Instructor's Manual to Accompany THE COMPLETE TEXTBOOK OF PHLEBOTOMY Fifth Edition

Chapter 2: Safety in Phlebotomy

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Review

Review any previous material that learners should understand for successful completion of this chapter. The material may come from a previous course or previous chapter.

Part A: Chapter Overview

This chapter addresses the safety and isolation techniques necessary for the phlebotomist. With the onset of AIDS and hepatitis, working in a safe environment is paramount to a phlebotomist's daily work activities. Understanding safety procedures will help the phlebotomist perform duties without concern. In-depth safety procedures and equipment that will improve the safe environment for the phlebotomist are discussed.

Part B: Resources

Textbook: *The Complete Textbook of Phlebotomy, Fifth Edition*, Lynn B. Hoeltke. Cengage Learning ©2018

Instructor Materials: Instructor's manual for the chapter, PowerPoint presentation slides for the chapter, student study guides, test bank of questions, and competencies.

Internet: It is recommended that the student have access to and have a working knowledge of the internet for further research of topics.

Part C: Student Preparation for Class

Before the class the student should have read the chapter that will be covered in the lecture. The student should also be knowledgeable about the Key Terms at the beginning of each chapter.

Part D: Learning Objectives and Competencies

After studying this chapter, the student should be able to:

1. Identify rules of safety that promote safety of the individual and patient.
2. Explain the principle of and procedures for infection control.
3. Describe the proper handwashing technique and when to use it.
4. Explain the infection concept.
5. Explain the differences between disease-specific and category-specific isolation.
6. List the three types of transmission-based precautions.
7. Explain the purpose and scope of standard precautions.
8. State the six major tactics to reduce the risk of exposure to blood-borne pathogens.
9. Explain the concerns regarding latex gloves.
10. Describe precautionary measures and actions to be taken with accidental needle punctures.
11. Explain the purpose of material safety data sheets (MSDSs).

NAACLS COMPETENCIES RELEVANT TO CHAPTER 2

Demonstrate knowledge of infection control and safety.

- Identify policies and procedures for maintaining laboratory safety.
- Demonstrate accepted practices for infection control, isolation techniques, aseptic techniques, and methods for disease prevention.
    - Identify and discuss the modes of transmission of infection and methods for prevention.
    - Identify and properly label biohazardous samples.
    - Discuss in detail and perform proper infection control techniques, such as handwashing, gowning, gloving, masking, and double-bagging.
    - Define and discuss the term *nosocomial infection*.
- Comply with federal, state, and local regulations regarding safety practices.
    - Use Occupational Safety and Health Administration (OSHA) standard precautions.
    - Use prescribed procedures to handle electrical, radiation, biologic, and fire hazards.
    - Use appropriate practices as outlined in the OSHA hazard communications standard, including the correct use of the material safety data sheet (MSDS) as directed.
- Describe measures used to ensure patient safety in various patient settings, such as inpatient, outpatient, and pediatrics.
- Differentiate between sterile and antiseptic techniques.

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Part E: Key Terms

It is important that all health care professionals familiarize themselves with the terms used in the health care industry. No matter which job is performed in health care, each individual is either directly or indirectly involved in processing patient information. Therefore, understanding the terms of the profession increases the individual's effectiveness in this process. Stress that students review these Key Terms before the start of class. This will help their understanding of the subject when it is discussed in class. Suggest that students search the term on the Internet if they do not fully understand the definition listed in the textbook.

Autoclave	Instrument for sterilizing that uses steam under pressure.
Autogenous Infection	Infection from one's own flora.
Biohazard	Anything that is potentially hazardous to humans, living organisms, or the environment.
Blood-Borne Pathogen	A pathogen that is spread by blood and body fluids containing blood. Typically, the pathogens are hepatitis and human immunodeficiency virus (HIV).

Body Substance Isolation (BSI)	The type of isolation that expanded universal precautions to require glove use when contacting all body substances.
Category-Specific Isolation	Isolation based on the category (strict, respiratory, etc.) of isolation.
Chemical Hazard	Any element, chemical compound, or mixture of elements and/or compounds that causes physical or health hazards.
Communicable Disease	Disease that is spread from person to person.
Disease-Specific Isolation	Isolation based on the type of disease infecting the patient.
Employee Input	Involvement of nonmanagerial, frontline employees in decisions for the use of needle safety devices.
Engineering Controls	Controls that isolate or remove blood-borne pathogens hazardous for the workplace.
Exposure Control Plan	A plan that identifies those tasks and procedures in which occupational exposure may occur and identifies the positions whose duties include those tasks or procedures.
Irritant Contact Dermatitis	Irritation and redness of the skin by direct contact with a chemical irritant.
Latex Allergy	An allergy to natural rubber latex. It is an allergy to the latex proteins that are released in the use of latex-containing products.
Local Infection	An infection affecting only one area of the body.
Nosocomial Infection	Also known as health care–associated or hospital-acquired infection. Infection that develops in a patient 48 hours or more after admission to a hospital or health facility.
Other Potentially Infectious Material (OPIM)	Human body fluids, unfixed tissue or blood, and organs or other tissues from experimental animals infected with HIV or HBV.
Personal Protective Equipment (PPE)	Equipment that is used to protect the health care associate from exposure to blood and body fluids.
Recordkeeping	Maintaining information and records of any job-related injuries.
Sharps Container	Specially labeled puncture-resistant containers for the disposal of sharp items such as needles, scalpels, and syringes.
Standard Precautions	Assumes that all blood and most body fluids are potentially infectious. A principle maintaining that personal protective equipment must be worn for contact with all body fluids whether blood is visible or not.

Systemic Infection	An infection affecting the entire body.
Transmission-Based Precautions	Isolation precautions taken for patients diagnosed or suspected of a specific transmissible disease. The precautions are based on whether the disease is transmitted by airborne, droplet, or contact.
Universal Precautions	A principle to protect health care associates from infections as a result to exposure to body fluids. A term now replaced by *standard precautions.*

Part F: After-Presentation Activity

Discuss the critical thinking questions at the end of the chapter. Divide the students into two groups, with each group covering one of the two questions. After 15 minutes, bring the class back together and have each group share their thoughts on the subject.

Part G: Additional Activities That Might Be Used for In-Class Discussions

In-Class Discussion

1. What is the difference between a local and systemic infection? Have the students discuss situations of infections they have seen and determine whether these were local or systemic.

2. Describe the "chain of infection." Have the class take an infection and follow it through the chain to see its source and how it is transmitted to the susceptible host. What methods could be used to stop this process? Use the common cold as an example if the students do not have any ideas.

   Susceptible host—Immunosuppressed patient, patient with diabetes, patient with burn injury, and so on
   Source—People, equipment, water
   Portal of exit—Excretions, secretions, droplets
   Means of transmission—Direct contact, ingestion, fomites, airborne
   Portal of entry—Mucous membrane, GI tract, respiratory tract, broken skin

Part H: For Those Students Needing Help

Index Cards: Create an index card for each Key Term. Place the concept on one side and the Key Term on the other. Ask learners to match the Key Term with the term's definition and/or concept.

Part I: For Those Students Who Are Ahead and Want to Learn More

The Internet: Using the Internet, research sites for information regarding the Key Terms or concepts covered in Chapter 2 of the textbook (these Key Terms are found at the beginning of the chapter in the textbook.)

Part J: After-Class Activities

The students will need to use the notes that were taken in class during the PowerPoint presentation and complete the study guide. The textbook and Internet should also be used to complete the information. It is up to the instructor to determine if these should be turned in during the next class period or be left to the students' discretion to complete them.

THE COMPLETE TEXTBOOK OF PHLEBOTOMY, 5th EDITION

STUDY GUIDE CHAPTER 2

STUDENT NAME:_____

1. Define the following terms.

Nosocomial infection

Systemic infection

Chain of infection
(disease transmission)

Housekeeping

Standard precautions

Autoclave

Local infection

Communicable disease

Engineering controls

HBV vaccination

Sharps container

Autogenous infection

Work practices

Isolation techniques

Blood-borne pathogen

Biohazard

Personal protective equipment (PPE)

Category-specific isolation

Latex allergy

2. What is the difference between a health-care-associated infection and a community-acquired infection?

3. Susceptibility to infection: What does this term mean?

4. What are the five means of transmission of infection?

a.

b.

c.

d.

e.

5. Chain of infection: Use Figure 2.1 to complete the following.
Factor: Type of patient or substance linking the chain

Susceptible host

Source

Portal of exit

Means of transmission

Portal of entry

6. Body fluids: Identify the source (part of the body) of each fluid.

Amniotic

Peritoneal

Pericardial

Synovial

Pleural

Edematous

Seminal

Cerebrospinal

7. What are the five main points that must be followed in standard precautions?

a.

b.

c.

d.

e.

8. What types of fluids are included in blood and body fluid precautions?

9. List three engineering controls and explain how not using the engineering controls can compromise your health or the health of the patient.

a.

b.

c.

10. What are the three transmission-based precautions? Explain the differences among these three precautions.

a.

b.

c.

11. In the chart that follows, describe how each of the items protects the patient or the phlebotomist.

Private room	
Gowns	
Exposure control plan	
Masks	
Gloves	
Sharps containers	
Goggles/ face shields	
Bagging of	

articles (self-sealing)	

12. Latex allergy: What is the difference between a type IV latex allergy and a type I latex allergy?

13. What would be the appropriate response to an accidental biohazard exposure such as a needlestick?