

Chapter 1

Introduction to Pharmacy

Learning Outcomes

This chapter reinforces the following learning outcomes discussed in Chapter 1/ Introduction to Pharmacy of the *Manual for Pharmacy Technicians, 4th edition*.

- Compare and contrast the responsibilities of pharmacy technicians and pharmacists.
- Outline the differences among licensing, certification, and registration.
- Describe the advantages of formal training for pharmacy technicians.
- Describe the differences between the ambulatory and institutional pharmacy practice settings.
- List two specific examples each of ambulatory and institutional pharmacy practice settings.
- Describe at least six characteristics of a professional.
- List five tasks that pharmacy technicians perform in various pharmacy settings.
- Describe the concept of pharmaceutical care.
- Define medication therapy management.
- Explain why the use of outpatient pharmacy and medical services is increasing.

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Multiple Choice

1. A pharmacy technician may perform all of the following tasks except:
 - a. Refilling Pyxis.
 - b. Repackaging medications.
 - c. Maintaining medication inventory.
 - d. Advising patients about aspirin.
2. Upon passing the exam provided by PTCB, pharmacy technicians earn a:
 - a. Pharmacy Technician license.
 - b. Pharmacy Technician registration.
 - c. Pharmacy Technician diploma.
 - d. Pharmacy Technician certificate.
3. Advantages of accredited pharmacy technician education include all of the following except:
 - a. Provision of a separate credential to be used after the technician's name.
 - b. Provision of standard educational goals designed to upgrade pharmacy technician education.
 - c. Provision of basic competency of pharmacy technicians who graduate from an accredited program.
 - d. Provision of criteria for technician trainees as they choose a technician training program.
4. Pharmacy technicians have the most patient contact in:
 - a. Long-term care pharmacy.
 - b. Hospital pharmacy.
 - c. Nuclear pharmacy.
 - d. Ambulatory pharmacy.
5. PBM stands for:
 - a. Patient benefit manager.
 - b. Pharmacy benefit manager.
 - c. Patient behavior modification.
 - d. Potential business model.
6. Medication therapy management (MTM) includes all of the following except:
 - a. Assessment of a pharmacy's inventory.
 - b. Formulation of a medication treatment plan.
 - c. Selection, initiation, modification, or administration of medication therapy.
 - d. Monitoring of a patient's response to therapy.
7. Pharmaceutical care includes all of the following except:
 - a. Identification of potential and actual drug-related problems.
 - b. Compounding sterile medications using aseptic techniques.
 - c. Resolution of actual drug-related problems.
 - d. Prevention of potential drug-related problems.
8. Pharmacokinetics is the study of:
 - a. Drugs and their actions in the body.
 - b. The process by which drugs are absorbed, distributed, metabolized, and eliminated in the body.
 - c. The science of preparing and dispensing drugs.
 - d. The movement of a prescription through the filling process.
9. In all states, pharmacists are licensed by the:
 - a. NAPLEX.
 - b. State Board of Pharmacy.
 - c. NABP.
 - d. PTCB.
10. ASHP's ten characteristics of a professional include all of the following except:
 - a. Knowledge and skills of the profession.
 - b. Commitment to self-improvement of skills and knowledge.
 - c. Accountability for his or her work.
 - d. Ability to defend medication errors.
11. Technician duties in a home care setting may include all of the following except:
 - a. Preparing sterile injectable products.
 - b. Maintaining computerized patient profiles.
 - c. Delivering medications.
 - d. Discussing drug interactions.
12. As the demand for cost-effective health care increases, pharmacy technicians with well-developed critical thinking skills may find themselves assuming responsibilities previously assigned to pharmacists such as:
 - a. Managerial duties.
 - b. Patient education.
 - c. Pharmacokinetic studies.
 - d. Drug utilization review.

Matching

- A. Licensure
- B. Registration
- C. Certification
- D. Accreditation
- E. Hospital Pharmacy

- F. Retail Pharmacy
- G. MTM
- H. ASHP
- I. PTCB
- J. AAPT

- | | |
|---|--|
| <ul style="list-style-type: none"> _____ 1. A nongovernmental agency or association grants recognition to an individual who has met certain predetermined qualifications specified by that agency or association. This recognition demonstrates to the public that the individual has achieved a certain level of knowledge, skill, or experience. _____ 2. Granting recognition or vouching for conformance with established criteria (usually refers to recognition of an institution). _____ 3. An agency of government grants permission to an individual to engage in a given occupation upon finding that the applicant has attained the minimal degree of competency necessary to ensure that the public health, safety, and welfare will be reasonably well protected. | <ul style="list-style-type: none"> _____ 4. The process of making a list or being enrolled in an existing list. _____ 5. Ambulatory pharmacy. _____ 6. The organization that accredits Pharmacy Technician Training Programs. _____ 7. A pharmacy technician organization. _____ 8. A distinct service or group of services that optimize therapeutic outcomes for individual patients. _____ 9. Institutional pharmacy. _____ 10. An organization that provides a National Certification Test. |
|---|--|

True or False

- | | |
|---|---|
| <ul style="list-style-type: none"> _____ 1. The study of how drugs are absorbed, distributed, metabolized, and eliminated by the body is called pharmacokinetics. _____ 2. Educating patients about their medications or suggesting medication alternatives to physicians is a task for a pharmacy technician. _____ 3. Training prerequisites for pharmacy technicians are the same throughout all of the states. _____ 4. Only pharmacists may prepare and compound sterile products. _____ 5. Technicians may be trained on the job or by completing a formal program. _____ 6. Pharmacists may be trained on the job or by completing a formal program. | <ul style="list-style-type: none"> _____ 7. Pharmacy technicians must recertify every 2 years by completing 20 hours of continuing education, with at least 1 hour related to pharmacy law. _____ 8. Pharmacy technician training programs are accredited by PTCB. _____ 9. Residencies provide the opportunity for pharmacy technicians to gain clinical experience, usually in hospital, ambulatory, or community settings. _____ 10. Most consumers believe that all pharmacy technicians have been trained and certified before they are allowed to prepare prescriptions. _____ 11. There are three recognized certification tests—PTCE, ExCPT, and NPTE. |
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Fill in the Blank

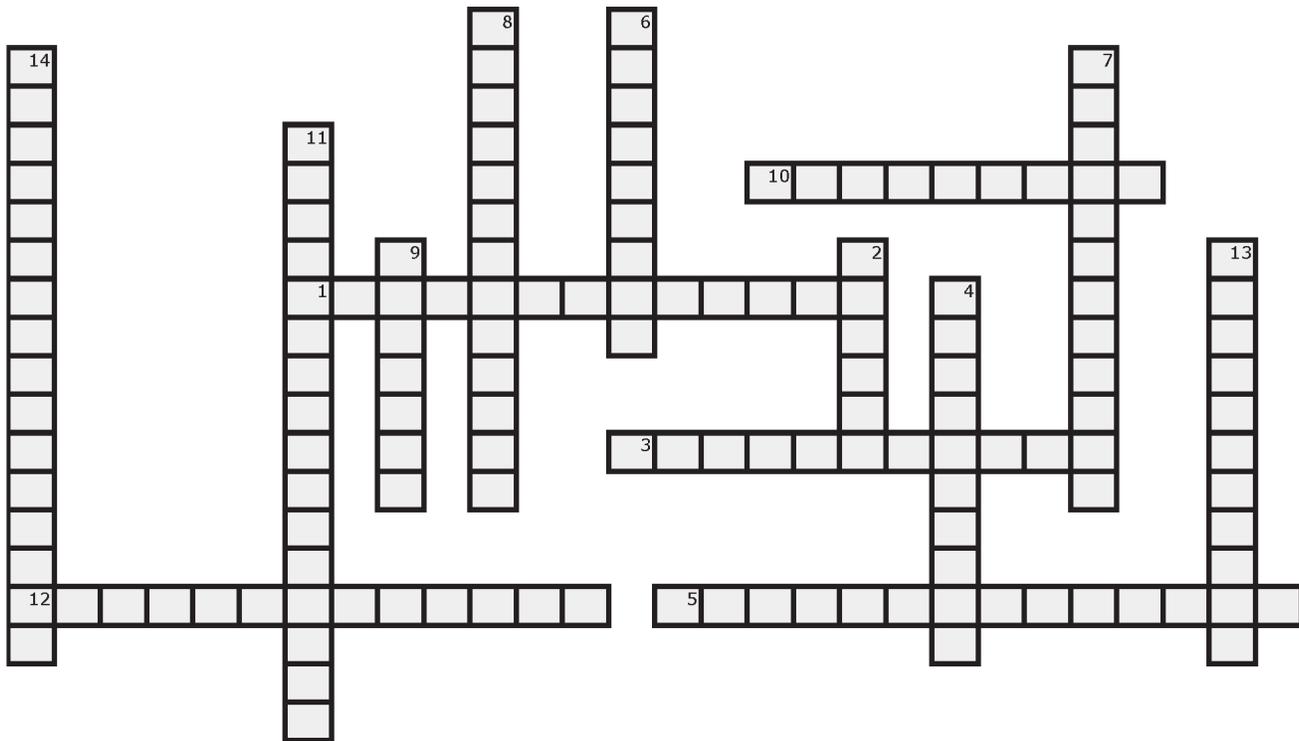
1. To maintain certification, a pharmacy technician must accumulate _____ continuing education credits.
2. Pharmacy technicians must recertify every _____ years.
3. Of the required hours of continuing education, at least _____ hour(s) must be related to pharmacy law.
4. The PTCB exam has _____ questions.
5. The ExCPT exam has _____ questions.
6. A maximum of _____ hours may be earned at the technician's workplace under the direct supervision of a pharmacist.
7. _____ care is care that is given to those patients with incurable diseases who are generally not expected to live more than 6 months.
8. An example of institutional pharmacy is _____.
9. An example of ambulatory pharmacy is _____.
10. A _____ oversees prescription medication programs and processes and pays prescription medication insurance claims.

Short Answer

1. A customer comes into the pharmacy and needs some help finding OTC cough syrup. It is time for the technician's lunch break, and no one else is available. The technician tells the customer that the store is out of cough syrup so that he can go to lunch on time. Discuss the violations of professional conduct displayed by this pharmacy technician.
2. Discuss the typical pharmacy technician duties in different pharmacy settings such as community pharmacy and hospital pharmacy. What tasks might be the same and what tasks are unique in these settings?
3. What is the purpose of MTM (Medication Therapy Management) and how is it accomplished?
4. Compare and contrast the two organizations that offer a National Certification Exam for pharmacy technicians.
5. What is the organization that accredits Pharmacy Technician Training Programs?
6. Technicians may specialize in many areas. Describe the different specialty areas. Why would you be interested or not interested in these areas?

Internet Research

1. Go to www.PTCB.org and find out about the exam.
 - a. How do you prepare for the exam?
 - b. What is the content of the exam?
 - c. How many questions are there?
 - d. How long will you have for the test?
2. Go to the American Society of Health-System Pharmacists' web site, the pharmacy technician page at www.ashp.org/technicians.
 - a. What are the opportunities for involvement in ASHP?
 - b. What are ASHP's latest initiatives and activities?
3. Go to the National Association of Boards of Pharmacy web site at www.nabp.net.
 - a. Find your State Board of Pharmacy Newsletter—what is new?
 - b. Type "technician" in search box—what is new with technicians on the NABP web site?
 - c. Click on "Government Affairs" and report any news about pharmacy technicians.

Crossword Puzzle**Part
1****Across:**

1. Technicians to check the work of other technicians
3. Granting recognition or vouching for
5. Nonsterile compounding
10. Provided by agency of the government
12. Critical skill in ambulatory pharmacy

Down:

2. Pharmacist degree
4. Dispensing cabinet
6. Pharmacist postgraduate training
7. The study of drugs
8. PTCB provides
9. Used in bar-code technology
11. Method of preparing sterile products
13. IV stands for
14. Study of movement of drug through body

Word Search

G I D N A R A N H N T C U H O S P I C E C E R E H
 E N L E R R A C L A C I T U E C A M R A H P L R A
 R A C C M E M C C I N H C E T Y C A M R A H P U A
 H N T M T A R H E C H C A C E A R E E I C E M S R
 N M T N C H O S P I C E C A R H I Y T N C M T N E
 Y A T E P I C A C N R H A L L I C E N S U E L E N
 E I N I H E A L T H S Y S T E M P H A R M A I C H
 R H A P S M S A A C S F A E E N C A I T O E T C H
 P H A R M A C Y B E N E F I T M A N A G E R Y I E
 H A S O E A G T P T R E R A C E C I P S O H C L N
 N I S L N T O E H Y A A C M R E T G N O L H R E R
 R R R A A P C T A C N O I T A T I D E R C C A A S
 P E S E C H C I R A Y C A I E R G I L T T S M N M
 E M A H G T A E M M G L L R O N N N H A A Y I G I
 F E E G A I H R A R S T A F I C C N H N C O A A E
 S O A U A H S S C A A L O L I A H A A A T E A D Y
 H G H I C E T T A H A R I Y M H C M M A I C U I E
 I N C R E A H A A P R A A R I L T R T R O H R T E
 H I T E A H O T E T T H A H A I A I R I P A L A U
 I L C G N A R A M N I H G C F H D E L E R M D R P
 I A T I D H E T E A P O I E P E R A I L Y N E T E
 T I I S S N R D E L A T N M R A I E E L E R P S Y
 A T A T T A E P A L U E E C C T L Y L C U P A I R
 T N A R M R A T N E B T A M N T S Y I S A H M G T
 I E E A C M I A C Y S E R E L R R I N N P R N E R
 D D R T S P H A C Y I E D N O I Y E C I A M C R A
 E E A I S A M A S O T E R E S E C M T A P P A A T
 R R S O Y R M H A G R E T O I I A C C E M E M E I
 C C H N A R T E N C P R T L L E E O E E I R E R G
 C H N H A L I O H O M E H E A L T H C A R E A A M
 A A P H A H L O G E A E T M A L F T S A E P E H T
 P H P E A A H O S P I T A L H A R M A C Y C Y O P
 E R H E C A E R A C L A C I T U E C A M R A H P C
 P H A R M E C I S T H E A H S G A Y H A C H E N L
 C N H H O S P I T A L P H A R M A C Y M A I E O I
 R T N S O E M T I H E O T I E M H H A R G R Y I E

ACCREDITATION
 CREDENTIALING
 HEALTHSYSTEMPHARMACY
 HOMEHEALTHCARE
 HOSPICECARE
 HOSPITALPHARMACY
 LICENSURE

LONGTERMCARE
 PHARMACEUTICALCARE
 PHARMACIST
 PHARMACYBENEFITMANAGER
 PHARMACYTECHNICIAN
 REGISTRATION