



## CCRN® Exam Review (Adult)

### Presented by

**Mary Ann "Cammy" Christie, MSN, APRN, CCRN, PCCN**

Cammy is an internationally known speaker with over 45 years of critical care experience. She has taught the CCRN Exam Review as well as critical care updates with an emphasis on the critical thinking skills of the bedside practitioner. In addition to lecturing across the globe, Cammy is a reviewer for several revered nursing journals, has numerous publications in the area of critical care and continues to have an active practice as an acute care nurse practitioner at the University of Florida, Division of Critical Care Medicine, Cardiothoracic Surgery. As a critical care nurse practitioner, Cammy brings many clinical practice skills to her lectures as well providing clinical pearls for bedside care.

**11.5 Contact Hours | 3.5 Pharmacology Hours | Course Length: 675 minutes**

### Program Description

This two-day course provides the critical-care nurse with a review of AACN's 2025 core curriculum. The agenda combines central knowledge-based lectures for nurses working in the ICU with an essential review of nursing care and interventions according to the AACN exam blueprint for the critical-care provider. This review is not an introduction to the ICU, but a comprehensive update for the professional at the bedside and preparing for the certification examination.

### Program Learning Outcomes

*This program prepares the learner to:*

1. Discuss and practice test-taking skills.
2. Review critical anatomy, physiology and pathophysiology of each system.
3. Discuss significant assessment and diagnostic findings relevant to the critical care environment.
4. Discuss clinical presentation as well as specific patient management of commonly seen critical care conditions.

# Topics Covered

## 1 Introduction and Synergy

56 minutes

### Module Description

This module reviews the requirements for the CCRN Exam as well as how to apply. It reviews several test-taking strategies, as well as the different types of questions: general knowledge, application and synthesis. The synergy theory is the overall paradigm for the American Association of Critical-Care Nurses (AACN) regarding patient/family-centered care. Since 20% of the CCRN Exam covers this module of care, sample questions are reviewed.

### Module Learning Objectives

*This module prepares the learner to:*

1. Discuss the requirements needed to apply for the examination.
2. Discuss the application process according to the newest guidelines.
3. Discuss test-taking strategies.
4. Define the synergy model as it relates to the critically ill patient and family.
5. Define patient-centered care.
6. Describe the essentials of critical-care nursing.

## 2 Hematology/Immunology

53 minutes

### Module Description

This module focuses on the inflammatory and stress responses in critical illness, anaphylactic shock, platelet function and bleeding disorders, care of wounds, anemias, cancer and the complications of the disease as well as treatment and immune deficiencies in the critically ill adult and peripheral extravasation of medications. The vascular response to bleeding and blood products will also be reviewed.

### Module Learning Objectives

*This module prepares the learner to:*

1. Describe the immune system and stress response as it is related to the critically ill patient.
2. Discuss interventions for the patient with disseminated intravascular coagulation (DIC).
3. Discuss the use of blood products for the bleeding patient.
4. List and describe how to identify and care for the patient with a peripheral IV infiltration.
5. Identify the patient and treatment protocols for the anemias seen in the critical care environment.
6. List the complications associated with the patient with cancer, before and during treatment.

## 3 Cardiovascular

132 minutes

### Module Description

This module covers normal cardiac physiology, hemodynamics, pharmacology, acute coronary syndrome (ACS), acute myocardial infarction (AMI), dysrhythmias associated with heart disease, heart failure (HF), valvular disease, cardiogenic shock, endocarditis and cardiac catheterization.

### Module Learning Objectives

*This module prepares the learner to:*

1. Discuss normal cardiac output (CO) parameters: heart rate (HR), preload, afterload and contractility.
2. Describe the cardiovascular assessment parameters of the adult patient with low CO.
3. Discuss hemodynamics and the utilization of pharmacology to enhance CO.
4. Devise nursing interventions for the patient with cardiac dysfunction.
5. Summarize the common diagnostics, treatments and complications of coronary artery disease (CAD).
6. Discuss, list and evaluate treatments of HF.
7. Discuss the assessment and treatment of vascular insufficiency.

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## 4 Endocrine

43 minutes

### Module Description

This module focuses on diabetes insipidus (DI), syndrome of inappropriate antidiuretic hormone secretion (SIADH), hypo- and hyperthyroidism, adrenal insufficiency, diabetic ketoacidosis (DKA) and hyperosmolar hyperglycemic state (HHS). Comparison of lab results and treatments are reviewed.

### Module Learning Objectives

*This module prepares the learner to:*

1. Describe the physiological effects of acute stress on the critically ill adult patient.
2. Compare and contrast DKA and HHS
3. List and discuss the nursing care of the patient with DI/SIADH.
4. List and discuss the treatments and complications of hypo/hyperthyroidism.
5. Summarize the identification and treatment of adrenal insufficiency.

## 5 Gastrointestinal

69 minutes

### Module Description

This module will focus on prevention of complications such as bleeding, ulcerations and translocation. Also presented will be a brief review of priorities of care for the gastrointestinal (GI) bleeding patient, pancreatitis, liver failure, gastroesophageal reflux disease (GERD), intestinal ischemia, GI surgeries, perforation of the esophagus, abdominal infarction and abdominal compartment syndrome.

### Module Learning Objectives

*This module prepares the learner to:*

1. Discuss liver physiology in relation to blood glucose and coagulopathies.
2. List interventions for upper and lower gastrointestinal bleeding.
3. Discuss the pathophysiology of bowel ischemia and pancreatitis and how this relates to the critically ill adult patient.
4. List and discuss strategies to prevent GI complications in the critically ill adult.
5. Summarize the identification and treatment of esophageal perforation.
6. Plan care for a patient with a Whipple procedure.

## 6 Neurology

78 minutes

### Module Description

This module focuses on normal cerebral function and altered function in the brain-injured patient. The patient with intracranial hypertension will be discussed in detail, which will include nursing assessment and care of the brain-injured patient. A brief review of the physiology of stroke, increased intracranial pressure (ICP), intracranial hemorrhage, subarachnoid hemorrhage (SAH), spinal cord injury, neuromuscular disorders and seizure activity will be incorporated.

### Module Learning Objectives

*This module prepares the learner to:*

1. List and discuss the focused neurological assessment.
2. Describe and list nursing interventions for the patient with an acute head injury and increased ICP.
3. Review the care of the patient with acute seizure activity.
4. Plan care for a patient with a spinal cord injury.
5. Discuss the respiratory compromise issues with patients with neuromuscular dysfunction.

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## 7 Behavioral and Psychosocial

28 minutes

### Module Description

Behavioral abnormalities are a common complication in the intensive care unit and a cause of prolonged ICU stay, increased medical complications, prolonged ventilation times and increased mortality. This presentation reviews several of the behavioral problems seen in the unit with a discussion of nursing interventions that may reduce the risk of these patients. AACN's guidelines for care are the focus as well as medications frequently used.

### Module Learning Objectives

*This module prepares the learner to:*

1. Discuss the clinical presentation of dementia and delirium.
  2. Discuss the nursing care of patients with altered behavior in the intensive care unit, focusing on decreasing complications of sedation.
- Review the causes and sequelae from post-traumatic stress disorder (PTSD), post-ICU syndrome (PICS), medical non-adherence and risk-taking behavior.

## 8 Renal

48 minutes

### Module Description

This module will review normal renal physiology and function. Since renal function is a major determinant of mortality in the critical-care area, preservation of normal renal function is addressed. Acute renal injury and failure are both discussed in detail while nursing assessment and interventions will also be reviewed. Topics discussed include electrolytes, pharmacology and the indications for dialysis.

### Module Learning Objectives

*This module prepares the learner to:*

1. Discuss renal assessment of the critically ill adult patient
2. Discuss and list the requirements for acute dialysis.
3. List and discuss the types of acute renal injury and failure.
4. Review electrolyte disorders in the adult critically ill patient.
5. Describe the metabolic acidosis in the patient with acute kidney injury (AKI).

## 9 Respiratory

103 minutes

### Module Description

This module will review normal respiratory physiology, drugs, acute respiratory failure (ARF), mechanical ventilation strategies, pneumonia, aspiration, chest-tube care, acute asthma, pulmonary embolus, *acute respiratory distress syndrome* (ARDS) and chest trauma. Nursing care of the ventilator-dependent patient is the focus. Thoracic surgery will be discussed with a focus on nursing care of the surgical patient.

### Module Learning Objectives

*This module prepares the learner to:*

1. Discuss the concepts of oxygenation and ventilation for the adult patient with respiratory dysfunction.
2. List and discuss strategies to enhance oxygenation and ventilation.
3. Devise nursing interventions for the patient with respiratory dysfunction.
4. Discuss monitoring of the patient in respiratory distress.

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## 10 Musculoskeletal and Multisystem

65 minutes

### Module Description

This module will discuss musculoskeletal infections and functional issues, such as the complications of immobility and gait disturbances. Complications such as compartment syndrome, osteomyelitis and rhabdomyolysis will also be discussed. This module will review the physiology of shock: cardiogenic, neurologic, hypovolemic, anaphylactic and septic shock. Nursing assessment, hemodynamics and interventions are covered. Also included are complications of bariatric surgery, review of hospital-acquired infections (HAIs) and the patient with pain and palliative care. Life-threatening maternal/fetal complications, including eclampsia, HELLP syndrome and postpartum hemorrhage, will be addressed.

### Module Learning Objectives

*This module prepares the learner to:*

1. Discuss musculoskeletal infections and complications of decreased functional capacity in patients with long-term ICU stays.
2. Discuss compartment syndrome and nursing care of these patients.
3. List and discuss the identification and treatment of osteomyelitis and rhabdomyolysis.
4. Define hypoperfusion and the resultant “shock” state.
5. List and discuss the types of shock: cardiogenic, hypovolemic and vasogenic.
6. Identify the possible triggers for HAIs, and discuss nursing interventions for the prevention of these complications.
7. List and discuss the possible postoperative complications of bariatric surgeries.
8. Briefly discuss care of the maternal/fetal patient with critical illness.

## Accreditation

**RN/LPN/LVN/Other: 11.5 Contact Hours**  
***Includes 3.5 Pharmacology Contact Hours***

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