

Intraoperative Hemodynamics: Mastering Advanced Monitoring In Action

Pre-Congress Workshop

**Saturday, August 9, 2025
7:00 am – 11:30 am**

Music City Center
201 Rep. John Lewis Way S.
Nashville, TN 37203

Purpose: Intraoperative hypotension (IOH) has emerged as a critical concern in anesthesia practice, with mounting evidence linking it to adverse postoperative outcomes.

Target Audience: The workshop is intended for frontline CRNAs, RRNAs, and anesthesia leaders responsible for making operations decisions for their departments.

Program Description: Studies have shown that IOH occurs in 19.3% to 88% of surgical cases, depending on the definition used. Even brief episodes of hypotension can significantly impact patient outcomes, with mean arterial pressures (MAP) below 60-70 mmHg associated with acute kidney injury (AKI), myocardial injury, postoperative cognitive dysfunction, stroke, and increased mortality. Greater severity and duration of IOH is associated with a dose-dependent increased risk for these adverse postoperative outcomes. A recent systematic review reported a MAP below 65 mmHg for > 5 minutes was the most cited threshold consistently associated with increased postoperative AKI. The management of IOH remains challenging, with debate surrounding optimal fluid and vasopressor strategies. Nurse anesthetists play a crucial role in monitoring and managing intraoperative hemodynamics. Even after adjusting for patient risk factors, multiple studies note that IOH may be associated with clinical practice variation, which is a modifiable risk factor for IOH in some patients. Attending a workshop on IOH would provide valuable insights into the latest evidence-based practices for prevention and treatment, including advanced hemodynamic monitoring techniques, individualized blood pressure management strategies, and the appropriate use of fluids and vasopressors. Such knowledge is essential for improving patient safety and outcomes, as proper management of IOH can significantly reduce postoperative complications and mortality.

Until April 2024, there were no specific recommendations for anesthesia providers for best practices to prevent patient harm from intraoperative hemodynamic instability. The Anesthesia Patient Safety Foundation (APSF) recently published consensus recommendations for the perioperative management of hemodynamic instability. They emphasize the importance of raising awareness and educating anesthesia clinicians on the effects of hemodynamic instability, the association with adverse outcomes, education on the pathophysiology of hypotension, the importance of early detection, and appropriate hemodynamic monitoring and management. These recommendations provide best practices for preventing harm, address current knowledge, and serve as a call to action for anesthesia clinicians, anesthesia education programs, and national associations/organizations to disseminate the consensus best practices. Many CRNAs remain unaware of these recent consensus recommendations and need education on best practices to improve patient outcomes and prevent harm. This interactive, hands-on workshop serves to respond to the call to action for a national campaign and aims to meet the APSF recommendations by providing needed education for CRNAs on each topic addressed. Attendees will learn during interactive lectures and immediately apply knowledge using state-of-the-art technology.

Attendees completing the half-day workshop will have access to pre-workshop course work included with registration covering the following 4 topics:

1. Intraoperative hypotension and hemodynamic instability
2. Hemodynamic monitoring and recent issues with management
3. Advanced hemodynamic monitoring and goal-directed therapy (GDT)
4. Clinical application of improved hemodynamic management

Note: Upon completion of the online and workshop components of the course the participant will receive a certificate of completion.

To ensure that the workshop content met both knowledge and skill sets associated with competencies and curriculum expectations, we're requesting participants to engage in a brief follow up survey 6 months after the workshop. This will help the AANA measure the change in practice performance that is associated with an educational intervention.

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7:00 – 7:15 am	Welcome and Overview	
7:15 – 8:15 am	<p>Going with the flow: Physiology of Hemodynamics and Adverse Effects of IOH (1 Class A CE)</p> <p>Learner Outcomes:</p> <ol style="list-style-type: none">1. Describe normal physiologic flow in the cardiac, neurological, and gastrointestinal systems.2. Define intraoperative hypotension.3. Describe the multifactorial pathophysiology of hemodynamic instability.4. Describe the correlation between the incidence of intraoperative hypotension and adverse patient outcomes of acute kidney injury, myocardial injury, and postoperative cognitive dysfunction.5. Discuss the importance of identifying the underlying cause of hemodynamic instability and effective interventions.	<p>Rhea Temmermand, PhDc, MSN, CRNA; Amy Yerdon, DNP, CRNA, CNE, CHSE; Desiree Chappell, MSNA, CRNA, FAANA</p>
8:15 – 9:15 am	<p>Ready, Steady, Go: Management of Hemodynamic Instability and IOH (1 Class A CE; with 0.5 Pharm)</p> <p>Learner Outcomes:</p> <ol style="list-style-type: none">1. Discuss adverse patient outcomes associated with recent trends in intraoperative hemodynamic management: Insights from MPOG Data2. Describe the pharmacology of commonly used vasopressors and appropriate choices for administration.3. Describe the benefits of continuous blood pressure monitoring in minimizing hemodynamic instability.4. Identify and incorporate evidenced based hemodynamic strategies to prevent and manage intraoperative hypotension.	<p>Desiree Chappell, MSNA, CRNA, FAANA; Amy Yerdon, DNP, CRNA, CNE, CHSE; Kesha Thurston, DNP, MSHQS, CRNA</p>
9:15 – 9:30 am	Break	

9:30 – 10:30 am	Interactive Session: Virtual Physiology Lab (1 Class A CE) Learner Outcomes: <ol style="list-style-type: none"> 1. Review the practical and physiological concepts of hemodynamic monitoring across the perioperative continuum. 2. Discuss the role of volume, flow, and pressure management as they relate to physiological changes commonly occur during surgery. 3. Evaluate perioperative hemodynamic changes and strategies for intervention. 4. Incorporate predictive approaches to hemodynamic monitoring. 	Kesha Thurston, DNP, MSHQS, CRNA; Rhea Temmermand, PhDc, MSN, CRNA; Amy Yerdon, DNP, CRNA, CNE, CHSE; Desiree Chappell, MSNA, CRNA, FAANA
10:30– 11:30 am	Fireside Chat: Reflections and Insights (1 Class A CE) Learner Outcomes: <ol style="list-style-type: none"> 1. Describe experiences and challenges in hemodynamic management. 2. Discuss and future directions in hemodynamic management. 3. Describe real and perceived barriers to implementing lessons learned. 	Kesha Thurston, DNP, MSHQS, CRNA; Rhea Temmermand, PhDc, MSN, CRNA; Amy Yerdon, DNP, CRNA, CNE, CHSE; Desiree Chappell, MSNA, CRNA, FAANA
11:30 am	Program Ends	

Accreditation Statement:

This course has been prior approved by the American Association of Nurse Anesthetists for 4.00 Class A CE credits; AANA Code Number 1045288; Expiration date Saturday, August 9, 2025. The American Association of Nurse Anesthesiology designates this program as meeting the criteria for up to 0.5 CE Credits in Pharmacology/Therapeutics.

The American Association of Nurse Anesthetists is accredited as a provider of nursing continuing professional development by the American Nurses Credentialing Center's Commission on Accreditation.

AANA is an approved provider by the California Board of Registered Nursing, CEP #10862.

**Conflict of Interest Disclosure:**

All presenters and planners of this continuing nursing education activity are required to disclose to the audience any significant financial relationship with the manufacturer(s) of any commercial healthcare products, goods, or services consumed by or used on patients. If any conflicts have been disclosed, the planners of this program assure that the content is unbiased and free of any conflict of interest.

All planners, authors, and content reviewers disclosed that there were no commercial interest relationships to declare. Attendees will be provided full disclosure information on the AANA Meetings App.