

APhA Pharmacy Technician Training Series

2nd Edition

The Pharmacy Technician Skills- Building Manual

Karen Snipe



American Pharmacists Association
Improving medication use. Advancing patient care.

APhA

The Pharmacy Technician Skills-Building Manual

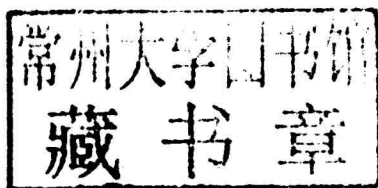
2nd Edition

Karen Snipe, MAEd, CPhT

Pharmacy Technician Program Coordinator

Trident Technical College

Charleston, South Carolina



American Pharmacists Association®

Improving medication use. Advancing patient care.

Washington, D.C.

Acquiring Editor: Sandra J.Cannon
Managing Editor: Vicki Meade, Meade Communications
Copy Editor: Mary De Angelo
Proofreaders: Publications Professionals LLC
Design and Layout: Michele Danoff, Graphics By Design
Cover Designer: Mariam Safi and Scott Neitzke, APHA Creative Services
Indexer: Jennifer Burton, Columbia Indexing Group

©Copyright 2015 by the American Pharmacists Association
APhA was founded in 1852 as the American Pharmaceutical Association

Published by the American Pharmacists Association
2215 Constitution Avenue, NW
Washington, D.C. 20037-2985
www.pharmacist.com www.pharmacylibrary.com



To comment on this book via email, send your message to the publisher at aphabooks@aphanet.org

All rights reserved.

No part of this book may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without written permission from the publisher.

Library of Congress Cataloging-in-Publication Data

Snipe, Karen R., author.

The pharmacy technician skills-building manual / Karen Snipe. -- 2nd edition.
p. ; cm.

Includes bibliographical references and index.

ISBN 978-1-58212-215-1

I. American Pharmacists Association, publisher. II. Title.

[DNLM: 1. Pharmacists' Aides--Problems and Exercises. 2. Drug Compounding--Problems and Exercises. 3. Drug Labeling--Problems and Exercises. 4. Pharmaceutical Preparations--administration & dosage--Problems and Exercises. 5. Pharmaceutical Services--Problems and Exercises. QV 18.2]

RM105

615.1076--dc23

2014027502

HOW TO ORDER THIS BOOK

Online: www.pharmacist.com/shop

By phone: 800-878-0729 (from the United States and Canada)

VISA®, MasterCard®, and American Express® cards accepted

NOTICE

The author and publisher have made a conscientious effort to ensure that the information in this manual is accurate and in accord with accepted standards at the time of publication. However, the information should be used solely for course work and preparation for the examination given by the Pharmacy Technician Certification Board. In no event should the information contained herein be used in connection with the actual services to be performed by pharmacy technicians.

This book is in no way authorized by or sponsored by the Pharmacy Technician Certification Board, Inc.

Drug therapy, other treatment, and pharmacy practice information are evolving constantly because of ongoing research and clinical experience, and they are often subject to interpretation. The publisher, author, reviewers, and other contributors have made every effort to ensure the accuracy and completeness of the information presented in this publication. However, these parties cannot be held responsible for the continued currency of the information, any inadvertent errors or omissions, or the application of this information, and shall have no liability to any person or entity with regard to claims, loss, or damage caused or alleged to be caused, directly or indirectly, by the use of information contained herein. Readers are advised that decisions regarding any treatment, including drug therapy, must be based on the independent judgment of the clinician, changing information about a treatment or drug (e.g., as reflected in the literature and manufacturer's most current product information), and changing medical practices.

Dedication

Blessings and appreciation to my husband, Roy, who encourages me every day to keep going when I'm frustrated and to complete every project I take on.

Thank you also to my students, who inspire me to push for excellence in pharmacy technician practice.

Preface



Preface to the Second Edition

The pharmacy technician profession has evolved exponentially beyond prescription processing and customer service. Today's technician is asked to function in a highly computerized and technology-driven environment while simultaneously performing daily tasks that require clear thought processes and manual dexterity.

Some states have created stepladders to encourage the promotion of technicians, and they have introduced incentives for technicians to take on more responsibilities—which allow pharmacists to perform higher-level functions in patient care. To that end, today's student technicians need structured, purposeful training to be competitive in the hiring market.

As a technician educator, I've always had the goal of opening my students' eyes so they see beyond the job's everyday tasks. I want them to be open-minded about embracing new developments in the field of pharmacy. I strive to give them opportunities to learn, stretch, and reach for the goal of being a technician in whom pharmacists can have complete confidence.

This text reflects the approach I use to help students become successful pharmacy technicians. It is written in a clear, concise style that lays a solid foundation in good technique. It also provides step-by-step instructions and exercises, as well as challenging activities to promote learning.

I encourage you to dive into this manual and work through each chapter to become *"the technician who makes your pharmacist's day."*

Karen Snipe
July 2014



Acknowledgments

My appreciation to the instructors on my team—Heather Weston, DeAnn Tuttle, Tracy Davis, and Carole Russell—who keep me updated on changes in the field and share creative ways to help students learn.

I also gratefully acknowledge the following:

- L. Michael Posey, BSPharm, MA, for sharing photographs and artwork.
- Jaclyn Kruse, PharmD, for fact-checking the contents.

Contents



Preface	ix
Acknowledgments	x
Chapter 1	Pharmacy Technician Job Description and Duties	1
Chapter 2	The Pharmacy Environment.....	11
Chapter 3	Medication Labels and Dosage Forms	33
Chapter 4	Prescription Requirements and Preparation	53
Chapter 5	Inventory Control.....	73
Chapter 6	Pharmacy Computer Applications.....	87
Chapter 7	Insurance Coverage.....	95
Chapter 8	Hospital Pharmacy	111
Chapter 9	Nonsterile Compounding	125
Chapter 10	Sterile Compounding Guidelines.....	147
Chapter 11	Sterile Compounding	157
Chapter 12	Specialized Sterile Compounding	179
Chapter 13	Information Resources	199
Appendix	Drug Calculations Conversion Table	213
Answer Key	215
Index	277

An abstract graphic on the left side of the page features a collection of colorful pills and capsules in various shapes and sizes, including red, yellow, blue, and white, arranged in a dynamic, overlapping pattern.

Chapter

I

Pharmacy Technician Job Description and Duties

Learning Objectives:

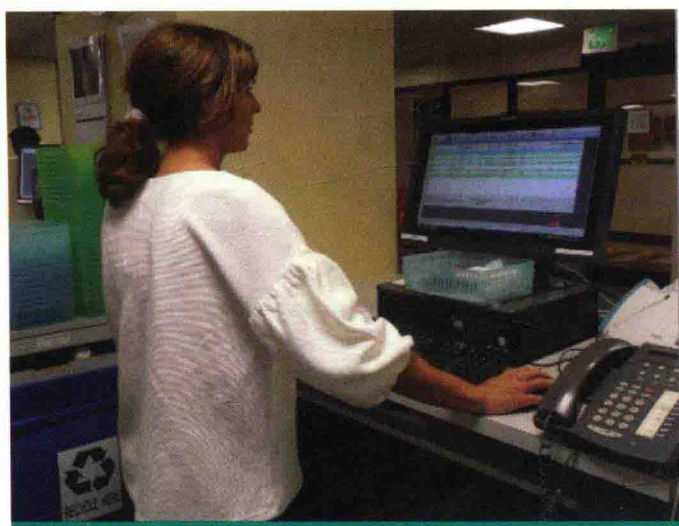
- The pharmacy team
- The relationship between pharmacists and technicians
- The role of the pharmacy technician on the health care team
- Professional requirements

Today's pharmacy technicians are important members of the health care team. In fact, pharmacists are fond of saying that *pharmacy technicians can either make or break their day*. As a pharmacy technician, you are the pharmacist's primary assistant—a second pair of eyes—and are valuable to pharmacy operations on a daily basis. Your goal is to become the type of technician who makes a pharmacist's day. **Exhibit 1-1** shows a pharmacy technician at work.

Exhibit 1-1



Pharmacy Technician at Work



The official title of **pharmacy technician** did not come into being until the 1980s. Before that, pharmacy technicians were known as pharmacists' assistants, support personnel, or ancillary personnel. The very first pharmacy technicians were usually related to the pharmacist who owned the pharmacy—family members employed as clerks, cashiers, and soda fountain staff.

In 1995, the Pharmacy Technician Certification Board (PTCB) formally defined the pharmacy technician's role in health care. Pharmacy technicians may now have such titles as lead technician, team leader, certified pharmacy technician (CPhT), registered pharmacy technician, and state registered and certified technician. Recently, many state boards of pharmacy have also developed a scope of practice for pharmacy technicians. **Exhibit 1-2** contains a definition of a pharmacy technician.



Lab Discussion #1

Scope of Practice

1. Many state boards of pharmacy have developed a "scope of practice" for pharmacy technicians. What is a scope of practice?
2. The Pharmacy Technician Certification Board defined the technician's role in health care. What are some of those roles?

Exhibit 1-2



Definition of a Pharmacy Technician

A pharmacy technician—sometimes known as a pharmaceutical technician—is a health care worker who performs pharmacy-related functions that do not require the judgment of a pharmacist. A technician generally works under the direct supervision of a licensed pharmacist or other health professional. Pharmacy technicians work in a variety of locations, including community/retail and hospital pharmacies; in long-term-care facilities; for pharmaceutical manufacturers, third-party insurance companies, or computer software companies; and in government or teaching. Job duties include filling prescriptions and providing medical devices to patients. Pharmacy technicians may also perform administrative duties in pharmaceutical practice, such as reviewing prescription requests with doctors' offices and insurance companies to ensure that correct medications are provided and payment is received. Pharmacy technicians now also speak directly with patients on the phone to help stress the importance of taking medications on time.

The Pharmacy Team

The pharmacy team can be composed of the following personnel:

- Pharmacists (staff, administrative, and clinical)
- Pharmacy technicians (registered, certified, and noncertified)
- Pharmacy aides
- Administrative assistants
- Inventory specialists

Exhibit 1-3 outlines the duties of each member of the pharmacy team.

Exhibit 1-3



Duties of Pharmacists, Technicians, and Other Pharmacy Staff

Pharmacist	Pharmacy Technician
<ul style="list-style-type: none"> ■ Dispenses drugs and medicines prescribed by medical personnel ■ Supplies and advises patients on the use of nonprescription medications ■ Understands the composition and effects of drugs and the way they are tested for purity and strength ■ Maintains patient medication profiles and advises physicians on the proper selection and use of medications ■ Compounds ingredients to form powders, tablets, capsules, ointments, and solutions ■ Uses patient profiles to ensure that harmful drug interactions do not occur and to monitor patient adherence with the physician's instructions ■ Consults with and often has direct contact with patients ■ Buys and sells nonpharmaceutical merchandise ■ Hires and supervises personnel ■ Oversees the operation of the pharmacy ■ Makes sterile solutions ■ Performs administrative duties ■ Does final check on all aspects of a completed prescription and assumes responsibility for a filled prescription, including the accuracy of the drug prescribed and the prescribed drug's strength, labeling, and proper container ■ Ensures appropriate therapy and outcomes ■ Takes part in health promotion and disease prevention ■ Provides consultation and recommendations to health professionals ■ Promotes efficient use of information technology ■ Contributes to direct patient care through interactions with providers ■ Interprets a wide array of laboratory and imaging tests to monitor drug therapy 	<ul style="list-style-type: none"> ■ Helps licensed pharmacists provide medications and other health care products to patients ■ Prepares prescribed medications for patients (e.g., counts tablets and labels bottles) ■ Refers questions regarding prescriptions, drug information, or health matters to a pharmacist ■ Stocks and inventories prescription and nonprescription medications ■ Maintains written or computerized patient medication records ■ Counts or pours medications into dispensing containers ■ Types prescription labels ■ Prepares insurance claim forms ■ Manages the cash register ■ Repackages medications for verification by the pharmacist ■ Prepares commercially unavailable medications ■ Prepares sterile intravenous medications ■ Maintains nursing station medications ■ Collects quality improvement data ■ Delivers medications to patient rooms ■ Operates computerized dispensing and/or robotic machinery ■ Performs any duties assigned by the pharmacist, as allowed by law <p>All pharmacy technician duties require absolute accuracy and precision in both the technical and the clerical aspects of the job.</p>

continued on next page

Pharmacy Aide	Administrative Assistant	Inventory Specialist
<ul style="list-style-type: none"> Primarily answers telephones Handles money Stocks shelves Performs other clerical duties 	<ul style="list-style-type: none"> Assists pharmacy director with budgets, reports, scheduling, appointments, applicant interviews, and any other administrative duties assigned by the pharmacy director 	<ul style="list-style-type: none"> Ensures pharmacy is well stocked with all needed medications Makes inventory purchases for pharmacy Researches supply resources for back-ordered/out-of-stock medications Maintains working relationships with pharmaceutical sales representatives



Lab Exercise #1

Determining State Board of Pharmacy (BOP) Requirements for Pharmacy Technicians

- Using an Internet search engine, key in the following address: www.nabp.net.
 - On the menu bar, select Boards of Pharmacy.
 - What is the website address for your state board of pharmacy?
- Search your state's BOP website for the requirements to become a pharmacy technician in your state.
 - What are the requirements?
 - How is a pharmacy technician defined?
 - What is the technician's scope of practice?
 - Are there different levels of pharmacy technicians in your state (e.g., Tech I, Tech II)?
 - If so, is there an expansion in duties among the different levels?
 - Does your state mandate registration and/or PTCB certification for employment?

Now you know what is required by your board of pharmacy to become a pharmacy technician in your state. Some technicians aspire to be pharmacists later in their career, so let's look at what is required to become a pharmacist in your state. Your instructor will assist you with the name of a pharmacy school in your area.



Lab Exercise #2

State Board of Pharmacy Requirements for Pharmacists

- Using an Internet search engine, key in the name of a pharmacy school provided by your instructor.
 - Name of pharmacy school
 - Web address
 - What are the entrance requirements for pharmacy school? Print out the admission requirements and pre-pharmacy list of courses.
- What are the degrees conferred on a pharmacist?
- Search your state's BOP website for the requirements to become a pharmacist in your state.
 - What are the requirements?
 - How is a pharmacist defined?
 - What is the pharmacist's scope of practice?



Lab Discussion #2

Duties of Pharmacists versus Pharmacy Technicians

Using information from your board of pharmacy website and **Exhibit 1-3**, discuss the differences in the scope of practice for pharmacy technicians versus pharmacists.

The Relationship between Pharmacists and Technicians

Pharmacy technicians must work under the supervision of a licensed pharmacist. They are essentially assistants to pharmacists, serving as important team players who help pharmacists provide medications and other health care products to patients. Technicians also perform other duties assigned by the pharmacist, as allowed by law. The relationship between pharmacy technicians and pharmacists is a professional one where good rapport, respect, and cooperation are keys to good working relationships.



Lab Exercise #3

The Relationship Between Pharmacists and Pharmacy Technicians

1. Access the following website to determine the relationship between pharmacists and pharmacy technicians: www.alliedhealthworld.com/pharmacy_technician.html
2. Based on the duties listed in **Exhibit 1-3**, answer the following questions.
 - a) Is the pharmacist or the technician more essential in a pharmacy? Explain.
 - b) Can a pharmacy operate without a pharmacist? Why or why not?
 - c) Can a pharmacy operate without a pharmacy technician? Why or why not?
 - d) How would you characterize the relationship between the pharmacist and the technician?

- Provide medication information and counseling
- Collaborate with other health care professionals
- Provide good customer service
- Accurately dispense medications

Exhibit 1-4 contains a list of pharmacy-related abbreviations that pharmacy technicians should learn and be able to use.

Exhibit 1-4



Pharmacy-Related Abbreviations

AAPT	American Association of Pharmacy Technicians
APhA	American Pharmacists Association
ASHP	American Society of Health-System Pharmacists
BOP	Board of Pharmacy
CDC	Centers for Disease Control and Prevention
CMS	Centers for Medicare and Medicaid Services
CPhT	certified pharmacy technician
DEA	Drug Enforcement Administration
DUE	Drug Use Evaluation
DUR	Drug Utilization Review
ExCPT	Exam for the Certification of Pharmacy Technicians
FDA	Food and Drug Administration
NABP	National Association of Boards of Pharmacy
P&T	Pharmacy and Therapeutics Committee
PTCB	Pharmacy Technician Certification Board
PTEC	Pharmacy Technician Educators Council
TJC	The Joint Commission

The Role of the Pharmacy Technician on the Health Care Team

The health care team is made up of many types of health care professionals. Team members can include physicians, nurses, medical assistants, pharmacists, pharmacy technicians, physical therapists, occupational therapists, respiratory therapists, radiologists, radiologic technicians, medical laboratory technologists, medical record coders, and phlebotomists, as well as other specialists. The goal of the pharmacy team is to:



Lab Discussion #3

Role of the Pharmacy Technician

1. Who are pharmacy technicians most likely to interact with on the health care team?
2. How important are the roles of the pharmacist and the pharmacy technician on the health care team?
3. Who should the pharmacy technician always keep in mind when performing his/her duties?
4. What is the goal of every pharmacy in regard to its customers?

continued on next page



Lab Discussion #3

continued

5. Using the information given in **Exhibit 1-4**, give the abbreviations for the following pharmacy terms and organizations.
- _____ Food and Drug Administration
 - _____ Drug Enforcement Administration
 - _____ American Society of Health-System Pharmacists
 - _____ Pharmacy Technician Certification Board
 - _____ American Pharmacists Association
 - _____ National Association of Boards of Pharmacy
 - _____ Board of Pharmacy
 - _____ Centers for Disease Control and Prevention
 - _____ American Association of Pharmacy Technicians
 - _____ Pharmacy Technician Educators Council
 - _____ The Joint Commission
 - _____ Centers for Medicare and Medicaid Services
 - _____ Pharmacy and Therapeutics Committee
 - _____ Drug Use Evaluation
 - _____ Drug Utilization Review
 - _____ certified pharmacy technician
 - _____ Exam for the Certification of Pharmacy Technicians

Professional Requirements

Pharmacy technicians have an important role on the health care team. Because of their importance in the pharmacy industry, there has been a move to standardize the field in three key areas:

- Training through formal academic programs or in-house pharmacy programs
- Registration by boards of pharmacy
- National certification examinations

Formal academic programs vary in length but seek to teach the same curriculum. In-house programs in pharmacies follow a step approach to training currently employed technicians.

Other areas of development include continuing education, professional memberships in pharmacy organizations, and registration by state boards of pharmacy.

For PTCB certification and state board of pharmacy (BOP) registration, pharmacy technicians must fulfill continuing education requirements to keep abreast of new research and drug developments and to provide a means for recertification.

Also, professional memberships in state and national professional organizations are very important for networking, building relationships, and continuing education. Technicians are encouraged to participate in as many activities as possible to grow and mature, not only as people, but as professionals.



Lab Discussion #4

Standardization

What does the following statement mean?

"Move toward standardization in the pharmacy technician field."



Lab Exercise #4

Researching Professional Pharmacy Organizations

Using an Internet search engine, gather the following information about state and national professional pharmacy organizations.

- (Your State) pharmacy organizations. What are the names of the organizations?
- What are the requirements for technician membership?
- Do these organizations offer continuing education (CE) programs for technicians?
- Find a national professional pharmacy organization.
 - What is the name of the organization?
 - What are the requirements for technician membership?
 - Does this organization offer CE programs for technicians?

Board of Pharmacy Registration

Most state boards of pharmacy require newly employed pharmacy technicians and pharmacy technician students to register with them before they participate in pharmacy functions. Technicians must submit an application and pay a fee to obtain registration. Boards of pharmacy also conduct background checks to ensure the pharmacy technician's eligibility for employment. Technicians must renew their registration annually, and in some states they must complete continuing education as a requirement for registration renewal.

Technician registration certificates are posted alongside the pharmacist licenses in the pharmacy. **Exhibit 1-5** contains a sample Pharmacy Technician Registration Certificate.

Pharmacy Technician Certification Board

Since the PTCB-sponsored certification exam began in 1995, many states have added certification as a requirement to their pharmacy practice acts. Most pharmacies now require PTCB certification as the entry hiring level for all technicians. This raises the standard for pharmacy technicians in the workplace.

PTCB certificates are displayed alongside pharmacists' licenses in the pharmacy, and pharmacy technicians proudly utilize the CPhT acronym behind their names. Once technicians achieve certification, they must recertify every two years and complete 20 hours of continuing education (CE) during this time. Specifically:

- Medication Safety and Pharmacy Law are two of the continuing education requirement areas.
- For recertification candidates, one of the 20 hours must be on pharmacy law and one on patient safety.
- For reinstatement candidates, two of the 20 hours required must be on pharmacy law and two on patient safety.

It's important to note that pharmacy technician certification requirements vary by state. Technicians should review state-specific pharmacy technician requisites by contacting their state board of pharmacy.

Exhibit 1-6 shows a sample PTCB certificate.

Exhibit 1-5



Pharmacy Technician Registration Certificate



Exhibit 1-6



PTCB Certificate



Exam for the Certification of Pharmacy Technicians

The Exam for the Certification of Pharmacy Technicians (ExCPT) is a pharmacy technician certification program accredited by the National Commission for Certifying Agencies (NCCA). This program was established by the Institute for the Certification of Pharmacy Technicians (ICPT), which is now a part of the National Healthcare Association.

Technicians who pass the ExCPT are granted the title of Certified Pharmacy Technician. During the two-year period prior to recertification, certified pharmacy technicians must participate in at least 20 hours of CE—including at least one hour of Pharmacy Law and one hour of Medication Safety.

Some pharmacy technicians choose to wear patches or pins that identify their certification status. These pins are not endorsed or awarded by any official certifying or licensing body and are strictly voluntary. **Exhibit 1-7** shows an example of a pharmacy technician certification pin.

Exhibit 1-7



Pharmacy Certification Pin



Lab Exercise #6

Pharmacist and Pharmacy Technician Interview

Visit a local pharmacy. Identify yourself as a pharmacy technician student conducting a research assignment (show student ID), and ask to speak to the pharmacist in charge and a pharmacy technician. Be prepared to discuss your findings in the next lab.

1. Ask the pharmacist the following questions.
 - a) What is your definition of a pharmacy technician?
 - b) What is the primary role of the pharmacy technician in your pharmacy?
 - c) How important are pharmacy technicians to the day-to-day operations of your pharmacy?
 - d) What is your relationship to your technician?
 - e) How dependent are you on your technician?
2. Ask the technician the following questions.
 - a) What is your relationship to your pharmacist?
 - b) How dependent are you on your pharmacist?
3. If you were asked to explain “what does a pharmacy tech do in the pharmacy,” what would you say?



Lab Exercise #5

Pharmacy Technician Certification Research

1. Access the following website: www.ptcb.org.
 - On the menu bar, locate RESOURCES/Career Outlook.
 - Read the information under the subheadings.
 - On the menu bar, locate WHOM WE SERVE/ Pharmacy Technicians/CPhT by state.
 - What is the number of CPhTs in your state?
2. Access the following website and read about the process of pharmacy technician certification. www.nhanow.com/pharmacy-technician.aspx
3. What did you learn about the process of certification on the PTCB website?
4. What did you learn about the process of certification on the ExCPT website?
5. What is the cost of these exams: PTCE? ExCPT?
6. What certification is accepted in your state?

Conclusion

The role of the pharmacy technician has evolved into a multifaceted position. No longer is it a job of just “counting by fives.” Technicians are now expected to be cross-trained in all areas of pharmacy practice and to take responsibility for functions once performed only by pharmacists. As ways to become more efficient are developed, technicians must be open to learning new skills—thereby making themselves a vital part of the health care team.



Chapter Review Questions

- 1. The title “pharmacy technician” did not come into being until _____.
- 2. The very first “pharmacy technicians” were the pharmacist’s _____ members.
- 3. The board formed in 1995 to certify pharmacy technicians was _____.
- 4. The primary job duty of the pharmacy technician is to be an _____ to the pharmacist.
- 5. The primary job of the pharmacist is to _____ of the prescription and to _____ the patient.
- 6. Three other members of the health care team are _____, _____, and _____.
- 7. The primary focus of the health care team is _____.
- 8. Two acronyms that pharmacists use after their name are _____ and _____.
- 9. The acronym that certified technicians use after their name is _____.
- 10. What does your board of pharmacy require to be registered in your state? _____

- 11. What organizations offer national certification? _____

