, benzphetamine (Didrex®), phendimetrazine, and any compound, mixture, preparation, or suppository dosage form containing amobarbital, secobarbital, pentobarbital, dronabinol (Marinol®), or ketamine.

Schedule IV

The substances in this schedule have an abuse potential less than those in Schedule III and more than those

in Schedule V. Some examples of Schedule IV narcotics include propoxyphene (Darvon®), butorphanol (Stadol®), and pentazocine (Talwin-NX®). The following benzodiazepine substances are also found in Schedule IV: alprazolam (Xanax®), clonazepam (Klonopin®), clorazepate (Tranxene®), diazepam (Valium®), flurazepam (Dalmane®), halazepam (Paxipam®), lorazepam (Ativan®), midazolam (Versed®), oxazepam (Serax®), prazepam (Centrax®), temazepam (Restoril®), triazolam (Halcion®), and quazepam (Doral®). Other Schedule IV substances include barbital, phenobarbital, chloral hydrate, ethchlorvynol (Placidyl®), chlordiazepoxide (Librium®), ethinamate, meprobamate, paraldehyde, methohexital, phentermine, diethylpropion, pemoline (Cylert®), mazindol (Sanorex®), and sibutramine (Meridia®).

Schedule V

The substances in this schedule have an abuse potential less than those in Schedule IV and consist primarily of preparations containing limited quantities of certain narcotic and stimulant drugs, generally for antitussive, antidiarrheal, or analgesic purposes. Some examples are cough preparations containing not more than 200 milligrams of codeine per 100 milliliters or per 100 grams (Robitussin AC®, Phenergan with Codeine®) and buprenorphine (Buprenex®).

List I Chemicals

In addition to Schedules I through V controlled substances, the DEA monitors List I and List II chemicals. These are chemicals that can be used in the synthesis of other chemicals that are controlled substances. The pharmacy must account for List I and List II chemicals. Pseudoephedrine is a common List I chemical. The use of these chemicals in compounding may have to be reported to the DEA, depending on a state's rules.

States also will place certain drugs into a schedule. Occasionally, a conflict arises when a state and the federal government do not agree on which schedule a drug should be. If such a conflict arises, the stricter scheduling will apply.

State Boards of Pharmacy

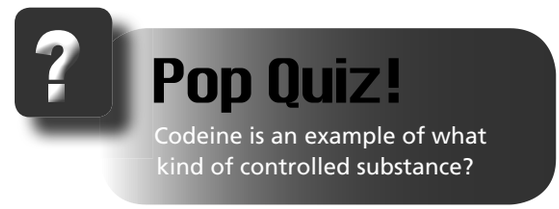
State pharmacy laws establish the legal requirements, restrictions, and prohibitions for the practice of pharmacy. State laws are enacted by state legislatures through the legislative process. If the state and federal laws or regulations differ, both laws and regulations must be followed, including the more stringent requirement whether state or federal.

Pharmacy technician requirements vary from state to state; however, an important and universal distinction for pharmacy technicians to understand is that they work under the supervision and direction of the pharmacist and may only perform the tasks that are permitted under State Law. State pharmacy laws do not permit pharmacy technicians to perform pharmacy tasks and responsibilities that are limited to pharmacists and require the professional judgment, education, and training of a pharmacist.

State boards of pharmacy are responsible for regulating the practice of pharmacy, including pharmacies, pharmacists, pharmacy interns, and pharmacy technicians. The state boards of pharmacy have regulatory authority over a number of areas, such as:

- licensing pharmacies and pharmacists
- registering or licensing pharmacy technicians
- inspecting pharmacies
- issuing rules and regulations
- investigating complaints, and disciplinary actions against pharmacies, pharmacists, and pharmacy technicians for violations of pharmacy laws and regulations

State boards of pharmacy have also enacted regulations pertaining to patient counseling by pharmacists. Information on the various state boards of pharmacy is available through the National Association of Boards of Pharmacy (NABP) Web site at www.nabp.net.



Counseling Requirements

The Omnibus Reconciliation Act of 1990 (OBRA 90) required states that receive federal funding to create programs to improve the quality of pharmaceutical care and save money by educating patients on the proper use of drugs. The program required pharmacists to obtain certain information from the patient, including personal identifying information, disease state, medication allergies, and other information that would be important for determining proper drug therapy. This federal program targeted only Medicaid and Medicare patients, but most states expanded it to include all patients.

Although most states require the pharmacist to provide the counseling, the pharmacy technician's role in this program is important in obtaining information from the patient. The pharmacy technician should ask patients if they desire counseling for all prescription products in addition to any OTC products the patient is purchasing.

OBRA 90 further mandated that pharmacists provide counseling for individuals or their caregivers. The pharmacist or a designee must extend an offer for medication counseling to the patient. The offer may be written or oral. The pharmacist must always perform the actual counseling session. The patient may decline counseling, and if so, this should be documented.

OBRA 90 and most state counseling regulations require that the following eight areas be covered in patient counseling:

- the name and description of the medication
- the route of administration, dosage, and dosage form
- special directions and precautions for preparation, administration, and use by the patient
- common severe side effects, adverse effects, interactions, and therapeutic contraindications
- techniques for self-monitoring therapy
- proper storage
- prescription refill information
- action to be taken in the case of a missed dose

Record-Keeping Requirements

The FDCA describes the records that pharmacists are required to keep. One of the main reasons pharmacists are required to record the receipt, disposition, and accountability of drugs is to ensure that the pharmacy can contact patients who received a drug that has been recalled.

Purchase invoices are records of drug receipt, prescriptions are records of drug disposition, and inventories provide a record of drugs in stock. Some type of written document should evidence any sales, disposals, returns, destruction, or theft of drugs. Rules vary as to the length of time records must be kept, but in general, it should not be less than 5 years. Some states may require longer storage of certain records.

The Health Insurance Portability and Accountability Act of 1996 (HIPAA)

The Health Insurance Portability and Accountability Act of 1996 (HIPAA) has strengthened patient privacy rights. Although this was not the only purpose of the law, the pharmacy's role in maintaining confidentiality has also increased. Patient records must be guarded from disclosure to unauthorized individuals and companies. Pharmacy employees are prohibited from discussing a patient's medical history except for purposes relevant to the patient's care. All written information concerning a patient should be discarded in such a manner as to protect the patient's identity. Utilizing shredders or professional document disposal services is now common pharmacy practice. Pharmacy technicians should only discuss information regarding the patient's therapy so that unauthorized persons will not overhear such discussions. Technicians should also be aware that using overhead paging systems to announce a patient's name could undermine a patient's privacy. Most pharmacies will have policies and procedures in place to address the requirements of HIPAA.

Communication and Teamwork

It is important for pharmacy technicians to develop effective communication skills to help strengthen professional relationships and ensure an appropriate information exchange. These skills will enable the pharmacy technician to better assist the pharmacist in providing patient-centered care and manage pharmacy operations.

Pharmacists are involved in patient-centered communication, the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient's quality of life.

Pharmacy technicians play an important role in the patient's safe use of medication. Often the pharmacy technician is the first person that the patient encounters. Appropriate appearance, behavior, professionalism, knowledge, and communication skills of the technician cannot be overemphasized.

Verbal communication is the most common form of interpersonal communication. It involves a spoken message delivered from a sender to a recipient. Nonverbal communication is the exchange of messages by means other than speaking. This may include, but is not limited to, appearance and behavior, body language, physical distance, and physical contact.

Body language can be interpreted as unconsciously conveying one's feelings or psychological state of mind and can have a profound impact on how the message is received by the recipient. Inappropriate expressions such as lack of eye contact or rolling of the eyes should be avoided. Body postures that convey attention and interest

should be used rather than the using of a closed posture showing a lack of interest.

Telephone encounters are a high percentage of the communication contacts made by a pharmacy technician on a daily basis. Nonverbal skills are not as significant but still play a role. Clearly, how the message is spoken impacts how the message is perceived by the recipient. At the beginning of the telephone conversation the pharmacy technician should identify themselves by name and title as well as the name of the pharmacy or department.

Internet and Electronic Communication

The use of the Internet and facsimile (fax) for communications has greatly expanded in pharmacy practice settings. The principles of effective written communication should be followed.

Never ask patients to provide information over the Internet that could lead to "identity theft" unless it is transmitted through the use of a security-encrypted Web site. When faxing documents, be sure to include a cover sheet to ensure the complete information reaches the appropriate person and follow the Health Insurance Portability and Accountability Act (HIPAA) requirements to maintain the privacy of patient protected health information (PHI). For important documents, use a method of verification of information receipt.

Teamwork

Pharmacy technicians are members of the healthcare team. They have a responsibility to promote the principles of the team. This can be done by the following behaviors:

- cultivating trust and confidence among team members
- recognizing the contributions of all team members
- working with other team members to solve problems and develop ideas
- minimizing politics by respecting professional boundaries
- helping to align the team around the common objectives and priorities
- establishing respect and appreciation among team members
- holding oneself and other team members to the same high standards
- putting the team's goals ahead of personal interests and goals

It is also the responsibility of team members to identify and disclose unprofessional behaviors among team members, which could jeopardize the team and the services provided. In pharmacy settings, these situations (eg, medication errors, drug diversion, substance abuse impairment, patient discrimination or harassment, theft, etc.) could result in negative effects on services, operations, and patient health. The pharmacy technician should play an active role in the detection and prevention of these issues by bringing irregularities to the attention of the pharmacist or appropriate supervisory personnel.

Billing and Reimbursement

Pharmacy Reimbursement Basics

One of the most time-consuming activities in the ambulatory care pharmacy setting is dealing with third party payment programs. Reimbursement for pharmaceuticals is complex and widely variable. Most prescription plans allow for "on-line adjudication" of prescriptions. This process verifies the patient's eligibility, identifies the reimbursement type, and identifies any fee due from the patient at the time of purchase. The exact methodology that is used to bill and reimburse for drugs will vary based upon several factors, including:

- the practice setting in which the drug is dispensed
- the type of drug that is being dispensed
- who is paying for the drug

In community pharmacy practice, the most common type of payment method is retrospective or **fee for service**. In the **retrospective payment** model, drugs are dispensed and later reimbursed according to a predetermined formula that is specified in a contract between the pharmacy and the **third party payer,** such as the insurance company or pharmacy benefit manager. The reimbursement rate for third party prescriptions is based on a formula consisting of various parts: ingredient cost, dispensing fee, and patient copayments. The ingredient cost is the amount paid to the pharmacy for the cost of the drug product, the **dispensing fee** is an amount paid for dispensing the prescription, and the **copayment** (also known as "copay") is the cost-sharing amount paid by the patient or customer.

- Third party reimbursement = (ingredient cost + dispensing fee) – copayment

Historically, the average wholesale price (AWP) has been the most commonly used benchmark used for billing drugs that are reimbursed in the community

pharmacy setting. AWP is usually set at 20–25% above the wholesale acquisition cost (WAC). Wholesale acquisition cost (WAC) is set by each manufacturer. It represents the "list price" at which the manufacturer sells the drug to the wholesaler. There is growing recognition that neither AWP nor WAC represents what is actually paid for drugs.

New benchmarks that are used for drug pricing within the past decade include average sales price (ASP) and average manufacturer price (AMP). ASP is based on manufacturer reported selling price data and includes volume discounts and price concessions that are offered to all classes of trade. AMP is the average price paid to manufacturers by wholesalers for drugs distributed through retail pharmacies. AMP includes discounts and other price concessions that are provided by manufacturers. AMP was created by Congress in 1990 to facilitate calculating Medicaid rebates. The Budget Deficit Reduction Act of 2005 (DRA) requires that AMP be used to calculate the **federal upper limit (FUL)** for drugs that are paid through Medicaid. The FUL represents the maximum of federal matching funds the federal government will pay to state Medicaid programs for eligible generic and multi-source drugs. With the enactment of the Patient Protection and Affordable Care Act of 2010 (health care reform) on March 23, 2010, the AMP was established as 175% of the ASP.

Typically, the reimbursement formula for a generic product is different than for a brand product. Sole source or brand-name drugs are usually reimbursed based upon AWP or WAC, whereas generic or multi-source drugs are reimbursed based upon a **maximum allowable cost (MAC)** schedule, which is usually based upon the cost of the lowest available generic equivalent.

Sample formulas:

- sole source drug reimbursement = AWP – 15% + $3.50 dispensing fee
- multi-source drug reimbursement = MAC + $3.50 dispensing fee

Payment for Drugs and Pharmacy Services

Self-Pay

Although many patients have some form of prescription drug coverage, a significant number are still uninsured or underinsured. The amount that is paid by a cash-paying customer is often referred to as the "usual and customary price" or the "cash price." Many third party contracts will indicate that the amount to be paid for a prescription is based upon a reimbursement formula (as explained above) or the usual and customary price. The lower of the two prices is the amount usually paid.

Many drug companies offer certain free drugs through **patient assistance programs (PAPs)** to low-income patients who lack prescription drug coverage and meet certain criteria. Some companies also offer bulk replacement or **institutional patient assistance programs (IPAP)**. In the IPAP model, medications are provided to an institution (eg, pharmacy or clinic) rather than to the individual patient. The 340B drug-pricing program is another option that can be utilized to assist patients who lack adequate prescription drug coverage. There are several types of facilities that qualify as "covered entities" for 340B pricing, including federal qualified health centers (FQHC), disproportionate share hospitals (DSH) and state-owned AIDS drug assistance programs. The Office of Pharmacy Affairs, which is located within Health Resources and Services Administration, administers the 340B drug discount program.

Private Insurance

Private insurance can be either managed care (based on a network of providers) or indemnity (non-network based coverage). Managed care is a type of private health insurance or health care organization that is based on networks of providers, such as pharmacies, doctors, and hospitals. **Indemnity** insurance offers more choices of physicians and hospitals, but the employee's out-of-pocket costs are higher than with managed care.

Pharmacy Benefit Managers

Pharmacy benefit managers (PBM) are organizations that administer pharmacy benefits for private or public third party payers, also known as plan sponsors. These organizations may include managed care organizations, self-insured employers, insurance companies, labor unions, Medicaid and Medicare prescription drug plans, the Federal Employees Health Benefits Program, and other federal, state, and local government entities. A plan sponsor chooses a PBM to manage the pharmacy benefit; the sponsor pays the PBM a fee that is usually based on the number of beneficiaries (plan members and dependents) who are covered by the pharmacy benefit. The fee should cover the total cost of the pharmacy benefit (including all prescriptions) for the covered beneficiaries. The PBM designs and manages the pharmacy benefit so that the cost of prescriptions dispensed does

not exceed the amount of money paid to the PBM by the sponsor.

The **formulary** is the cornerstone of any PBM's activities. It is a specific list of drugs that is included with a given pharmacy benefit. The formulary usually includes both brand and generic drugs in most therapeutic categories. Brand name drugs can be either preferred (designated by the PBM as the first-choice drugs) or non-preferred. The PBM may charge different copays for different types of formulary drugs.

The PBM can utilize administrative tools within the context of the formulary in order to optimize the clinical and economic performance of the pharmacy benefit. Some of the more common administrative tools are prior authorization, step therapy, and quantity limits.

- **Prior authorization** requires the prescriber to receive preapproval from the PBM in order for the drug to be covered by the benefit.
- **Step therapy** requires use of a recognized first-line drug before a more complex or expensive second-line drug is used.
- **Quantity limits** set upper limits of the amount of a drug that will be covered by the benefit, or the total days of therapy.

Processing Private Third Party Prescriptions

Patients with a prescription drug benefit should have a prescription identification (ID) card. The information on the prescription ID card is necessary in order to submit a claim to the PBM.

The card will identify the PBM (any PBM) or drug benefit provider. It will show a telephone number for the PBM's customer service department. The employer may be identified (Your Company, Inc.), followed by the member name (Jane Doe) and member ID number (12345678). If the beneficiary is different from the plan member, such as a dependent child, the participant's name may be listed. Finally, the BIN # (000012) is the bank identification number, which is also needed to submit the claim. It references the claims processor or PBM.

Once the technician enters information in the pharmacy computer from the prescription ID card and the prescription, the PBM will either accept or reject the claim. If the claim is rejected, the PBM will respond with a message, commonly known as a rejection code. The technician must assess the meaning of the rejection code and respond accordingly. If the issue cannot be resolved, the technician may need to place a call to the PBM to resolve the issue.

Public Payers

Medicare

Medicare is the federal health program for the elderly, disabled, and people with end-stage renal disease or amyotrophic lateral sclerosis (ALS). Most people automatically qualify for Medicare once they turn 65 and are eligible for Social Security payments, and if they or their spouse have made payroll tax contributions to Medicare for a total of 10 years or 40 quarters. There are four parts to Medicare:

- Part A (hospital insurance)
- Part B (medical insurance)
- Part C (Medicare Advantage plans)
- Part D (prescription drug coverage)

Medicare Part A

Medicare Part A helps cover inpatient care (hospitals, skilled nursing facilities, hospice care, and some home health care). For most people, Part A coverage is prepaid through payroll taxes. Medicare Part A coverage involves a **deductible** and a benefit period of 60 days. A deductible is an out-of-pocket amount that must be paid before insurance coverage begins. Full Medicare coverage applies for the first 60 days; thereafter, the beneficiary is responsible for **coinsurance**, which is a fixed percentage charge for a service. Part A claims are processed by a fiscal intermediary, and the **diagnosis-related group (DRG)** is the basis for reimbursement.

Medicare Part B

Medicare Part B is optional medical insurance for outpatient physician and hospital services, clinical laboratory services, and durable medical equipment, prosthetics, orthotics, and supplies (DMEPOS). Part B coverage involves paying a monthly premium, an annual deductible, and coinsurance.

Medicare Part C

Medicare Part C is the Medicare Advantage Plan, which combines Part A and B coverage. Under this plan, benefits are provided by Medicare-approved private insurance companies. These private fee-for-service and managed care plans often include prescription drug benefits, called Medicare Advantage Prescription Drug plans or MAPDs; as such, Part C beneficiaries should not enroll in a Part D prescription drug plan. There are five types of Part C plans:

- health maintenance organizations (HMO)
- preferred provider organizations (PPO)
- medical savings account plans

- private fee-for-service plans
- Medicare special needs plans

Medicare Advantage Plans charge one combined premium for Part A and B benefits and prescription drug coverage (if included in the plan).

Medicare Part D

Medicare Part D is a federal prescription drug program that is paid for by the Centers for Medicare and Medicaid Services (CMS) and by individual premiums. It was enacted as part of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003. Medicare Part D offers a voluntary insurance benefit for outpatient prescription drugs. Medicare prescription drug plans are administered by private PBMs or other companies approved by Medicare. Each plan varies in terms of cost and drugs covered. Drug formularies for Medicare Part D vary from plan to plan. CMS requires that all Medicare prescription drug plans cover at least two drugs in each therapeutic category. There are six categories of drugs that must include almost all drugs in the category due to the importance of the therapeutic class and the need for beneficiaries to have access to all drugs in the class. The six protected drug categories are:

- antipsychotics
- antidepressants
- antiepileptics
- immunosuppressants
- cancer
- HIV/AIDS drugs

There are some classes of drugs that are not covered at all by Medicare Part D. These are:

- over-the-counter drugs
- benzodiazepines
- barbiturates
- drugs for weight loss or weight gain
- drugs for erectile dysfunction.

Processing Medicare Part D prescriptions is similar to processing prescriptions from any other private insurance company or PBM. All Part D claims must contain a National Provider Identifier (NPI). If the prescriber does not have an NPI, or if the pharmacy cannot locate the prescriber's NPI, a non-NPI prescriber ID can be submitted on the claim if allowed by the payer.

Medicaid

Medicaid is a medical and long-term care program that is jointly funded by the federal and state governments. Participation in Medicaid is optional for states; however, since 1982, all states participate in the Medicaid program. Medicaid covers three main groups of low-income Americans: parents and children, the elderly, and the disabled. Patients whose incomes exceed the established guidelines for eligibility may qualify for Medicaid if they have medical expenses that exceed a certain threshold. This type of coverage is commonly known as "spend down." As explained above, the Medicare Prescription Drug benefit, which provides prescription drug coverage for qualified senior citizens, was implemented in January 2006. Medicaid recipients who also qualify for Medicare are known as "dual eligible." Medicare is usually considered the primary payer for medical benefits for dual eligible patients; however, Medicaid can supplement Medicare benefits by providing coverage for benefits that may not be covered by Medicare and/or providing assistance with copayments for prescription medications. Medicaid functions as the "safety net" or payer of last resort.

In addition to Medicare and Medicaid, the government pays for health benefit programs for the Department of Veterans Affairs, Department of Defense, and the Indian Health Service. All veterans of active military service (Army, Navy, Air Force, Marines, and Coast Guard) are potentially eligible for health benefits from the Department of Veterans Affairs.

Claims Processing

Billing Methods in Institutional Pharmacy

Most billing in institutional settings is imbedded within the patient's overall bill for the stay. Separate payments are not made for drugs; the drug costs are included in the diagnosis-related groups (DRG), which are used to determine the payments made to the hospital by insurers. DRG were introduced in the early 1980s as part of a prospective payment system (PPS) to classify hospital cases based primarily on type of patient, diagnoses, procedures, complications, comorbidities, and resources used. Patients admitted for a hospital stay are assigned a DRG. Payment or reimbursement for inpatient services are often predetermined and are based on this DRG-based prospective payment system. There are three basic systems: billing at the time of order entry, billing at the time of dispensing, and billing at the time of administration.

Billing at the time of order entry charges the dispensed quantity of medication to the patient as soon as the order is entered by the pharmacy. Subsequent charges are transmitted every time the order is refilled for the patient. Some order entry charges assume a "flat rate charge" for the use or availability of the medication. A flat rate might occur, for example, on an order for a sliding scale insulin, rather than a charge for each administration. The flat rate is generally based on average usage for the order type.

Billing at the time of dispensing is a common method in many institutions that use point-of-care dispensing technology, such as Omnicell® or Pyxis®. The medication, rather than being charged at the time of order entry, is charged when withdrawn from the machine. This system may make billing more accurate by eliminating charges for lost medications. It also eliminates a lot of the crediting activity created when medications are returned to the pharmacy unused after being billed at the time of order entry.

Billing at the time of administration is the most accurate and efficient of the three. This system can be used when bedside bar code recognition of the patient and the medication allows for billing to be transmitted by the bar code reader.

Billing Methods in Outpatient and Clinic Settings

In an outpatient hospital, clinic, or physician office setting, physician-administered drugs may either be included as part of the procedure or paid separately. Most drugs given in this setting are considered fee-for-service or separately billable (if the drug exceeds the Medicare packaging threshold). Typically, the fee-for-service formula is based on AWP. Some drugs are bundled into the ambulatory payment classification (APC). APCs are predetermined outpatient payment categories, similar to inpatient DRGs.

Each drug charge requires the appropriate **Healthcare Common Procedure Coding System (HCPCS)** code, and the quantity should be billed in service unit increments. Service units are pre-determined billing increments that may be unrelated to the package size.

Key data elements necessary for claim submission include:

- beneficiary name and Health Insurance Claim Number (HICN)
- date of service
- Healthcare Common Procedure Code System (HCPCS) codes
- Common Procedural Terminology (CPT) codes
- International Classification of Diseases, 9th Revision (ICD-9) codes (also known as Diagnosis codes)
- clinical modifiers
- National Drug Code (NDC)
- units of service (quantity expressed in service units or billing increments)
- place of service

Community Pharmacy

The majority of pharmacy claims are submitted by community pharmacies and reimbursed by a third party payer. When working in the outpatient care setting, it is essential to understand how drugs are billed and paid. The prescription drug claims **adjudication** process involves the following steps:

- submitting appropriate information
- determining eligibility, coverage, and payment
- communicating reimbursement
- settling the claim

Today, the pharmacy industry uses the NCPDP Telecommunications Standard Format Version 5.1 to adjudicate prescription drug claims through the electronic, online, real-time system. The system was created to standardize the exchange of data for claims submission and adjudication. This format allows communication of claims between pharmacy providers, pharmacy benefit managers, third party payers, and insurance carriers at the point of service. Pharmacy technicians can verify eligibility, determine formulary coverage status, confirm quantity limits and copay amounts, submit claims, and receive payment information.

Prescription Processing

In order to submit an electronic on-line claim, key billing elements include:

- prescription processor (insurance company or contracted PBM information on the ID card)
- BIN (bank identification number)
  - PCN (processor control number)

- pharmacy provider information (specific to each pharmacy)
  - NPI (National Provider Identification) – effective May 23, 2008
  - NCPDP or NABP (formerly NPIC = National Pharmacy Identification Code)
- eligibility (specific to each patient)
  - member name and identification number (unique identifier)
  - group number (insurers have several groups or plans)
  - relationship (plan member, spouse, dependent)
- prescription information
  - date of prescription (date when prescription was written and each fill)
  - NDC = National Drug Code (which identifies the manufacturer, drug, strength, dosage form, and package size)
  - directions for use
  - quantity dispensed
  - days supply
  - refills (number of refills authorized)
  - Dispense as Written (DAW) or product substitution
  - physician signature (electronic signature, if permitted), NPI number, and DEA number, when required

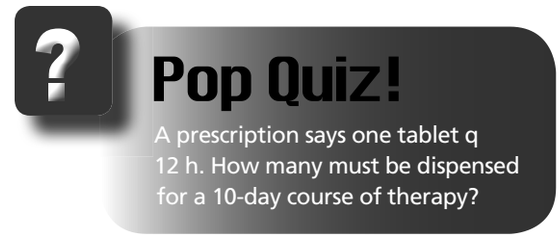
In a community pharmacy setting, prescription claims are submitted online and adjudicated in real time. Although the computer software offers guidance for correct billing practices, it cannot prevent all errors. Outlined below are basic elements and pharmacy procedures used to enter prescription-billing information.

Information necessary to file a claim is available on the prescription drug ID card and includes the following:

- cardholder ID
- group number
- dependent coverage (relationship codes)
  - 1 = cardholder or eligible primary person or subscriber
  - 2 = spouse of cardholder
  - 3 = dependent child
  - 4 = other (eg, disabled dependent, dependent adult, dependent parent, domestic partner)
- BIN and PCN numbers

Audits

Pharmacies are often subject to audits by third party payers, which can result in situations in which pharmacies are required to pay back third party payers.



Maintenance of Pharmacy Equipment

Cross-contamination resulting from microbes or drug product residue on equipment and work surfaces will not occur if written policies regarding cleaning and maintenance are followed and documented. Most automatic, mechanical, electronic, or other types of equipment have written programs for maintenance and cleaning to ensure proper performance. Technicians should familiarize themselves with these programs and document that these procedures have been completed as part of an ongoing quality assurance program. For example, laminar airflow hoods (LAH) should be cleaned before use, compounding equipment should be inspected and maintained according to manufacturers' recommendations, and temperature control equipment should be monitored for temperature and be equipped with an alarm that sounds when the temperature exceeds predefined limits. All equipment maintenance should be completed on a schedule and documented. Equipment cleaning, maintenance, and use should be recorded in individual equipment logs.

Nonsterile Compounding

All equipment and accessories used in compounding should be thoroughly cleaned after each use. Maintenance should be completed on the schedule recommended by the manufacturer and recorded. Weighing equipment should be certified at least annually. Guidelines for checking torsion balances can be found in pharmacy reference texts such as *Remington's Pharmaceutical Sciences* or the *United States Pharmacopeia* and the *National Formulary.*

Sterile Compounding

Sterile parenteral solutions must be kept free of living microorganisms, particulate matter, and pyrogens. This can be done by following several practices to maintain the sterile compounding area. See Chapter 16 in the *ASHP Manual for Pharmacy Technicians,* 4th edition for complete USP standards and information.

A sterile compounding area should be cleaned daily and segregated from normal pharmacy operations, patient specimens, nonessential equipment, and other materials that produce particles. Floors should be disinfected daily, and trash should be removed frequently. Stricter standards must be maintained if Risk Level II (batched solutions) or Risk Level III (sterile solutions from nonsterile ingredients) products are prepared in the area.

Laminar Airflow Workbench

The manufacturer's recommendations for proper operation and maintenance of LAFWs should be followed (see Chapter 1, Figure 6 for an illustration of the LAFW). LAFWs should be tested by qualified personnel every 6 months, whenever the hood is moved, or if filter damage is suspected. The LAFW should be cleaned before use; HEPA filters should be inspected every 6 months and have their prefilters changed regularly.

Before use, all interior working surfaces of the LAFW should be cleaned with 70% isopropyl alcohol or other appropriate disinfecting agent and a clean, lint-free cloth. The sidewalls of the hood should be cleaned in an up and down direction, starting at the HEPA and working toward the outer edge of the hood. The walls are generally cleaned before the "floor" of the hood. The hood should be cleaned often throughout the compounding period and when the work surface becomes dirty. LAFWs must be cleaned and disinfected at a minimum frequency of the beginning of each shift, before each batch, not longer than 30 minutes following the previous surface disinfection when ongoing compounding activities are occurring, after spills, and when surface contamination is known or suspected. Some materials are not soluble in alcohol and may initially require the use of water in order to be removed. After the water is applied and wiped off, the surface should be cleaned with alcohol. In addition, Plexiglas sides, found on some types of laminar flow workbenches, should be cleaned with warm, soapy water rather than alcohol because the alcohol will dry out the Plexiglas and cause it to become cloudy and possibly cracked**.** Spray bottles of alcohol should not be used in the hood, as they do not allow for the physical action of cleaning the hood, they can accidentally damage the HEPA filter, and they do not ensure that alcohol is applied to all areas of the surface to be cleaned. Once applied, alcohol should also be allowed to air dry, as this will increase its effectiveness as a disinfectant.

Cleaning should be done periodically during use when the surface is soiled. Any cleaning procedure should take into consideration what drugs have been mixed in the space. If toxic materials have been used in the LAH, proper protective equipment should be used during cleaning. Cleaning materials should be properly disposed of to protect others from exposure.

Biological Safety Cabinet

One of the most important pieces of equipment for handling hazardous drugs safely is the Biological Safety Cabinet (BSC). BSCs must be operated continuously, 24 hours per day, and they should be inspected and certified by qualified personnel every 6 months. Follow the manufacturer's recommendations for proper operation and maintenance, particularly replacement of HEPA filters.

Clean and disinfect the BSC regularly. Clean the work surface, back, and sidewalls with water or a cleaner recommended by the cabinet manufacturer. Do not use aerosol cleaners; they could damage the HEPA filters and cabinet, and could allow contaminants to escape.

Automated Compounders

Equipment used inside the LAFW must be cleaned daily according to the manufacturer's instructions. These systems also require routine maintenance and calibration to ensure accurate compounding measurements.

Repackaging Equipment

Equipment used in repackaging may provide a medium for cross-contamination. Like equipment used in compounding, it should be cleaned after each use.

Medication Errors

Pharmacists are responsible for the safe and appropriate use of medications in all pharmacy practice settings. As part of the multidisciplinary health care team, the pharmacist's role is to establish patient-specific drug therapy regimens designed to achieve predefined therapeutic outcomes without subjecting the patient to undue harm. As pharmacists become more involved in patient-specific care, technicians are permitted to perform tasks that were previously restricted to pharmacists. As their responsibilities expand, the role of technicians in ensuring medication safety also increases. As a result, they need to be aware of potential causes of medication errors and the significance of their role in preventing those errors.

According to the *ASHP Guidelines on Preventing Medication Errors in Hospitals,* medication errors can be categorized into 11 types, including:

- prescribing errors
- omission errors
- wrong time errors
- unauthorized drug errors
- improper dose errors
- wrong dosage form errors
- wrong drug preparation errors
- wrong administration technique errors
- deteriorated drug errors
- monitoring errors
- compliance errors

Note that the specific category to which an error belongs is not always obvious, because of the complex nature of the medication use process. Errors can occur because of multiple factors, and therefore may fit into several categories.

Causes of Medication Errors

- Calculation errors—These include misplaced decimal points and using wrong conversions.
- Abbreviations—The Joint Commission has developed a list of dangerous abbreviations and dose designations that should not be used. Technicians should know the list of abbreviations approved by their facility.
- High-alert medications—Because of their high risk of causing serious harm to patients when given in error. Errors with drugs designated as high alert do not necessarily occur more frequently than others. According to the ISMP, the following medications are examples of high alert medications:
  - heparin
  - narcotics and opiates (eg, morphine, hydromorphone, oxycodone)
  - potassium chloride injection
  - insulin
  - chemotherapeutic agents (eg, methotrexate, vincristine, doxorubicin)
  - neuromuscular blocking agents (eg, vecuronium, cisatracurium, succinylcholine)

  A complete list of high-alert medications and drug classes can be found on the ISMP Web site.
- Illegible handwriting

Look-Alike and Sound-Alike Drug Names

Many case reports deal with medication errors caused by confusion surrounding drug names. Hundreds of drug names either sound or look like other trade or generic drug names. The USP provides an easy to use search tool called USP's Drug Error Finder on their Web site. See the appendix "Confused Drug Names" in the *ASHP Manual for Pharmacy Technicians,* 4th edition.

Deteriorated Medications

Because expired medications and improperly stored medications may have lost their potency and thus effectiveness, technicians should take steps to keep these medications out of the dispensing stock. In many cases, it is the technician's responsibility to rotate stock. Technicians should be familiar with the pharmacy's regular system for checking for expired medications. Although checking expiration dates is sometimes viewed as a tedious job, it is important because it reduces the risk of making deteriorated drug errors.

Prevention of Medication Errors

It is impossible to eliminate all potential for error. People are not perfect, and even the most conscientious and knowledgeable staff members can make mistakes. There are several systems and methods that

help to prevent medication errors, including failure mode and effects analysis, systems designed to prevent medication errors, legal requirements, policies and procedures, multiple check systems, standardized order forms, education and training, and computerization and automation.

Failure Mode and Effects Analysis

Sometimes the systems that people work within present numerous opportunities for errors. **Failure mode and effects analysis (FMEA)**, also called failure mode effect and criticality analysis (FMECA), is a systematic evaluation of a process or system used to predict the opportunity for and severity of errors at various steps in the process. FMEA focuses on finding flaws within a system that create opportunities for individuals to make errors. It evaluates the "how" and "why" of an error instead of the "who."

Pharmacy Laws

Pharmacy laws are designed to protect the public by ensuring that a knowledgeable individual double-checks the results of the prescribing process and oversees the use of medications.

Policies and Procedures

Policies and procedures formally establish a system to prevent medication errors. Therefore, technicians should be familiar with the workplace's policies and procedures.

Multiple Check Systems

Another system designed to prevent medication errors is a multiple check system. This can include the pharmacist reviewing a physician order, a pharmacy technician preparing a medication for the pharmacist to check, a nurse inspecting the dose from the pharmacy, and a patient asking questions and examining the medication before taking it. A multiple check system is especially important with potentially lethal drugs such as cancer chemotherapeutic agents.

Education and Training

Education and training are important in reducing medication errors. Training can include pharmacy calculations, compounding techniques, pharmacy abbreviations, preparation of IV medications, and computer operation skills. Health care personnel should be familiar with the classes of medications, their generic and trade names, and their forms and doses. The Joint Commission requires organizations to prove their personnel are competent.

Computerization and Automation

The proper use of computerization and automation are effective ways to prevent medication errors. Many health care facilities use bar coding, automated dispensing cabinets (ADC), and robots to reduce medication errors. The technology reduces the number of health care personnel who handle the medications, which can in turn reduce the risk for human error.

What to Do When an Error Occurs

Whatever the circumstances surrounding an actual medication error, the pharmacy technician has a responsibility to inform the pharmacist about any known details. Pharmacists usually investigate the error and the severity of the consequences and gather the details before contacting the physician. The pharmacy technician must follow his or her institution's policy and procedures for the reporting of medication errors.

Liability

Technicians and pharmacists need to be informed about how to prevent medication errors. In addition to the institution or company liability, they may be held personally accountable for a medication error involving injury to a patient.

Identifying Trends

One of the purposes of medication error review is to look for medication errors that occur frequently or involve high-risk medications. The reviewers look for trends among medication error reports and evaluate the systems involved in the errors. Many quality assurance committees focus on the pharmacy's processes (eg, staff orientation and education) instead of on individual staff members, because most medication errors are due to poor drug distribution systems, miscommunication, faulty pharmaceutical packaging, labeling, nomenclature, and lack of information rather than any one person. Education is important to prevent other associates from making similar mistakes.

Self-Assessment Questions

1. What topics do policies and procedures generally cover?
   a. steps to follow when making an IV solution
   b. how the pharmacy should respond in an emergency
   c. staffing levels for the pharmacy
   d. how drug distribution is done
   e. all of the above
2. Quality control programs make sure that processes are working the way they are expected to, whereas quality improvement programs strive to make processes work better than before.
   a. True
   b. False
3. If a patient is out of refills but needs the medication, which of the following is (are) true for the pharmacist?
   a. can dispense an emergency supply if the physician cannot be contacted
   b. cannot dispense an emergency supply without violating the law
   c. can call the physician to obtain refills for the patient
   d. can refill the prescription without calling the physician if it is obvious that the medication is supposed to be continued
   e. both a and c
4. Which of the following medications are exempt from the Poison Prevention Packaging Act?
   a. oral contraceptives
   b. nitroglycerin
   c. medications packaged for patient use by the manufacturer
   d. all of the above
   e. no drugs are exempt from this important safety legislation
5. Schedule I drugs have a high abuse potential and are only rarely used medically.
   a. True
   b. False
6. Benzodiazepines like diazepam, lorazepam, and triazolam are schedule _____ drugs.
   a. II
   b. III
   c. IV
   d. V
7. What does OBRA 90 require?
   a. that pharmacists make the offer to counsel
   b. that the offer to counsel be made in writing
   c. that the pharmacist include a number of elements in education, including what to do if a dose is missed
   d. that there be a minimum of two pharmacists on duty at all times so that one is available to do counseling
   e. that someone provide counseling, but that person can be a pharmacist or a technician—whoever is free at the time
8. The Health Insurance Portability and Accountability Act of 1996 (HIPAA) strengthened patient privacy protection for health information.
   a. True
   b. False
9. Record retention rules vary by state, but the minimum amount of time most records should be retained is 7 years.
   a. True
   b. False
10. Laws that govern pharmacy technicians are the same in all 50 states.
    a. True
    b. False
11. _____ is responsible for registering or licensing pharmacy technicians.
    a. PTCB
    b. ASHP
    c. NABP
    d. State Boards of Pharmacy

Self-Assessment Questions

12. Nonverbal communication includes body language,
    a. appearance, and behavior
    b. physical distance, and physical contact
    c. how the message is spoken
    d. a and b
    e. all of the above
13. AMP is the average price
    a. paid by the wholesaler
    b. paid by the pharmacy
    c. paid by the manufacturer
    d. paid by the self-pay patient
14. The plan whereby a drug company offers certain free drugs to low-income patients who lack prescription drug coverage is
    a. indemnity insurance
    b. Medicare Part D
    c. patient assistance program
    d. WAC
15. PBMs
    a. are organizations that administer pharmacy benefits for private insurance companies
    b. are organizations that administer pharmacy benefits for third party insurance providers
    c. are organizations that administer pharmacy benefits for the federal government
    d. are organizations that administer pharmacy benefits for private or third party payers.
16. Medicare is
    a. a medical and long-term care program funded by federal and state governments
    b. the federal health program for the elderly, disabled, and others with ESRD and ALS
    c. the federal health program for low-income Americans
17. Medicare Part D plans all subscribe to the same formulary with the same costs and benefits to all subscribers.
    a. True
    b. False
18. ICD-9 codes used in claim submissions are used to designate
    a. beneficiaries
    b. drug name, strength, and manufacturer
    c. place of service
    d. diagnosis
19. How should laminar airflow hoods be cleaned?
    a. with water and disinfected with 70% isopropyl alcohol
    b. from the dirtiest area to the cleanest
    c. always the same way regardless of what was last prepared in the hood
    d. both a and b
    e. none of the above
20. What should routine maintenance of the sterile compounding area include?
    a. LAH pre-filter should be changed monthly
    b. floor should be cleaned daily
    c. trash should be emptied frequently
    d. HEPA filter should be inspected every 6 months
    e. all of the above
21. When cleaning a laminar flow hood the technician should
    a. work from the outer edge toward the HEPA, then move to the floor
    b. start with the floor, then the walls from the outer edge toward the HEPA
    c. work from the HEPA toward the outer edge, then the floor
    d. start with the floor, then move to the walls starting at the HEPA toward the outer edge
    e. it all works as long as it gets done
22. Biological safety cabinets should
    a. be left running 24 hours a day
    b. be turned on only when in use and closed when not in use
    c. replace all LAFWs
    d. be cleaned with aerosol cleaners to assure adequate coverage

Self-Assessment Questions

23. According to the ISMP, insulin is a high alert drug.
    a. True
    b. False
24. Failure Mode and Effective Analysis (FMEA) is a systematic approach evaluating
    a. who is causing errors in the drug-use process
    b. what process should be fixed to eliminate errors in the drug-use process
    c. how and why an error was made in the drug-use process.
    d. standardized training of pharmacy technicians to minimize errors in the drug-use process
25. Because pharmacists have the responsibility for the final check of all products, the pharmacy technician is free of all liability.
    a. True
    b. False