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NHA Certified Phlebotomy Technician (CPT)

Detailed Test Plan*

100 scored items, 20 pretest
Exam Time: 2 hours

**** Based on the Results of a Job Analysis Study Completed in 2016***

This document provides an outline of the topics that may be covered on the NHA CPT Certification Examination. A one-page summary of the plan is also available.

Within a given topic area, task and/or knowledge statements will be provided. Knowledge statements reflect information that a candidate will need to know, while task statements reflect duties that a candidate will need to know how to properly perform. Items on the exam may require recall and critical thinking pertaining to a knowledge statement, a task statement, or both.

Generally, knowledge statements listed immediately after a set of tasks for a domain are only applicable to that domain. Knowledge statements listed under "Core Knowledge" at the end of this document are potentially applicable to any of the assessment domains.

1.	**Safety and Compliance**
	Tasks:
T1.	Adhere to regulations regarding workplace safety (e.g., Occupational Safety and Health Administration, National Institute for Occupational Safety and Health).
T2.	Adhere to regulations regarding operational standards (e.g., The Joint Commission, Clinical and Laboratory Standards Institute, Center for Disease Control).
T3.	Adhere to HIPAA regulations regarding protected health information.
T4.	Adhere to scope of practice and comply with ethical standards applicable to the practice of phlebotomy.
T5.	Perform quality control for laboratory equipment (e.g., maintain logs for equipment inspection, reporting and troubleshooting equipment issues).
T6.	Perform quality control (e.g., machine calibration, test controls, storage controls) for CLIA-waived tests.
T7.	Identify and dispose of sharps and biohazards according to Bloodborne Pathogens Standard.
T8.	Follow exposure control plans in the event of occupational exposure.
T9.	Follow transmission based precautions (e.g., airborne, droplet, contact).
T10.	Follow standard precautions regarding personal protective equipment (e.g., gloves, gowns, masks, shoe covers, respirators).

	T11. Use aseptic and infection control techniques throughout the phlebotomy process.
	T12. Follow hand hygiene guidelines to prevent the spread of infections.
	T13. Initiate first aid and CPR when necessary (e.g., check for DNR bands).
	T14. Comply with documentation and reporting requirements.
	Knowledge of:
	K1. Resources and regulations regarding workplace safety (e.g., Occupational Safety and Health Administration, National Institute for Occupational Safety and Health, Center for Disease Control)
	K2. Operational standards (e.g., The Joint Commission, Clinical and Laboratory Standards Institute, College of American Pathologists)
	K3. HIPAA regulations
	K4. Manufacturer recommendations for laboratory equipment
	K5. Quality control and assurance procedures (e.g., maintaining logs, checking reference ranges, troubleshooting)
	K6. Guidelines related to CLIA-waived tests
	K7. Bloodborne Pathogens Standard
	K8. Requirements related to biohazards (e.g., cleaning of blood spills, disinfection, disposal, OPIM)
	K9. Requirements for sharps disposal
	K10. Exposure control protocols (e.g., eye washing, handwashing, showers, notification requirements)
	K11. Standard precautions
	K12. Transmission based precautions (e.g., airborne, droplet, and contact)
	K13. Personal protective equipment
	K14. Hand hygiene guidelines
	K15. First aid and CPR
2.	**Patient Preparation**
	Tasks:
	T1. Introduce yourself to the patient and provide information, such as name, title, and department.
	T2. Positively identify the patient based on specific identifiers while following HIPAA guidelines.
	T3. Receive implied, informed, or expressed consent from the patient.
	T4. Review and clarify the requisition form.
	T5. Verify patient compliance with testing requirements (e.g., fasting, medication, basal state) and proceed accordingly.
	T6. Interview patients to identify special considerations that may impact collections (e.g., allergies, medications, recent surgeries, history of fainting) and proceed accordingly.

T7.	Explain the phlebotomy procedure to be performed to the patient.
T8.	Position the patient to maximize comfort and safety, and optimize specimen collection.
T9.	Determine site for specimen collection, based on the Clinical and Laboratory Standards Institute standards, to minimize patient risk and optimize outcome.
T10.	Instruct patients on collection of non-blood specimens (e.g., stool, urine, semen, sputum).
Knowledge of:	
K1.	Patient identifiers
K2.	Informed, expressed, or implied consent requirements
K3.	Requirements of requisition forms (e.g., patient demographics, physician information, diagnosis code, tests ordered, test priority)
K4.	Timing requirements of draws (e.g., peaks and troughs, stats, routines, time of day)
K5.	Testing requirements (e.g., fasting, medication, basal state)
K6.	Patient interviewing techniques
K7.	Variables that may impact collections (e.g., allergies, medications, recent surgeries, history of fainting)
K8.	Special considerations (e.g., age, physical and mental condition)
K9.	Non-blood specimen collection procedures
K10.	Minimum and maximum blood volume requirements
K11.	Patient positioning
K12.	Site selection criteria
3.	**Routine Blood Collections**
Tasks:	
T1.	Select and assemble equipment (e.g., evacuated tube system, syringe, winged collection set) needed for blood collection(s).
T2.	Verify quality of equipment (e.g., sterility, expiration date, manufacturer's defects).
T3.	Follow standard tourniquet application and removal procedures.
T4.	Select final site through observation and palpation, for specimen collection.
T5.	Apply antiseptic agent to blood collection site.
T6.	Anchor below venipuncture site.
T7.	Insert venipuncture device.
T8.	Follow order of draw when performing venipuncture.
T9.	Ensure patient safety throughout the collection by identifying problematic patient signs and symptoms (e.g., syncope, diaphoresis, nausea, seizure).
T10.	Recognize and respond to potential complications resulting from procedure (e.g., lack of blood flow, hematoma, petechiae, nerve pain).
T11.	Remove venipuncture device.

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T12. Invert evacuated tubes with additives according to procedural guidelines.
T13. Perform dermal puncture for capillary collection based on patient age and condition.
T14. Follow order of draw when performing capillary collection.
T15. Label all specimens.
T16. Perform post-procedural patient care.
Knowledge of:
K1. Blood collection devices
K2. Considerations for device selection (e.g., current health status, stated history, vein size and patency, requisition requirements)
K3. Needle gauge sizes and lengths
K4. Evacuated tubes required for laboratory testing (e.g. colors, additives and preservatives)
K5. Order of draw, number of tube inversions, angle of tube insertion, fill level/ratios
K6. Equipment quality control checks (e.g., inspection of needles, check for cracks in tubes, check expiration dates)
K7. Standard tourniquet application and removal procedures
K8. Palpation techniques
K9. Skin integrity, venous sufficiency, contraindications
K10. Types of antiseptic agents and methods of application
K11. Techniques for anchoring the vein
K12. Angle of needle insertion and withdrawal
K13. Problematic patient signs and symptoms during collection (e.g., syncope, diaphoresis, nausea, seizures)
K14. Potential complications resulting from procedure
K15. Adjustments for establishing blood flow (e.g., redirection, increase or decrease needle angle, change tube)
K16. Procedural steps when removing tourniquet, tubes, and needle
K17. Use of needle safety devices (e.g., retractable, sheath)
K18. Dermal puncture procedures for capillary collection
K19. Order of draw for capillary collection
K20. Bandaging procedures and considerations (e.g., allergies, skin types, patient age and condition)
K21. Labeling procedures and requirements
K22. Post-procedural complications and precautions
4. Special Collections
Tasks
T1. Prepare peripheral blood smears.
T2. Perform blood culture collections.

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T3.	Assist other health care professionals with specimen collection.
T4.	Collect blood samples for inborn errors of metabolism (e.g., PKU, galactosemia).
T5.	Perform phlebotomy for blood donations.
T6.	Calculate volume requirements in patients who are at higher risk (e.g., pediatric, geriatric) to avoid causing iatrogenic anemia.
T7.	Perform non-blood specimen collection (e.g., throat cultures, nasal swab, wound cultures).
Knowledge of:	
K1.	Equipment needed for peripheral blood smears (e.g., slides, lancet, tubes)
K2.	Techniques to perform peripheral blood smears
K3.	Type of sample for blood smears and timing requirements
K4.	Techniques and locations for blood culture collections
K5.	Equipment needed for blood culture collections (e.g., needle type, hub/adaptor, bottle type)
K6.	Skin preparation for blood culture collections
K7.	Volume requirements for blood culture collections
K8.	Order of draw for blood culture collections
K9.	Blood culture bottle preparation procedures
K10.	Equipment and transfer procedures needed when assisting other health care professionals with specimen collection
K11.	Techniques to collect blood on filter paper/Guthrie cards
K12.	Standards for blood donation (e.g., check hemoglobin and hematocrit levels, weight, and complete patient screening)
K13.	Pediatric volume calculations
K14.	Equipment and techniques for performing non-blood specimen collection (e.g., throat cultures, nasal swab, wound cultures)
K15.	Skin preparation for blood alcohol level collection
5. Processing	
Tasks:	
T1.	Prepare specimens (e.g., centrifuging, aliquoting, freezing or refrigeration) for testing or transport.
T2.	Maintain integrity of specimens based on handling requirements (e.g., temperature, light, time).
T3.	Adhere to chain of custody guidelines when required (e.g., forensic studies, blood alcohol, drug screen).
T4.	Coordinate communication between non-laboratory personnel for processing and collection.
T5.	Input and retrieve specimen data using available laboratory information system.
T6.	Recognize and report critical values for point of care testing.
T7.	Distribute laboratory results to ordering providers.

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	Knowledge of:
K1.	Centrifuging procedures and techniques
K2.	Aliquoting procedures and techniques
K3.	Handling, storage, transportation and disposal requirements for specimens (e.g., biohazard bags/containers, temperature, exposure to light, viability guidelines)
K4.	Chain of custody guidelines
K5.	Internal and external databases
K6.	Critical values for point of care testing
K7.	Basic protocol to distribute laboratory results
K8.	Laboratory requirements

Core Knowledge

The following sections do not represent standalone domains on the CPT exam. Rather, this is necessary knowledge for a Phlebotomist, which could be used in the context of an assessment item, and are being provided for preparation and review purposes.

Core Knowledge

- K1. The role of phlebotomy technicians in laboratory testing
- K2. The role of phlebotomy technicians in patient care
- K3. Medical terminology related to phlebotomy
- K4. Aseptic techniques
- K5. Blood components (e.g., serum, plasma, whole blood, RBC, WBC, platelets)
- K6. Blood group systems (A, B, AB, O, Rh)
- K7. Phlebotomy-related vascular anatomy (e.g., antecubital fossa, hand, foot)
- K8. Cardiovascular system (e.g., anatomy and physiology of the heart, pulmonary and systemic blood flow, blood vessels)
- K9. Hemostasis and coagulation process
- K10. The impact of pre-analytical errors on test results
- K11. Needlestick Safety and Prevention Act
- K12. Documentation and reporting requirements
- K13. Verbal and non-verbal communication (e.g., active listening; pace, tone, and volume of voice; personal space; use of jargon)
- K14. Patient characteristics impacting communication (e.g., cultural and religious differences, language barriers, cognitive level, developmental stage)
- K15. Professionalism (e.g., integrity, punctuality, etiquette, respect, professional presentation)
- K16. Ethical standards applicable to the practice of phlebotomy (e.g., NHA code of ethics)