

# NWCA

NATIONAL  
WORKFORCE  
**CAREER**  
ASSOCIATION

## Certified Phlebotomy Technician



Professional Credential

## EXAM STUDY GUIDE



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## Credential Title

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Certified Phlebotomy Technician (CPT)

## Purpose of Credential

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The Certified Phlebotomy Technician credential is designed to document the knowledge base for phlebotomists who work in a variety of settings, including those who are a part of the laboratory team, paramedics, and point-of-care healthcare workers. Areas of assessment include the phlebotomist's role and profession, infection control and safety, quality assurance, anatomy and physiology, medical terminology, phlebotomy equipment and procedures, point-of-care testing, and special populations and procedures.

## Audience for Credential

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This credential is appropriate the healthcare workers who assist in patient care by taking blood, urine, and other body fluid samples so that they can be analyzed by a medical lab to assist the physician or other provider in clinical decision making for diagnosis, treatment, and monitoring of health parameters. Phlebotomists work in hospital labs and those of other residential facilities (long-term care facilities, specialty hospitals, urgent care facilities, psychiatric facilities) in ambulatory and outpatient settings (physician offices, clinics, home health care agencies, hospice agencies, prison health clinics, school-based clinics, dialysis centers, screening centers, durable medical equipment suppliers, HMOs, community health centers, specialty practices, rehabilitation settings, sports medicine settings, drug testing centers), and in mobile settings (mobile vans for blood donations, mammography, workplace testing, forensic toxicology labs, etc.) In addition, various healthcare workers, such as nurses, patient care technicians, respiratory therapists, home health aides, and so forth, are cross-trained to collect blood and other body fluid samples for analysis.

## Job/Career Requirements

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This credential documents development of skills for healthcare professionals who collect blood, urine, fecal specimens, seminal fluid, sputum, and other body specimens. They collect, label, package, transport, use lab equipment to test, enter data into computers, report on, and store body fluid specimen. Phlebotomists are employed in general medical and surgical hospitals, specialty hospitals, medical and diagnostic laboratories, ambulatory health care services, physicians offices, insurance carriers, state government offices, home health care services, blood donation facilities, and other facilities.

## Phlebotomy Technician Tasks

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- Identify patients correctly
- Verify orders
- Talk with patients and donors so they are less nervous about having their blood drawn
- Assess the patient prior to collection to ensure there are no contraindications to performing the procedures
- Prepare the patient appropriately for each procedure and inform the patient of the procedure





- Perform the procedure properly using the correct equipment and supplies
- Label specimen containers properly
- Assess the patient after the procedure
- Perform quality control functions
- Enter patient information into a database
- Transport specimens correctly and in a timely manner
- Prepare/process the samples for testing/analysis
- Assist in laboratory testing procedures
- Assemble and maintain medical instruments used in procedures
- Wash glassware and clean equipment and facilities
- Print/collate/distribute laboratory requisitions and reports
- Answer phones
- Practice customer service

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### Exam Structure Overview

**Number of Questions in Exam:** 200

**Total Time:** 120 minutes

**Overall Passing Score:** 70% (All sections require an individual passing score of 70%)





# Study Outline

## Phlebotomy

Phlebotomists must understand fully their roles and responsibilities on the healthcare team, including how to communicate professionally and effectively with a variety of patient types as well as how phlebotomy in general contributes to the successful diagnosis, treatment, and monitoring of patients. As with any medical professional, the phlebotomist must understand how to follow established infection control guidelines and how to ensure that the patient and healthcare worker is safe in any situations, including emergency situations. Safety includes quality control, quality assurance, and continuous improvement of phlebotomy processes.

In order to collect blood and other body specimens safely and effectively for lab tests, phlebotomists must also understand the anatomy and physiology especially that of the cardiovascular system, lymphatic system, and blood as well as the medical terminology and abbreviations commonly used in the clinical laboratory setting.

To perform specimen collections properly for accurate laboratory assessment and for patient safety, it is essential that the phlebotomist understand all phlebotomy equipment and supplies and the proper steps to the various collection procedures asked of the phlebotomist including venipuncture, blood capillary specimen collection, specimen collections for a blood culture, glucose tolerance testing, lactose tolerance testing, collection for arterial blood gases, IV line collection, and collection for therapeutic and workplace blood monitoring. Phlebotomists are also commonly asked to perform urinalysis and other body fluid and specimen analysis.

Further, phlebotomists must understand the numerous complications and risks that can be harmful to the patient or that can interfere with accurate test results during the preanalytical phase, the analytical phase, and the postanalytical phase of the collection and testing process. Taking every precaution and understanding the potential problems, correctly documenting all information, and properly handling specimens and transporting them to the lab help to ensure that test results are accurate, patients are safe, and the physician's goals and needs are met for the patient.

Finally, phlebotomists must fully understand the legal, regulatory, and ethical concepts related to healthcare in general and phlebotomy specifically to ensure that the rights of the patients are maintained and the legal risks of the physicians and healthcare institution are minimized.

## Professional Roles and Communication Strategies

- Objective:*
- *Describe the role of the phlebotomist in various healthcare settings*
  - *Describe communication strategies, tools, and practices that are needed for the successful phlebotomist*

1. Phlebotomy Practice Settings
  - a. Definition of Phlebotomy
  - b. Phlebotomy Professional and Governing Organizations
    - i. Phlebotomy Certification





- c. Phlebotomy Standards
  - i. Professional Characteristics
  - ii. Duties and Scope of Practice of the Phlebotomist
  - iii. Ethical Standards for the Phlebotomist
- d. Workplace Settings and Personnel for the Phlebotomist
  - i. Healthcare Structure, Departments, and Services
  - ii. Standards and Accreditation for Clinical Laboratories
  - iii. Laboratory Regulations
  - iv. The Clinical Laboratory
    - 1. Personnel
    - 2. Anatomical and Surgical Pathology
    - 3. Departments/Areas
    - 4. Clinical Pathology Areas/Departments
  - v. Clinical Pathology Laboratory Departments
    - 1. Blood Banks
    - 2. Immunohematology
    - 3. Chemistry
    - 4. Coagulation and Hemostasis
    - 5. Hematology
    - 6. Microbiology
    - 7. Molecular Diagnostics
    - 8. Phlebotomy
    - 9. Referrals
    - 10. Serology/Immunology
    - 11. Urinalysis
    - 12. Clinical Microscopy
  - vi. Specimen Collection Services
  - vii. Other Healthcare Settings Where Phlebotomists Work
    - 1. HMOs, PPOs
    - 2. Physician Office Labs
    - 3. Reference Labs
    - 4. Nursing Homes
- e. Clinical Laboratory Workflow Pathway
  - i. Preanalytical Phase
    - 1. Requisition Handling
    - 2. Equipment Considerations
    - 3. Patient Identification
    - 4. Patient Preparation and Specimen Collection Issues
    - 5. Transportation Considerations
  - ii. Analytical Phase
    - 1. Processing Considerations
    - 2. Separation Times
    - 3. Maintenance of Equipment
    - 4. Evaporation Issues
    - 5. Contamination Issues





- 6. Freezers and Refrigerators
    - 7. Aliquot handling and Label Considerations
  - iii. Postanalytical Phase
  - f. Computerization in the Clinical Laboratory
- 2. Communication Strategies
  - a. The Communication Process
  - b. Components of Effective Communication
    - i. Verbal Communication
      - 1. Voice, Tone, and Facial Expressions
    - ii. Nonverbal Communication
    - iii. Effective Listening Skills
    - iv. Written Communication
  - c. Communicating with Difference Populations and Using Different Channels
    - i. Different Ages and Generations
    - ii. Patients Whose Language is Not English
    - iii. Patients with Hearing Impairment
    - iv. Patients with Visual Impairments
    - v. Family, Visitors, and Significant Others of Patients
    - vi. In Emergency Situations
    - vii. Healthcare Workers
    - viii. Cultural Considerations
  - d. Office Skills
    - i. Telephone Etiquette
    - ii. E-Mail Etiquette

## Infection Control, Safety and Quality Assurance

- Objective:*
- Describe quality control, assurance, and improvement tools used for phlebotomy
  - Explain the infection control policies and procedures that must be followed in specimen collection and transportation
  - Explain standard safety and first aid procedures for the phlebotomist

- 1. Quality Improvement and Assessment in Phlebotomy
  - a. Definition of Quality
  - b. Stakeholders in Healthcare
  - c. Continuous Quality Improvement Strategies
    - i. Six Sigma
    - ii. CLSI's 12 Quality System Essentials
    - iii. Components of a Quality Plan for Phlebotomy Services
    - iv. Quality Control
    - v. Standardization and Globalization
  - d. Quality Performance Assessment Tool and Techniques
    - i. Flow Charts
    - ii. Pareto Charts
    - iii. Cause-and-Effect Diagrams





- iv. Plan-Do-Check-Act Cycle
  - v. Line Graphs, Histograms, Scatter Diagrams
  - vi. Brainstorming
  - vii. Factors Affecting Quality in Specimen Collection Services
  - viii. The Laboratory Testing Cycle
- 2. Infection Control
  - a. The Chain of Infection
  - b. Standard Precautions
    - i. Airborne Precautions
    - ii. Droplet Precautions
    - iii. Contact Precautions
    - iv. Personal Protective Equipment and Proper Procedures for Use
  - c. Hospital Isolation Policies and Procedures
    - i. Protective/Reverse Isolation
    - ii. Gowns, Masks, and Gloves in Isolation Rooms including Proper Procedures for Donning, Removing, and Disposal
    - iii. Infection Control in Special Hospital Units
      - 1. Nursery Unit
      - 2. Burn Unit
      - 3. ICU or Postoperative Care Unit
      - 4. Dialysis Unit
  - d. Infection Control and Safety in the Clinical Laboratory
    - i. Disinfectants and Antiseptics
    - ii. Sterilization
  - e. Bloodborne Pathogens
    - i. Hepatitis, A, B, C, D, and E
    - ii. HIV (AIDS)
    - iii. Syphilis
    - iv. Malaria
    - v. Human T-Cell Lymphotropic Virus Types I and II
  - f. Guidelines for Personal Safety from Infection
    - i. Occupational Safety and Health Administration
      - 1. Types of Hazards in Health Care
      - 2. Nosocomial Infections
    - ii. OSHA Regulations/Compliance with Standard and Universal Precautions
    - iii. Exposure Control Strategies Policies
    - iv. SHARPS/Needlestick Injury Prevention and Programs
    - v. Employee Health Screening
    - vi. Employee Immunization Guidelines
- 3. Safety
  - a. Safety, First Aid, and Emergency Response
    - i. Safety Practices a Medical Facility
      - 1. Patient Safety Outside the Room
      - 2. Latex Safety
      - 3. Disaster Emergency Plans





- 4. Emergency Procedures
- ii. Emergency First Aid Procedures
  - 1. Bleeding Aid
  - 2. Circulation Aid
  - 3. Shock Prevention
- iii. Fire Safety
- iv. Electrical Safety
- v. Radiation Safety
- vi. Mechanical Safety
- vii. Chemical Safety
  - 1. Chemical Identification
    - a. Hazardous Materials Warning Placards and Labels
    - b. MSDSs
  - 2. Protective Measures for Chemical Use
    - a. Safety Showers
    - b. Eyewash Stations
    - c. Chemical Spill Cleanup
    - d. Disposal of Chemicals

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## Anatomy, Physiology and Medical Terminology

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- Objective:*
- *Define medical terminology and abbreviations commonly used in the clinical laboratory setting*
  - *Explain the anatomy and physiology associated with phlebotomy procedures*

- 1. Basic Medical Terminology
  - a. Word Parts
  - b. Rules for Combining Word Part
  - c. Directional Terms, Anatomical Regions, Positions
- 2. Anatomy and Physiology
  - a. Medical Terminology Related to the Cardiovascular and Lymphatic System
  - a. Cellular Structure and Function
  - b. Structure, Function, Diseases, Disorders, Common Laboratory Tests of Organ Systems
    - i. Integumentary System
    - ii. Skeletal System
    - iii. Muscular System
    - iv. Nervous System
    - v. Respiratory System
    - vi. Digestive System
    - vii. Urinary System
    - viii. Endocrine System
    - ix. Reproductive System
- 3. The Cardiovascular System Anatomy and Physiology
  - a. Heart Anatomy and Physiology
    - i. Vessels and Circulation







- ii. Arteries, Capillaries
    - iii. Veins, Venules
  - b. Blood Anatomy and Physiology
    - i. Function
    - ii. Composition
      - 1. Formed Elements
        - a. Erythrocytes
          - 1. Erythropoiesis
          - 2. Erythropoietin
        - b. Leukocytes
        - c. Thrombocytes or Platelets
      - 2. Constituents
      - 3. Plasma and Serum
  - c. Blood Specimens and Testing
    - iii. Centrifuged Blood
    - iv. Blood Typing
      - 1. Antibodies and Antigens
      - 2. Blood Groups and Compatibilities
      - 3. Rh Factor
    - v. Common Blood Tests (Abbreviations, Reference Range, Test Results Indications)
      - a. Hematology
      - b. Coagulation
      - c. Immunohematology
    - vi. Common Chemistry Tests Performed on Blood (Test Name, Abbreviation, Reference Range, and Test Results Indications)
      - a. Hemostasis and Blood Clotting
  - d. The Hemostatic Process
  - e. Disorders of the Cardiovascular System (Disease Name, General Description)
- 4. The Lymphatic System
  - a. Lymphatic System Structure and Function
  - b. Disorders of the Lymphatic System
  - c. Common Laboratory Tests for the Lymphatic system

## Phlebotomy Equipment and Procedures

- Objective:*
- Describe the phlebotomy equipment and supplies used to perform various procedure
  - Explain preanalytical complications that can cause medical errors in blood collection
  - Explain proper venipuncture procedures
  - explain how to collect capillary blood specimens
  - Explain proper procedures for handling, transporting, and processing blood specimens





1. Blood Collection/Phlebotomy Equipment
  - a. Venipuncture Equipment
  - b. Blood Collection Tubes and Additives
  - c. Types of Evacuated Tubes
    - i. Additives
      1. Anticoagulants
      2. Preservatives
      3. Clot Activators
      4. Polymer Gels
    - ii. Color-Coded Tops
      1. Yellow-Top Tubes and Vacuum Culture Vials
      2. Light-Blue-Top Tubes
      3. Serum Separation Tubes (Mottled-Top, Specked-Top, and Gold-Top Tubes)
      4. Red-Top Serum Tubes
      5. Green-Top Tubes
      6. Purple (Lavender)-Top Tubes
      7. Pink-Top Tubes
      8. Gray-Top Tubes
      9. Royal-Blue-Top Tubes
      10. Tan-Top Tubes
      11. Black-Top Tubes
      12. Molecular Diagnostic Tubes
  - d. Needles and Syringes
    - i. Safety Syringes
    - ii. Safety Needles, Holders, Adapters
    - iii. Butterfly Needles
    - iv. Needle and Other SHARPS Disposal
  - e. Other Equipment and Supplies
    - i. Tourniquets
    - ii. Venoscopes
    - iii. Bleeding-Time Equipment
    - iv. Gloves for Blood Collection
    - v. Antiseptics
    - vi. Sterile Gauze Pads
    - vii. Bandages
    - viii. Microcollection Equipment
    - ix. Blood-Drawing Chairs
    - x. Infant Phlebotomy Stations
    - xi. Specimen Collection Trays
2. Organizing and Transporting Equipment
3. Preanalytical Complications Causing Medical Errors in Blood Collection
  - a. Categories of Variables Impacting Results at the Preanalytical Stage
    - i. Basal State
    - ii. Age
    - iii. Diet





- iv. Allergies
    - v. Menstrual Cycle
    - vi. Stress
    - vii. Exercises
    - viii. Obesity
    - ix. Infections
    - x. Medications
    - xi. Turbid or Lipemic Serum
    - xii. Damaged, Sclerosed, or Occluded Veins
    - xiii. Thrombosis
    - xiv. Diurnal Rhythms and Posture
    - xv. Travel Issues
    - xvi. Mastectomy
    - xvii. Edema
    - xviii. Interference of Drugs and Other Substances in Blood
    - xix. Vomiting
    - xx. Other Factors
  - b. Complications Associated with Test Requests and Identification
    - i. Identification Discrepancies
    - ii. Time of Collection
    - iii. Requisitions
  - c. Complications Associated with the Specimen Collection Procedure
    - i. Tourniquet Pressure and Fist Pumping
    - ii. Improper Collection Tube
    - iii. Failure to Draw Blood
    - iv. Collapsed Veins
    - v. Petechiae
    - vi. Hemolysis
    - vii. Backflow of Anticoagulant
    - viii. Syncope
    - ix. Hematomas
    - x. Excessive Bleeding
    - xi. Nerve Complications
    - xii. Seizure During Blood Collection
    - xiii. Hemoconcentration
    - xiv. Intravenous Therapy
- 4. Routine Venipuncture Procedures
  - a. The Venipuncture Process
  - b. Requisitions
  - c. Hand Hygiene and Gloving Technique
  - d. Preparing for the Patient Encounter
  - e. Approaching Patient and Introduction
  - f. Factors Affecting Physical Disposition of the Patient
  - g. Patient Identification Process
    - i. Inpatient Identification Process and Precautions





- ii. Outpatient/Ambulatory Patient Identification Process and Precautions
  - iii. Identification Issues for Infants and Young Children
  - iv. Identification Issues for Patients Who are Comatose, Semiconscious, or Sleeping
  - v. Identification Issues for Patients in the ER
  - vi. Identification Issues for Patients with Severe Burns
  - vii. Identification Issues for Patients in Isolation
  - viii. Preventing Identity Errors
- h. Positioning of the Patient
- i. Test Requisitions
- j. Equipment Selection and Preparation
  - i. Supplies for Venipuncture
  - ii. Venipuncture Site Selection
  - iii. Warming the Puncture Site
  - iv. Tourniquet Application
  - v. Vein Palpation
  - vi. Decontamination of the Puncture Site
- k. Venipuncture Procedures and Methods
  - i. Evacuated Tube System
  - ii. Syringe Method
- l. Precautions and Complications
  - i. Order of Draw for Blood Collection Tubes
  - ii. Vein Access Factors
  - iii. Barriers to Patient Communication
  - iv. Site Selection Problems
  - v. Problems Associated with Cleaning Dermal Puncture Site
  - vi. Caring for the Puncture Site
  - vii. Tourniquet Problems
  - viii. Complications During Collections
  - ix. Coagulation Testing
  - x. Filling Blood Collection Tubes
  - xi. Specimen Identification and Labeling
  - xii. Problems Completing a Blood Draw
  - xiii. Factors Affecting Sample Integrity
  - xiv. Disposal of Used Supplies and Equipment
  - xv. Patient Assessment at the End of the Venipuncture Procedure
  - xvi. Long-Term Complications
  - xvii. Specimen Rejection
  - xviii. Specimen Recollection
  - xix. Issues Affecting Venipuncture Practices
    - 1. Monitoring Blood Volumes Acquired by Venipuncture
    - 2. Reducing Hematoma Complications
    - 3. Avoiding Specimen Hemolysis
    - 4. Patient Refusal
    - 5. Emergency During Phlebotomy Procedures
    - 6. Specimen Rejection





7. Prioritizing Patients
5. Capillary Blood Specimens
  - a. Indications for Dermal Puncture
  - b. Capillary Blood versus Venous Blood
  - c. Basic Technique for Collecting Diagnostic Capillary Blood Specimens
    - i. Preparation for Skin Puncture
    - ii. Supplies for Skin Puncture
    - iii. Skin Puncture Sites
    - iv. Skin Puncture Equipment, Supplies, and Procedures
      1. Using a Retractable Safety Device
      2. Order of Collection
      3. Blood Films for Microscopic Slides/Blood Smears
      4. Tests Using Capillary Blood Samples
        - a. Venous Specimen Test Results
        - b. Microhematocrit
        - c. Hematology Specimens
        - d. Blood pH and Blood Gas Determination
    - v. Lance Disposal
    - vi. Labeling the Specimen
    - vii. Completing the Interaction with the Patient
6. Specimen Handling
  - a. Turnaround Time and Time Constraints
  - b. Mixing the Specimen
  - c. Labeling and Packaging the Specimens Correctly
  - d. Transportation to the Appropriate Laboratory
  - e. Special Handling Procedures
    - i. Time Constraints
    - ii. Protecting Specimens from Light
  - f. Specimen Transportation
  - g. Special Delivery Methods
  - h. Shipping Biohazardous Specimens
  - i. Processing Specimens in the Laboratory
    - i. Safety
    - ii. Clotting
    - iii. Specimens in Which NO Centrifugation is Required
    - iv. Precentrifugation
    - v. Centrifugation
    - vi. Removing a Stopper
    - vii. Preparing Aliquots
    - viii. Postcentrifugation
    - ix. Transport and Processing of Nonblood Specimens
    - x. Specimens with Special Conditions
    - xi. Specimen Rejection
7. Laboratory Test Requisitions
  - a. Requisition Form





- b. Manual Methods
  - c. Semi-Automated Methods
  - d. Automated Methods
  - e. Using Bar Codes and RFID
- 8. Specimen Labels
  - a. Using Blood Drawing List
- 9. Reporting Laboratory Results
  - a. Written Reports
  - b. Verbal Reports
  - c. Computerized Reports
- 10. Documentation
  - a. Components of the Clinical or Medical Record
  - b. Components of the Electronic Medical Record
  - c. Documentation Procedures and Guidelines
- 11. Types of Laboratory Services Information and Manuals

## Point-of-Care Testing and Special Procedures

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- Objective:*
- *Explain the special blood collection procedures required for pediatric and geriatric patients*
  - *Explain procedures and special precautions required for point-of-care specimen collection*
  - *Describe the procedures and precautions for special blood collection purposes (blood culture, glucose tolerance testing, lactose tolerance testing, arterial blood gases, therapeutic drug monitoring, IV line collections, etc.)*
  - *Explain the collection procedures for urinalysis, body fluid analysis, and other specimen analysis*
  - *Explain special collection procedures for toxicology, forensic toxicology, drug testing, and other workplace and sports medicine testing purposes*

- 1. Pediatric Patients
  - a. Special Physiological Care Considerations
  - b. Psychological Response Procedures
  - c. Involving and Preparing Child and Parent
  - d. Identification of Children and Newborns
  - e. Techniques for Distracting Pediatrics
  - f. Room Location Considerations
  - g. Equipment and Supplies Preparation
  - h. Creating a Friendly and Non-threatening Environment
  - i. Immobilizing/Restraining Infants and Children
  - j. Dealing with Combative Patients and Restraining a Child
  - k. Tips for Decreasing the Needlestick Pain
  - l. Precautions for Protecting the Child
  - m. Latex Allergy Alert





- n. Pediatric Phlebotomy Procedures
  - i. Procedures Microcapillary Heel Stick
    - 1. Skin Puncture Sites and Precautions
  - ii. Procedure for Capillary Blood Gases Collection
  - iii. Procedure for Collection of Capillary Blood for Neonatal Screening
    - 1. Interferences in Newborn Screening Collections
  - iv. Procedures for Fingersticks on Children
  - v. Venipuncture Procedures on Children
    - 1. Precautions
    - 2. Equipment for Venipuncture
    - 3. Procedure
    - 4. Scalp Vein Venipuncture
  - vi. Collecting Blood from IV Lines
    - 1. Procedure for Heparin or Saline Lock Blood Collection
    - 2. Procedure for Central Venous Catheter Blood Collection
- 2. Geriatric Patients
  - a. Physical Changes Associated with Age
  - b. Mental Impairment Considerations
  - c. Common Disorders of Geriatric Patients
  - d. Considerations for Geriatric Patients
  - e. Considerations for In Home Care Blood Collection
- 3. Point-of-Care Collection
  - a. Types of Point-of-Care Testing (POCT)
    - i. Blood Gas Analysis
    - ii. Electrolyte Analysis
    - iii. POCT for Acute Heart Damage
    - iv. Blood Coagulation Monitoring
    - v. Hematocrit
    - vi. Hemoglobin
    - vii. Cholesterol Screening
    - viii. Bleeding-Time Test
    - ix. Glucose Monitoring
  - b. Quality in Point-of-Care Testing
- 4. Blood Culture Method
  - a. Interfering Factors
  - b. Procedure for Site Preparation for Blood Culture Collection
  - c. Safety Syringe Blood Culture Collection
  - d. Safety Butterfly Assembly Blood Culture Collection
  - e. Evacuated Tube System for Blood Culture Collection
  - f. Follow After Blood Culture Collection
- 5. Glucose Tolerance Test (GTT)
  - a. Patient Information Card
  - b. Postprandial Glucose Test
  - c. Modified Oral Glucose Tolerance Test
- 6. Lactose Tolerance Test





7. Arterial Blood Gases
  - a. Appropriate Puncture Sites
  - b. Procedure
8. Therapeutic Drug Monitoring
  - a. Collection for Trace Metals (Elements)
  - b. Genetic Molecular Tests
9. Collecting Blood Through a CVC
10. Cannulas and Fistulas
11. Blood Donor Collections
  - a. Donor Interview and Selection
  - b. Procedure for Collection of Donor's Blood
12. Autologous Transfusion
13. Therapeutic Phlebotomy
14. Urinalysis
  - a. Types of Urine Collection
    - i. Clean-Catch Midstream Urine Collection for Men
    - ii. Clean-Catch Midstream Urine Collection for Women
    - iii. Collecting a 24-Hour Urine Specimen
  - b. Normal and Abnormal Test Results
15. Other Types of Specimen Collections
  - a. Cerebrospinal Fluid
  - b. Fecal Specimens
  - c. Seminal Fluid
  - d. Amniotic Fluid
  - e. Pericardial Fluid
  - f. Peritoneal Fluid
  - g. Collecting Sputum Collection
  - h. Throat Swab Collections
  - i. Skin Tests
  - j. Gastric Analysis
  - k. Breath Analysis for Peptic Ulcers
  - l. Sweat Chloride by Iontophoresis
16. Drug Specimens
  - a. Substance Abuse Facts
  - b. Commonly Abused Drugs
17. Common Drug Analysis Methods and Interferences
18. Forensic Toxicology Specimens
  - a. Types of Specimens
  - b. Chain of Custody
  - c. Workplace Drug Testing
19. Drug Use in Sports
20. Neonatal Drug Testing
21. Blood Alcohol and Breath Testing







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## Ethical, Legal, and Regulatory Issues

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*Objective:* ➤ *Explain the professional, ethical, legal, and regulatory issues related to the phlebotomist*

1. Ethics
  - a. Ethical Behavior for Healthcare Workers
  - b. Patients' Rights
2. Legal Terminology
  - a. Negligence
  - b. Malpractice
  - c. Legal Claims and Defenses
  - d. Being an Expert Witness
  - e. Avoiding Lawsuits
  - f. Respondeat Superior
  - g. Professional Liability Insurance
3. Privacy and Confidentiality
4. Standard of Care
5. Informed Consent
6. Clinical Laboratory Regulations
7. CLIA

