

## Cardiovascular CME

Total AAPA Category 1 CME Credits: 15.75

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### A Case-Based Approach to Acute Coronary Syndrome

AAPA Category 1 CME Credits: 1

**Description:** This session covers the topic of acute coronary syndrome and the diagnoses that fall within that spectrum through a series of cases. The session outlines the approach to the patient, the diagnostic methods and criteria for the conditions, as well as management of acute coronary syndrome. The cases are presented vignette style with history, physical exam, diagnostic studies, differential diagnoses, and management to be included.

#### Educational Objectives

At the conclusion of this session, participants should be able to:

- Compare and contrast the diagnoses on the acute coronary syndrome spectrum
  - Describe the appropriate evaluation for a patient with suspected acute coronary syndrome
  - Discuss the treatment plan for a patient unstable angina, NSTEMI or STEMI
  - Given a clinical scenario, identify a non-ST elevation acute coronary syndrome patient that would require more aggressive management
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### American Diabetes Association: Cardiovascular Risk and Treatment Options

AAPA Category 1 CME Credits: 1

**Description:** Atherosclerotic cardiovascular disease is the leading cause of morbidity and mortality for patients with diabetes. This session addresses hypertension, lipid and antiplatelet guidelines, as well as highlights the recent cardiovascular outcomes trials in people with diabetes and how these are a game changer for diabetes treatment and care.

#### Educational Objectives

At the conclusion of this session, participants should be able to:

- Demonstrate screening recommendations for early detection
  - Identify antihypertensive treatment approaches for adults with diabetes and hypertension
  - Cite ADA lipid treatment guidelines
  - Summarize the CV risk reduction noted in clinical trials of certain antihyperglycemic agents
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### Fickle Flutterings: Where We Are, Where We Are Going, and Special Considerations in Atrial Fibrillation Management

AAPA Category 1 CME Credits: 1

**Description:** This session provides an overview of atrial fibrillation and its implications for clinicians responsible for diagnosing, managing, and treating atrial fibrillation. It also covers newer therapies and who would benefit from these emerging therapies. The goal is to help explain the origination of atrial fibrillation and exacerbating factors.

#### Educational Objectives

At the conclusion of this session, participants should be able to:

- Identify risk factors for the development of atrial fibrillation
  - Recognize signs and symptoms of the condition and identify patients needing evaluation
  - Review treatment and emerging therapies for long term management
  - Identify unique populations of atrial fibrillation and their management
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### Hemodynamic Support in Acute Cardiogenic Shock

AAPA Category 1 CME Credits: 1

**Description:** Cardiogenic shock (CGS) is a life-threatening presentation of severe heart failure with high morbidity and mortality. There are limitations in conventional therapy in CGS with only a modest increase in cardiac output and neutral or negative survival benefits with inotropes, vasopressors, and intra-aortic balloon pumps (IABP). The use of mechanical circulatory support (MCS) has increased over the last decade and the next generation of acute support is now focusing on myocardial recovery and the benefits of ventricular unloading. This session covers the physiology of GCS, current use and indications for impella ventricular assist device versus extra corporeal membrane oxygenation, and the clinical evidence of benefit for MCS in cardiogenic shock.

#### Educational Objectives

At the conclusion of this session, participants should be able to:

- Describe the pathophysiology of cardiogenic shock with and without acute myocardial infarction as the primary cause
  - Recognize the incidence and outcomes with conventional management of cardiogenic shock
  - Describe the current concepts around myocardial recovery and the benefit of ventricular unloading
  - Compare and contrast the differences in mechanical circulatory support (MCS) technology
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### Hypertension in Chronic Kidney Disease: How Diuretics and/or RAAS Blockade are Keys to Success

AAPA Category 1 CME Credits: 1

**Description:** Hypertension (HTN) is the second leading cause of kidney disease and ESRD in the U.S. Yet in our chronic kidney disease (CKD) patients, it is difficult to achieve BP to recommended goals due to many factors including comorbidities, lack of patient education, and inappropriate medication regimens. This session provides insight into the treatment of resistant and/or difficult to control BP with focuses on proper understanding of diuretic and RAAS blockade medication regimens, importance of patient education/knowledge, and how CKD contributes to HTN.

#### Educational Objectives

At the conclusion of this session, participants should be able to:

- Recognize how CKD can lead to secondary and uncontrolled HTN
  - Explain how uncontrolled BP can worsen CKD and albuminuria prognosis
  - Properly diagnose thiazide and loop diuretics based upon level of CKD stage, albuminuria and patient compliance
  - Discuss the latest BP guidelines based upon age and comorbidities such as CKD and presence of albuminuria
  - Incorporate patient education to facilitate achieving BP management
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### Identifying, Managing, and Optimizing Treatment for Heart Failure

AAPA Category 1 CME Credits: 1

**Description:** Heart failure is an ongoing and complicated disease, and according to the CDC about 5.7 million adults in the U.S. have heart failure. One in nine deaths in 2009 included heart failure as contributing cause; about half of people who develop heart failure die within 5 years of diagnosis; and heart failure costs the nation an estimated \$30.7 billion each year. This total includes the cost of healthcare services, medications to treat heart failure, and missed days of work. This session focuses on the demographics of this disease, the early symptoms and detection, and management strategies that PAs must take in order to properly treat their patients. Plus, the session highlights newer medication therapies that have changed treatment recommendations.

#### Educational Objectives

At the conclusion of this session, participants should be able to:

- Identify the basic demographics and extent of heart failure, and the overall economic impact it has on the healthcare system
- Recognize early signs and symptoms of the disease, including the different stages and classes of heart failure

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- Determine the best clinical workup for patients
  - Recognize recommended treatment pathways based on the extent of the disease
  - Formulate a plan within the attendees' own practice of managing these complicated patients
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### **IHS: From Framingham to the Strong Heart Study: Understanding Cardiovascular Disease and its Risk Factors Among American Indians**

AAPA Category 1 CME Credits: 0.75

**Description:** This session is part of the Indian Health Services Symposium. While the Framingham Heart Study is considered the premiere example of a longitudinal epidemiological study into cardiovascular disease and its risk factors, it was completed on a largely white middle income population that is not generalizable to many patient populations to include American Indians. Based on a review of the existing data by the Subcommittee on Cardiovascular and Cerebrovascular Disease of the Secretary of Health and Human Service's Task Force on Black and Minority Health, it was concluded that information on cardiovascular disease in American Indians was inadequate and strongly recommended an epidemiological study of this problem. For almost 30 years, The Strong Heart Study (SHS) has evaluated the cardiovascular risk factors of American Indian communities as well as the impact of diabetes. This session provides an overview of the SHS, its key findings, and the unique factors that can impact the management of cardiovascular disease in American Indian people.

#### **Educational Objectives**

At the conclusion of this session, participants should be able to:

- Describe the Strong Heart Study and its contributions to American Indian Cardiovascular Health as well as the field of cardiology
  - Recognize the role of albuminuria as a unique risk factor of cardiovascular disease in American Indian populations
  - Interpret the differences in 10-year cardiovascular risk calculated via Strong Heart Study vs Framingham Study criteria
  - Identify the unique challenges and cultural considerations of conducting epidemiological studies in American Indian populations
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### Know When to Hold 'Em: Common Medication Management Decisions When Your Patient Has Planned Surgery

AAPA Category 1 CME Credits: 1

**Description:** This session focuses on key considerations in approaching chronic medication management for patients who are in need of non-emergent surgery. Common cardiovascular, pulmonary, diabetic, neuropsychiatric, and immune suppression agents is covered with respect to concerns for potential adverse events in the perioperative period, optimal time frames for adjustment, and patient education. An overview of anticoagulation considerations and resources is addressed. The importance of interdisciplinary communication with anesthesia, surgical team, and primary care is underscored. The content primarily focuses on planned surgery for the non-hospitalized patient, but many concepts translate to the inpatient setting. Evidence-based recommendations is discussed as well as areas where variations can exist in management.

#### Educational Objectives

At the conclusion of this session, participants should be able to:

- Recognize major drug classes that can influence perioperative management and postoperative complication concerns
  - Discuss important considerations in antiplatelet and anticoagulant management prior to surgery
  - Explain importance of communication with the PCP, consultants and the perioperative care team
  - Discuss some non-pharmaceutical considerations in preoperative optimization
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### Management of Patients with Valvular Heart Disease

AAPA Category 1 CME Credits: 1

**Description:** The field of valvular heart disease is rapidly progressing with advances in diagnostic imaging and improvements in catheter-based and surgical interventions. Much research has been done since the 2014 AHA/ACC Guideline for the Management of Patients with Valvular Heart Disease. Therefore, a 2017 AHA/ACC Focused Update was released, focusing on areas of change such as; transcatheter valve replacement, surgical management of primary and secondary mitral regurgitation, and management of valve prostheses. This session focuses on evaluation, management, medical therapy, and surgical treatment options for patients with aortic stenosis, aortic regurgitation, mitral regurgitation, infective endocarditis, and prosthetic valves.

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### Educational Objectives

At the conclusion of this session, participants should be able to:

- Recognize the clinical features of aortic stenosis, aortic regurgitation, mitral regurgitation, and infective endocarditis
  - Determine appropriate medical management and intervention for aortic stenosis, aortic regurgitation, mitral regurgitation, and infective endocarditis
  - Select the type of prosthetic heart valve that best fits the patient and their situation
  - Manage antithrombotic therapy for prosthetic valve patients
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### Managing Cardiovascular Risk in Patients with Type 2 Diabetes: Emerging Concepts

AAPA Category 1 CME Credits: 1

**Description:** This session focuses on the relationship between type 2 diabetes (T2D) and cardiovascular disease and is part of AAPA's curriculum known as Diabetes Leadership Edge. This CME session is intended for PAs who diagnose and treat patients with type 2 diabetes. The session covers the mechanisms by which type 2 diabetes contributes to cardiovascular disease, how to analyze the results of cardiovascular outcomes trials of glucose-lowering drugs and select the right treatment for the patient's overall cardiovascular risk profile.

### Educational Objectives

At the conclusion of this session, participants should be able to:

- Describe the pathophysiology of type 2 diabetes and CVD
  - Summarize the results of previous strategies addressing CV risk through glucose control
  - Identify the role of the rosiglitazone controversy in ushering in a new era of CV outcome studies mandated by the Food and Drug Administration (FDA) for type 2 diabetes agents
  - Summarize the results of cardiovascular outcome trials (CVOTs) of new diabetes agents
  - Differentiate among agents based on their CV profile and select appropriate second agent based on a patient's CV risk profile
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### Optimal Outpatient Management of Hypertension: Choosing the Right Treatment for the Right Patient

AAPA Category 1 CME Credits: 1

**Description:** The office management of hypertension has become more challenging as a result of the recently published ACC/AHA Hypertension Guideline that lowered the BP that defines hypertension, thereby substantially increasing the number of patients who are now hypertensive. Yet, even prior to these guidelines, the management of hypertension in this country has been suboptimal with only about half of the hypertensive population achieving even the previous higher BP targets. Among the causes

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for this shortcoming is inadequate clinician understanding of the pharmacology of antihypertensive medications and how to combine them to achieve optimal blood pressure control with the least side effects. After a brief review of key elements of the new guideline as they relate to their application in the office management of hypertension, this session outlines the effective, ineffective, and potentially harmful antihypertensive drug combinations and then illustrate these points through interactive case vignettes. Note: This session is not eligible for AAPA Category 1 Self-Assessment CME credit.

### Educational Objectives

At the conclusion of this session, participants should be able to:

- Define hypertension, treatment thresholds and targets according to the 2017 ACC/AHA Hypertension Guideline
  - Accurately diagnose hypertension using office and out-of-office blood pressure measurement methods
  - Identify effective, ineffective, and harmful antihypertensive drug combinations based on their pharmacology
  - Apply the previous objectives to specific patient scenarios
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### PCSK9 Inhibitors And Ezetimibe: What Exactly Am I Supposed to do With Them?

AAPA Category 1 CME Credits: 1

**Description:** This high-yield, evidence-based session, provides an efficient, clear, and unequivocal demystification regarding use of PCSK9 inhibitors and ezetimibe amidst a roaring tide of arguably overzealous implementation and conflicting guidance. Participants should have a better understanding of who might benefit from these medications under what circumstances, and how to discuss with their patients the possible institution of these therapies when appropriate.

### Educational Objectives

At the conclusion of this session, participants should be able to:

- Compare a treat-to-target approach and an approach based on cardiovascular risk and discuss the evidence behind both
  - Describe key findings from major clinical trials for the PCSK9 inhibitors and ezetimibe in reducing cardiovascular outcomes
  - Use the available evidence to ascertain the patient populations who might reasonably be thought to possibly benefit from these medications
  - Discuss how shared decision-making can be incorporated into decisions surrounding PCSK9 inhibitors and ezetimibe
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### **Syncope Assessments in the Office, Emergency Department, or Hospital: Effective, Efficient, and Economic Evaluation**

AAPA Category 1 CME Credits: 1

**Description:** Syncope and other causes of transient loss of consciousness (t-LOC) are seen commonly in the emergency department as well as outpatient and inpatient settings. While benign etiologies for syncope occur commonly, clinicians must accurately and efficiently identify when a patient presenting with syncope bears higher risk for morbidity and mortality. Current guidelines and risk stratification tools can assist clinicians in making appropriate and safe medical decisions in their patients presenting with syncope or t-LOC. This session uses a case-based interactive discussion to permit clinicians to effectively and safely triage and evaluate patients presenting after a syncopal episode.

#### **Educational Objectives**

At the conclusion of this session, participants should be able to:

- Use H and P findings and clinical decision rules to risk stratify and triage patients with transient loss of consciousness (t-LOC) and syncope
  - Employ prudent evidence-based test-ordering decisions for syncope patients based on clinical findings
  - Accurately estimate pulmonary embolism (PE) risk in syncope, and implement a structured PE evaluation (when indicated)
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### **The Little Engine that Could Not Even: A Cautionary Tale of Right Ventricular Failure**

AAPA Category 1 CME Credits: 1

**Description:** This lecture will be an interactive discussion of the recognition and management strategies for acute right ventricular failure. The past few years have seen an increased understanding and focus on specific management of right-sided heart failure, and its significant contribution to overall cardiac performance. This is especially important given the current recommendations of fluid resuscitation in patients suspected of developing septic shock. This session will briefly touch on specific anatomic considerations, delve into special physiologic considerations (differentiating from the Left Ventricle, ventricular interdependence, etc.), diagnostic tools (especially Point of Care Ultrasound), and then address strategies for both prevention and treatment of acute isolated RV failure or biventricular failure, including fluid/diuretics, inotropic/vasoactive pharmacology, and finally initiation of temporary and durable mechanical circulatory support.

#### **Educational Objectives**

At the conclusion of this session, participants should be able to:

- Compare and contrast the basic anatomic and physiologic features of the right and left ventricles



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- Describe the concept of ventricular interdependence and how right-sided heart failure can immediately impact total cardiac performance
  - Identify the most common causes of acute right ventricular failure (infarct, volume overload, LV failure, valvular disorders, PHTN/PE, etc.)
  - Demonstrate knowledge of the role of diagnostics, and interpret cardiac point-of-care ultrasound images (e.g. IVC diameter, TAPSE) to assess RV function
  - Explain the role of volume optimization, vasoactive medicines (inotropes/pressors) and mechanical circulatory support in the management of RV failure
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### Treating Hypertensive Urgencies and Emergencies: What the New Guidelines Tell Us

AAPA Category 1 CME Credits: 1

**Description:** Although hypertensive urgencies and emergencies occur in only a minority of hypertensive patients, they pose the greatest threat and demand appropriate management. The two entities is defined and the important clinical distinctions and implications for treatment between them is highlighted. The session focuses on the management of specific clinical entities associated with hypertensive emergencies. These include preeclampsia/eclampsia, aortic dissection, pheochromocytoma crisis, CNS disorders (ischemic and hemorrhagic stroke, encephalopathy), and acute heart failure. The key questions are what drugs should be used for each, and how fast and far should the blood pressure be lowered? The answers will come from the latest evidence-based clinical practice guidelines, including, but not limited to, the 2017 ACC/AHA Hypertension Guideline. Note: This session is not eligible for 1 AAPA Category 1 Self-Assessment CME credit.

#### Educational Objectives

At the conclusion of this session, participants should be able to:

- Define, compare, and contrast the hypertensive urgencies and emergencies
  - Apply recommended general principles of managing hypertensive urgencies vs. emergencies
  - Apply the current clinical practice guideline recommendations for managing specific clinical entities associated with hypertensive emergencies
  - Avoid inappropriate and harmful pharmacologic interventions for managing these specific clinical entities
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### Update: Management of Venous Thromboembolism

AAPA Category 1 CME Credits: 1

**Description:** Venous thromboembolism (VTE) is one of the major causes of morbidity and mortality in the U.S. Prompt recognition of a patient presenting with acute VTE is critical for good outcomes. The purpose of this session is to provide PAs and NPs with the tools needed to appropriately care for patients presenting with VTE disease, according to the latest literature and recommendations. Participants should be familiar with the basic work-up for a patient presenting with both stable and unstable VTE. The laboratory studies and diagnostics required to appropriately work-up a patient presenting with acute venous thromboembolic disease will be identified. Pharmacologic and non-pharmacologic treatments is covered in the context of landmark studies and the most recent CHEST Guidelines. Direct oral anticoagulants is reviewed and compared to traditional therapies.

### Educational Objectives

At the conclusion of this session, participants should be able to:

- Identify the current statistics and epidemiology
  - Review the basic work-up for a patient presenting with acute venous thromboembolism
  - Examine the options for initial pharmacologic management of acute deep vein thrombosis and pulmonary embolism
  - Describe the indications for non-pharmacologic treatment
  - Compare and contrast the oral anticoagulants
-