Purpose: This document provides an outline of the medical content categories and their associated weights covered on the Certified Cardiovascular Knowledge Exam for nurse practitioners (NPs) and physician associates (PAs). It is based on the results of a Job Task Analysis Study completed in May 2023. The study involved the results of a survey administered to approximately 17,000 NPs/PAs and the review of the patient care and procedural skills by the Job Task Analysis Task Force (JTA-Task Force.) The JTA-Task Force was comprised of eleven subject matter experts. This document also provides the skills and/or knowledge statements that NPs should know/ have to provide safe and effective care in cardiology.

Medical Content Category	% of Exam
Acute Coronary Syndromes	13%
Adult Congenital Heart Disease	5%
Ambulatory and Consultative Cardiology Care	9%
Cardiac Arrhythmias and Electrophysiology	11%
Cardiovascular Disease Prevention	9%
Critical Care Cardiology	2%
Heart Failure	14%
Pericardial Disease	5%
Stable Ischemic Heart Disease	8%
Valvular Heart Disease	9%
Vascular Medicine	6%
Core Competencies	9%
TOTAL	100%

Acute Coronary Syndromes (13%)

Determine a noninvasive versus invasive treatment strategy for patients with acute coronary syndromes.
Identify and initiate management for hemodynamic instability/compromise in patients with acute coronary syndromes.
Initiate and manage dual antiplatelet therapy and/or anticoagulants in patients with acute coronary syndromes.
Integrate assessment of left ventricular function into the management of patients with acute coronary syndromes.
Interpret coronary angiography report findings for patients with acute coronary syndromes.
Prevent and manage complications associated with contrast agents.
Prevent, identify, and initiate therapies in a bleeding emergency or a vascular access site complication.
Recognize and manage patients with right ventricular infarction and/or right ventricular dysfunction.
Recognize cardiac biomarker abnormalities to aid in the diagnosis of acute coronary syndromes.
Recognize ECG changes suggestive of myocardial ischemia and/or infarction.
Recognize mechanical complications in patients with acute coronary syndromes.
Recognize ST-segment changes on continuous ECG monitoring suggestive of acute coronary syndromes.

Adult Congenital Heart Disease (5%)

Integrate physical findings to develop differential diagnosis in adults with congenital heart disease.
Recognize cardiac arrhythmias in adults with congenital heart disease.

Ambulatory and Consultative Cardiology Care (9%)

Assess the cardiovascular risks associated with recreational and/or competitive sports, physically demanding occupations, and other vigo.rous physical activities.
Counsel patients about cardiovascular disease prevention strategies.
Distinguish causes of chest pain, palpitations, fatigue, lightheadedness, syncope, dyspnea, and edema through patient history, physical examination findings, and appropriate testing.
Identify patients with acute cardiovascular disorders or high-risk conditions who require immediate treatment, specialty consultation, and/or hospitalization.
Initiate management of urgent or emergent cardiovascular conditions and prioritize management of patients with multicomponent illness.
Integrate clinical information and test results to assess risk, establish diagnosis, formulate treatment, and manage follow-up for patients with cardiovascular disease.
Interpret cardiovascular imaging reports and apply results to clinical decision making.
Interpret exercise and pharmacological stress test reports with or without imaging and apply results to clinical decision making.
Monitor for side effects, intolerance, or nonadherence to cardiovascular treatment.
Provide preoperative risk assessment for patients with cardiovascular disease undergoing noncardiac surgery.
Recognize and document distinguishing characteristics of heart murmurs and sounds, vascular bruits, and peripheral pulses.
Recognize common cardiovascular findings on chest x-ray.
Recognize ECG and rhythm strip abnormalities.
Triage patients by phone or in person according to their presenting symptoms and medical urgency.
Utilize diagnostic testing for initial diagnosis and follow-up care of patients with cardiovascular disease.

Cardiac Arrhythmias and Electrophysiology (11%)

Evaluate and manage atrial arrhythmias, including rate control, rhythm control, and anticoagulation.
Evaluate and manage patients with bradyarrhythmias and heart block.
Evaluate and manage patients with syncope.
Monitor, recognize, and manage arrhythmias during exercise testing.
Recognize and manage abnormal findings in ambulatory rhythm monitoring.

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Cardiovascular Disease Prevention (9%)

Develop, implement, manage, and evaluate a plan of care for patients with hypertensive urgency and emergency.
Initiate and manage pharmacological and nonpharmacological interventions for patients with lipid disorders.
Order and assess laboratory testing at various stages of lipid management.
Perform a cardiovascular risk assessment and to develop an evidence-based treatment plan.
Perform a physical assessment and examination for patients with lipid disorders.
Recognize adverse effects of antihypertensive medications.
Recognize and initiate evaluation of secondary causes of hypertension.
Recognize patients with common inflammatory disorders or systemic diseases that may adversely impact cardiovascular disease risk.
Select antihypertensive drugs based on comorbidities, age, gender, or ethnic background.

Critical Care Cardiology (2%)

Perform clinical assessments for patients in all forms of shock.

Heart Failure (14%)

Develop a plan of care for patients with heart failure.
Develop a plan for lifestyle interventions in patients with heart failure.
Develop, implement, and evaluate patient-centric education plans for patients with heart failure.
Evaluate and manage patients with new-onset, chronic, and acutely decompensated heart failure.
Obtain clinical history and physical examination to determine functional capacity and volume status in patients with heart failure.
Refer patients with heart failure.
Utilize and titrate medical therapy for patients with heart failure in both the hospital and outpatient care settings.

Pericardial Disease (5%)

Clinically evaluate and manage patients with acute and relapsing pericarditis.
Identify and refer patients with pericardial disease who are candidates for intervention.
Identify physical findings of pericardial effusion, tamponade, and chronic constrictive pericarditis.
Refine the therapeutic plan of care of patients with pericardial disease based on laboratory and diagnostic test results.

Stable Ischemic Heart Disease (8%)

Distinguish stable from unstable coronary syndromes.
Obtain a problem-focused history and physical examination in patients with coronary artery disease and variant angina.
Recognize symptoms and ECG changes suggestive of ischemic heart disease and variant angina.
Recommend lifestyle interventions for patients with stable coronary artery disease.
Select evidence-based pharmacological therapy for patients with stable ischemic heart disease.
Select the appropriate noninvasive or invasive diagnostic study for patients with known or suspected coronary artery disease.

Valvular Heart Disease (9%)

Manage valvular disease.
Evaluate and collaboratively manage patients with valvular heart disease.
Recognize cardiac arrhythmias and perioperative complications in patients with valvular heart disease.

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Vascular Heart Disease (6%)
Evaluate and manage patients with upper and lower extremity peripheral artery disease.
Evaluate and manage patients with venous insufficiency.
Evaluate and manage patients with venous thromboembolism.
Identify patients at risk for abdominal and thoracic aortic aneurysms.
Initially evaluate patients with extracranial carotid and vertebral artery disease.
Interpret results of an ankle-brachial index test report.

Core Competencies (9%)
Engage patients in shared decision-making based upon balanced presentations of risks, benefits, and alternatives, factoring in patients' values and preferences.
Refer patients who are facing advanced and end-stage cardiovascular disease to appropriate specialists.
Educate healthcare professionals about diagnosis and management of patients with a condition in one's area of expertise.
Identify and address socioeconomic barriers impacting cardiovascular care and refer to other team members.
Develop, implement, and evaluate individualized, patient-centered educational strategies.
Utilize clinical practice guidelines, appropriate use criteria, and point-of-care tools to improve clinical decision-making.
Conduct literature searches, interpret findings, and apply evidence-based results to clinical care.
Demonstrate high ethical standards in personal and professional conduct.
Demonstrate mutual respect, consideration, and empathy for patients, families, and the healthcare team.
Attend to one's own health, well-being, and abilities in order to maximize personal and professional performance.

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