

Presented by

Cammy Christie, MSN, ACNP, CCRN, CSC, CMC, 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 as providing clinical pearls for bedside care.

12 Contact Hours | Course Length: 684 minutes

Program Description

This course is to prepare the adult cardiac medical and cardiac surgical nurse to take the AACN certification exam for Cardiac Medicine and/or Surgery Exam. The course focuses on adult cardiac abnormalities with a concentration on nursing assessment and medical/surgical interventions. Coronary artery disease, acute coronary syndrome, heart failure, endocarditis, valvular disease and aortic disease will be the major topics of discussion with related medical and surgical interventions. The course will also include a brief review of pulmonary, hematology, neurology, gastrointestinal and renal systems as they pertain to the cardiac patient.

Program Learning Outcomes

This program prepares the learner to:

1. Discuss and practice test-taking skills.
2. Review critical anatomy, physiology and pathophysiology of the cardiac system.
3. Define in detail: preload, afterload, contractility and cardiac output/index.
4. Relate pharmacological interventions for the medical and surgical cardiac patient.
5. Discuss the role of hemodynamics as a diagnostic tool for the development of interventions for the cardiac patient.
6. Discuss significant assessment and diagnostic findings relevant to the cardiac adult patient: specifically coronary artery disease and heart failure.
7. Discuss the clinical presentation as well as specific patient management modalities of the cardiac medical problems.
8. Discuss the clinical presentation as well as specific patient management modalities of the patient undergoing cardiac surgery.

Topics Covered

1 Introduction

26 minutes

Module Description

This module will introduce the test format for the Cardiac Medicine Certification (CMC) Exam and the Cardiac Surgery Certification (CSC) Exam. The American Association of Critical-Care Nurses (AACN) blueprints for both exams is presented in detail and the application and renewal process is discussed.

Module Learning Outcomes

At the completion of this topic, the participant will be able to:

1. List the blueprint components of the separate examinations.
2. Describe how to: apply for the examination and schedule the examinations.
3. List how to recertify by examination and/or CEU requirements.

2 Cardiac Anatomy and Physiology

80 minutes

Module Description

This module reviews cardiac anatomy, physiology and the essentials of vital signs and cardiac assessment. This module will also introduce many of the advanced physical assessment and intervention skills required to care for the complex cardiac patient.

Module Objectives

This module prepares the learner to:

1. List and discuss basic cardiac anatomy, including intracardiac structures and the great vessels.
2. Define: preload, afterload, contractility, cardiac output and cardiac index.
3. Identify normal and abnormal heart rate and rhythm, blood pressure, respiratory rate and temperature.
4. Discuss coronary artery circulation physiology.
5. List endocrine and neurologic control of cardiac function.

3 Cardiovascular Assessment

72 minutes

Module Description

This module reviews cardiovascular assessment and a review of heart sounds and murmurs associated with valvular disease. Hemodynamics is discussed as it relates to ventricular function assessment, oxygen delivery and consumption, and cardiac pharmacology. The 12-Lead ECG is discussed with detail to assessing myocardial ischemia and infarction.

Module Learning Outcomes

This module prepares the learner to:

1. Review the systematic approach to cardiac assessment.
2. List and discuss the techniques of inspection, palpation and auscultation for cardiac assessment.
3. Review the assessment of the vascular system.
4. State the normal pressures within the cardiovascular system.
5. Define preload, afterload and contractility.
6. Discuss cardiac pharmacology as it relates to hemodynamic function.
7. Describe the normal QRS morphology in all 12-Leads.
8. Define and discuss the 12-Lead changes that occur with cardiac ischemia and infarction.

4 Cardiac Pathophysiology

75 minutes

Module Description

This module pertains to coronary artery disease (CAD): identification, diagnosis, presentation and treatment modalities. Incidence, prevalence and acute coronary syndrome will be discussed at length.

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Module Learning Outcomes

This module prepares the learner to:

1. Define CAD, and discuss the progression of the disease.
2. Define stable angina, unstable angina, non-ST segment elevation myocardial infarction (NSTEMI) and ST-segment elevation myocardial infarction (STEMI).
3. List the pharmacological treatment modalities for CAD.
4. Define and discuss the medical and surgical treatment of CAD
5. List and discuss the most common complications of CAD as well as the medical and surgical treatment of CAD.

5 Heart Failure

79 minutes

Module Description

This module will deal with the physiology, pathophysiology and treatment of acute and chronic heart failure (HF). Systolic and diastolic HF will be discussed. The focus of the module is the complex treatment of patients with decompensated HF.

Module Learning Outcomes

This module prepares the learner to:

1. Discuss the definitions of HF: systolic and diastolic.
2. List and discuss types of HF and the treatment modalities of each.
3. Discuss the clinical presentation of acute decompensated HF as well as compensated chronic HF.

6 Valvular Disease: Physical Findings, Diagnosis, Treatment

48 minutes

Module Description

This module is designed to review adult cardiac valvular disease. Congenital and acquired valvular disease is presented. Identification, diagnosis, patient presentation, hemodynamics and treatment modalities are discussed in detail.

Module Learning Outcomes

This module prepares the learner to:

1. Discuss the pathophysiology related to aortic stenosis and regurgitation and mitral stenosis and regurgitation.
2. Discuss medical and surgical treatment modalities of common adult valvular disease.
3. List and discuss the common complications of adult valvular disease.

7 Introduction to Cardiac Surgery

172 minutes

Module Description

This module introduces the sections on cardiothoracic surgery. A brief review of coronary artery disease (CAD) and heart failure (HF) surgical treatment is presented. This module also begins the introduction to the cardiac surgical patient. Indications for coronary artery bypass graft (CABG) and valvular repair and/or replacement are discussed with mortality and morbidity described. The preoperative evaluation, perioperative care and the procedures utilized during surgery are discussed as they relate to the care of the patient. The effects of cardiopulmonary bypass and hypothermia are discussed in detail. This module is also designed to review the immediate postoperative patient goals and immediate nursing and surgical interventions to obtain the goals.

Module Learning Outcomes

This module prepares the learner to:

1. List the diagnosis and treatment plans for the patient with CAD.
2. List the diagnosis and treatment plans for the patient with HF.
3. Describe the indications for CABG and valve surgery in the adult patient.
4. Define low cardiac output syndrome.
5. Discuss the preoperative, intraoperative and postoperative care of the cardiovascular patient.
6. List and discuss the immediate and first 48-hour surgical goals of care.

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8 Indications for CABG and Valve Surgery

132 minutes

Module Description

The purpose of this module is to briefly review aortic disease: aneurysm formation and aortic dissection. The focus of this presentation is acute aortic dissection: types, diagnosis, treatment and nursing care. A description of the nursing interventions is comprehensive and relates to physical assessment and hemodynamic monitoring of the patient. A review of non-cardiac postoperative complications is also reviewed.

Module Learning Outcomes

This module prepares the learner to:

1. Discuss the identification and treatment of aortic dissection.
2. Discuss the clinical manifestations as well as the physical assessment findings of aortic dissection.
3. Outline the medical and surgical management modalities of patients with aortic dissection.
4. Discuss the postoperative care of the cardiovascular patient.
5. List and discuss the complications of cardiac medical and surgical interventions.
6. Synthesize nursing interventions for the acute cardiac surgical and medical patient with cardiovascular, pulmonary, renal, hematological, gastrointestinal and neurological alterations.

Accreditation

RN/LPN/LVN/Other: 12 Contact Hours

Includes 3 Pharmacology Contact Hours

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