

**CURRICULUM VITAE**  
**Daniel Rosenkrans, MD**  
April 28, 2025

Contact Information	Department of Anesthesiology UNC School of Medicine N2198 UNC Hospitals, CB#7010 Chapel Hill, NC 27599-7595 Office: (919) 966-5136 Cell: (815) 978-2298 Work Email: Daniel_rosenkrans@med.unc.edu
---------------------	---

## **EDUCATION and TRAINING**

7/2019 – 6/2020	Critical Care Medicine Fellowship Duke University Medical Center
7/2018 – 6/2019	Adult Cardiothoracic Anesthesiology Fellowship Duke University Medical Center
6/2014 – 7/2018	Anesthesiology Residency University of North Carolina Hospitals
8/2010 – 5/2014	Medical Doctorate Southern Illinois University School of Medicine
8/2005 – 5/2009	Bachelor of Arts, Biology Augustana College

## **LICENSURE and CERTIFICATION**

2023 – Present	Perioperative Resuscitation and Life Support Certification
2023 – present	Adult Cardiac Anesthesiology Board Certification
2022 – Present	North Carolina Medical License #2016-01830
2020 – present	Critical Care Medicine Board Certification
2019 – Present	Advanced Perioperative Transesophageal Echocardiography Board Certification
2019 – Present	Anesthesiology Board Certification

2014 – Present    **Lean Six Sigma: Yellow Belt Certification**

## **PROFESSIONAL APPOINTMENTS and EMPLOYMENT**

### *Academic Appointments*

2022 – Present    **Clinical Assistant Professor**  
Department of Anesthesiology  
University of North Carolina School of Medicine at Chapel Hill

2021 – 2022    **Adjunct Clinical Assistant Professor**  
Rocky Vista University School of Osteopathic Medicine

### *Administrative Appointments*

2023 – Present    **Objective Structured Clinical Exam (OSCE) Director**  
Department of Anesthesiology  
University of North Carolina School of Medicine at Chapel Hill

2023 – Present    **Resident Point of Care Ultrasound Director**  
Department of Anesthesiology  
University of North Carolina School of Medicine at Chapel Hill

2022 – Present    **Resident Board Preparation Director**  
Department of Anesthesiology  
University of North Carolina School of Medicine at Chapel Hill

2022 – Present    **Resident Journal Club Director**  
Department of Anesthesiology  
University of North Carolina School of Medicine at Chapel Hill

2022 – Present    **Assistant Residency Program Director**  
Department of Anesthesiology  
University of North Carolina School of Medicine at Chapel Hill

2023 – 2024    **Resident Point of Care Ultrasound Bootcamp Director**  
Department of Anesthesiology  
University of North Carolina School of Medicine at Chapel Hill

2022 – 2024    **CT Anesthesia CME Rounds Co-Director**  
Department of Anesthesiology  
University of North Carolina School of Medicine at Chapel Hill

### *Clinical Appointments*

2022 – Present    **Cardiac Anesthesiologist and Intensivist**  
Department of Anesthesiology  
University of North Carolina School of Medicine at Chapel Hill

2020 – 2022    **Cardiac Anesthesiologist and Intensivist**  
Department of Anesthesiology  
University of Colorado Hospitals

## HONORS

06/19/2025    **Faculty Teaching Honor Roll**, Department of Anesthesiology, University of North Carolina School of Medicine at Chapel Hill

06/07/2025    **Service and Teaching Award**, Division of Cardiothoracic Surgery, University of North Carolina School of Medicine at Chapel Hill

06/01/2024    **Faculty Teaching Honor Roll**, Department of Anesthesiology, University of North Carolina School of Medicine at Chapel Hill

02/01/2023    **Best On-the-Fly Teacher Award**, Department of Anesthesiology, University of North Carolina School of Medicine at Chapel Hill

07/01/2019    **Chief Fellow**, Department of Anesthesiology, Duke University Medical Center

06/09/2018    **Outstanding Medical Student Teaching Award**, Department of Anesthesiology, University of North Carolina School of Medicine at Chapel Hill

06/09/2018    **George Sheldon Leadership Award**, Department of Anesthesiology, University of North Carolina School of Medicine at Chapel Hill

07/01/2017    **Chief Resident**, Department of Anesthesiology, University of North Carolina School of Medicine at Chapel Hill

09/25/2013    **Alpha Omega Alpha Honor Society**, Southern Illinois University School of Medicine

## BIBLIOGRAPHY

### *Books and Book Chapters*

Smith, K. & **Rosenkrans, D.** Keeping babies warm in the perioperative period is important, challenging and at times dangerous! Avoiding Common Anesthetic Errors, 2nd Ed. Lippincott Williams & Wilkins (PA). 2020. 2p.

#### *Peer-reviewed Articles*

Nash, R. **Rosenkrans, D.** Kolarczyk, L. Khan, A. Hatch, E. Gala, G. Loughon, S. McClure, R. Electroconvulsive Therapy in a Left Ventricular Assist Device Recipient with Treatment Resistant Depression. *J ECT*. 2024 Nov. PMID 39531309.

Blacker, S. Chen F. Winecoff, D. Antonio B. Arora, H. Hierlmeier, B. Kacmar, R. Passannante, A. Plunkett, A. Zvara, D. Cobb, B. Doyal, A. **Rosenkrans, D.** Brown, K. Gonzalez, M. Hood, C. Pham, T. Lele, A. Hall, L. Ali, A. Isaak, R. An Exploratory Analysis of ChatGPT Compared to Human Performance with the Anesthesiology Oral Board Exam: Initial Insights and Implications. *Anesth Analg*. 2024 Sep. PMID 39269908.

Carroll, Z. Ridgeway, E. Owen, P. Bonetti, A. Ikonomidis, J. **Rosenkrans, D.** Caranasos, T. McLean, D. Li, Q. Zhuo, S. Hollis, I. Postoperative Atrial Fibrillation Prophylaxis: Impact of the Implementation of a Medication Bundle. *J Thorac Cardiovasc Surg*. 2024 Jun. PMID 39296461.

Alfaras-Melainis K, Fernando RJ, Boisen ML, Hoffman PJ, **Rosenkrans D**, Teeter E, Cardi AI, Laney J, Reagan A, Rao VK, Anderson M, Luke CB, Subramani S, Schisler T, Ritchie PJ, Gelzinis TA. The Year in Thoracic Anesthesia: Selected Highlights from 2022. *J Cardiothorac Vasc Anesth*. 2023 Sep; S1053-0770(23)00734-6. PMID: 37802689.

**Rosenkrans D**, Zubair M, Doyal A. Rh Blood Group System. StatPearls Publishing. 2023 Aug. PMID: 37603643.

Serrano R, Kolarczyk L, **Rosenkrans D**. A Devastating Floating Aortic Thrombus and Ketosis-Prone Diabetes. *Cureus*. 2023 Sep;15(9):e44836. doi: 10.7759/cureus.44836. PMID: 37809193.

**Rosenkrans D**, Kumar PA. Pro: General Anesthesia Should Be Used for Transcatheter Aortic Valve Replacement. *J Cardiothorac Vasc Anesth*. 2023 May;37(5):827-828. PMID: 36732131.

Nicoara, A. Cooter Wright, M. **Rosenkrans, D.** Patel, CB. Schroder, J. Cherry, A. Hashmi, N. Pollak, A. McCartney, S. Katz, J. Milano, C. Podgoreanu, M. Predictive capabilities of the European registry for patients with mechanical circulatory support right-sided heart failure risk score after left ventricular assist device implantation. *J Cardiothorac Vasc Anesth*. 2022 Oct;36(10): 3740-3746. PMID: 35871044.

**Rosenkrans, D.** Qi, W. Cooter, M. Waldron, N. Cherry, A. McCartney, S. Hashmi, N. Schroder, J. Milano, C. Bishawi, M. Podgoreanu, M. Nicoara, A. EUROMACS-RHF risk score and 3D echocardiography as predictors of right heart failure after left ventricular assist device implantation. *J Heart Lung Transplant*. 2020 Apr; 39(4S): S403-S404.

**Rosenkrans, D.** & Kolarczyk, L. Intraoperative Hyperkalemia and Ventricular Arrhythmia During Parathyroidectomy. *Anesthesia & Analgesia*. 2017 Aug; 9(4): 105-108. PMID: 28622150.

**Rosenkrans, D.** Klamen, D. Roberts, N. The Learning Culture in Third Year Clerkships: Medical Students' Perceptions Through a Coaching Lens. MedEdPublish. 2015 Jan; 4(16).

*In Press/Submitted Peer-reviewed Articles (include year and total number of typed pages)*  
Zimmerman, P. Stone, H. Chen, F. An, X. Hood, C. Fardelmann, K. **Rosenkrans, D.** Martinelli, S. Cobb, B. Are Anesthesiology Residents Meeting the Bar? Comparing Resident Knowledge and Self-Efficacy to Published Palliative Care and Anesthesiology Competencies. Journal of Clinical Anesthesia. Submitted March 7, 2025.

**Rosenkrans, D.** Owensby, K. Magin, J. McCain, M. Teeter, E. Blacker, S. Chen, F. A Comparative Analysis of Human and AI-Augmented Feedback in Anesthesiology Education. Anesthesia Analgesia. Submitted 5/15/2025.

Quinn, J. de Silfa, K. An, X. **Rosenkrans, D.** C-O-N-S-E-N-T: Improving Anesthesiology Trainee Competency in Informed Consent Discussions through Mnemonic. Journal of Education in Perioperative Medicine. Submitted 5/14/2025.

Shaul, N. Smeltz, A. Raff, E. Jia, S. Guichard, L. **Rosenkrans, D.** Schoenherr, J. Acton, J. McLean, D. Henry, M. Doyal, A. Point-of-care ultrasound to evaluate volume status in congestive heart failure. Journal of Cardiovascular Imaging. Submitted 6/12/2025.

*Invited Presentations (state and national professional meetings)*

Quinn, J. de Silfa, K. An, X. **Rosenkrans, D.** C-O-N-S-E-N-T: Improving Anesthesiology Trainee Competency in Informed Consent Discussions through Mnemonic. Society for Education in Anesthesiology. Austin, Texas. April 2025.

*Digital and other novel forms of scholarship*

Kazior, M. Samouce, C. **Rosenkrans, D.** Lizdas, D. Feldman, J. Gravenstein, N. Lampotang, S. Free CME and MOCA QI with New APSF TEI Course on Manual External Defibrillation, Cardioversion, and Pacing (MEDCP), APSF Newsletter. June 2025.

Kazior, M. Samouce, C. **Rosenkrans, D.** Lizdas, D. Feldman, J. Gravenstein, N. Lampotang, S. APSF Announces Development of Third Technology Education Initiative (TEI) Course: Manual External Defibrillation, Cardioversion, and Pacing (MEDCP). Manuscript submitted to Anesthesia Patient Safety Foundation Newsletter. July 2024.

*Refereed unpublished Oral Presentations and/or Posters*

Wisniewski, M. Buckeridge, S. Patel, D. **Rosenkrans, D.** When Minimally Invasive Procedures Become Maximally Invasive: Dislodged Transcatheter Tricuspid Valve Replacement. Society of Cardiovascular Anesthesiologists Annual Meeting. Toronto, Canada. April 2025.

Lutes, B. O'hara, D. Byku, M. Merlo, A. **Rosenkrans, D.** Successful LVAD Implantation in a Patient with Severe Myasthenia Gravis and Complex Comorbidities: A Multidisciplinary Approach. Society of Cardiovascular Anesthesiologists Annual Meeting. Toronto, Canada. April 2025.

Quinn, J. de Silva, K. An, X. **Rosenkrans, D.** C-O-N-S-E-N-T: Improving Anesthesiology Trainee Competency in Informed Consent Discussions through Mnemonic. Society for Education in Anesthesiology. Austin, Texas. April 2025.

Kazior, M. Samouce, C. Lizzdas, D. Nguyen, V. Wu, A, Nibhanupudy. J, Mesber. S, Esteverena, T. Dooley, C. Gravenstein, N. **Rosenkrans, D.** Feldman, J. Lampotang, S. Development of an Online Course on Manual External Defibrillation, Cardioversion, and Pacing. University of Florida College of Medicine Celebration of Research. Gainesville, Florida. January 2025.

Kazior, M. Samouce, C. Lizzdas, D. Nguyen, V. Wu, A, Nibhanupudy. J, Mesber. S, Esteverena, T. Dooley, C. Gravenstein, N. **Rosenkrans, D.** Feldman, J. Lampotang, S. Development of an Online Course on Manual External Defibrillation, Cardioversion, and Pacing. University of Florida Department of Anesthesiology Celebration of Research. Gainesville, Florida. November 2024.

Kumar, A. Prabhu, I. Heyman, H. Patel, D. **Rosenkrans, D.** Kolarczyk, L. Frailty Screening in the Geriatric Thoracic Surgery Population: Implementation and Analysis of Early Results. American Society of Anesthesiology Annual meeting. Philadelphia, PA. October 2024.

Quinn, J. de Silva, K. Hermann, M. Lin, J. **Rosenkrans, D.** Lobonc, A. C-O-N-S-E-N-T: A Quality Improvement Project on Knowledge of the Objective Structured Clinical Examination Content Outline on Informed Consent. American Society of Anesthesiology Annual meeting. Philadelphia, PA. October 2024.

Carroll, Z. Ridgeway, E. Owen, P. Bonetti, A, Ikonomidis, J. **Rosenkrans, D.** Caranasos, T. McLean, D. Li, Q. Zhuo, S. Hollis, I. Postoperative Atrial Fibrillation Prophylaxis: Impact of the Implementation of a Medication Bundle. American College of Cardiology. Atlanta, GA. April 2024.

Wisniewski, M. Kolarczyk, L. **Rosenkrans, D.** Unchartered Territory: complex Anesthetic Care for Electroconvulsive Therapy in Left Ventricular Assist Device Patients. Society of Cardiovascular Anesthesiologists Annual Meeting 2024. Toronto, Canada. April 2024

Farawi, A. Kolarczyk, L. Smeltz, A. **Rosenkrans, D.** Right Ventricular Failure During Mechanical Embolectomy: A Tale of Multiple Insidious Insults. Society of Cardiovascular Anesthesiologists Annual Meeting 2023. Portland, Oregon. April 2023.

Behrens, M. Cooter, M. **Rosenkrans, D.** Ghadimi, K. Milano, C. Podgoreanu, M. Nicoara, A. Right ventricle-pulmonary artery coupling as a predictor of right ventricular failure after left ventricular assist device placement. Society of Cardiovascular Anesthesiologists Annual Meeting. West Palm Beach, Florida. April 2020.

**Rosenkrans, D.** Qi, W. Cooter, M. Milano, C. Podgoreanu, M. Nicoara, A. Predictive Capabilities of the European Registry for Patients with Mechanical Circulatory Support – Right Heart Failure Risk Score after Left Ventricular Assist Device Implantation. Accepted for presentation at Society of Cardiovascular Anesthesiologists Annual Conference. West Palm Beach, FL. April 2020.

**Rosenkrans, D.** Qi, W. Cooter, M. Waldron, N. Cherry, A. McCartney, S. Hashmi, N. Schroder, J. Milano, C. Bishawi, M. Podgoreanu, M. Nicoara, A. EUROMACS-RHF risk score and 3D echocardiography as predictors of right heart failure after left ventricular assist device implantation. Accepted for presentation at The International Society for Heart and Lung Transplantation. Montréal, Canada. April 2020.

Pollak, A. **Rosenkrans, D.** Schilf, C. Seay, T. Zvara, J. Bottiger, B. Does Intraoperative Resuscitation after CPB Reduce Initial ICU Metabolic Acidosis? Academic Evening. Duke University Hospital Systems, Durham, NC. May 2019.

**Rosenkrans, D.** Barrick, B. Teeter, E. Oh, the Places a Valve Can Go: A Tale of Two TAVRs. Society of Cardiovascular Anesthesiologists Annual Conference. Phoenix, AZ. May 2018.

**Rosenkrans, D.** Heniser, E. Gue, J. Mozingo, C. Howard, C. Rowan, C. Securing Nerve Block Catheters for Acute Pain. Quality improvement process leader. American Society of Anesthesiologists Annual Meeting. Boston, MA. October 2017.

**Rosenkrans, D.** Heniser, E. Gue, J. Mozingo, C. Howard, C. Rowan, C. Securing Nerve Block Catheters for Acute Pain. Quality improvement process leader. Awarded 1st place for project design and execution. Resident Symposium for Quality Improvement. UNC. Chapel Hill, NC. May 2017.

**Rosenkrans, D.** Long, J. Kolarszyk, L. Traumatic Tracheal Perforation from Crush Injury: Anesthesia and Surgical Consideration. Society of Cardiovascular Anesthesiologists Thoracic Anesthesia Symposium. Orlando, FL. April 2017.

Balfanz, G. Blasius, K. **Rosenkrans, D.** Specht, B. Cobb, K. Isaak, R. In-situ Simulation Program in GI Procedures Suite Improves Application of Crisis Resource Management Principles. International Meeting on Simulation in Healthcare. Orlando, FL. January 2017.

Hodnett, J. **Rosenkrans, D.** Piscitello, J. McNaull, P. Balfanz, G. Implementation of an Updated UNC Hospitals Standard Surgical Blood Order Schedule and UNC Intraoperative Blood Product Transfusion Best Practice Guidelines. ASA Annual Meeting. Chicago, IL. October 2016.

**Rosenkrans, D.** Teeter, E. Kolarszyk, L. Caranosas, T. Kyle, R. Anesthetic Monitoring Directly Impacts Patient Outcome During Novel Suprasternal TAVR Approach. Society of Cardiovascular Anesthesiologists. San Diego, CA. April 2015.

**Rosenkrans, D.** & Weyers, W. Identifying Current Practices for Routine Delirium Screening in the SICU. Academic Medicine Symposium. UNC. Chapel Hill, NC. November 2014.

**Rosenkrans, D.** Coaching vs. Teaching: A Proposal for Undergraduate and Graduate Medical Education. 5th Annual Symposium on Teaching and Learning. SIU. Springfield, IL. April 2014.

**Rosenkrans, D.** Ryan, D. Robinson, B. Markwell, S. Fritz, A. Freitag, P. One-Level Axial Lumbar Interbody Fusion: Does Order Placement of Hardware Matter? 23rd Annual Research Symposium. SIU. Springfield, IL. March 2013.

## TEACHING ACTIVITIES

### **Course Director or Faculty Roles**

6/19/2025	CTCCU Rotation Director
2/1/2021	CT Anesthesia & ICU Immersive Elective (2 Students)

### **Teaching Presentations**

*UNC School of Medicine*

6/7/2025	Ventilator Management
5/29/2025	Critical Care Interprofessional Panel
5/15/2025	Hypoxemia: From PEEP to FiO <sub>2</sub>
5/14/2025	Managing Valvular Abnormalities
5/13/2025	A Fluid is a Fluid is a Fluid
5/12/2025	Oxygenation, Ventilation and Everything in Between
5/12/2025	Emergency Airway Workshop
5/9/2025	Inotropes
5/9/2025	Vasopressors
4/24/2025	ECMO Management and Cannulation Strategies
4/23/2025	Vasopressors
4/22/2025	A Fluid is a Fluid is a Fluid
4/21/2025	Inotropes
4/18/2025	End-of-Life Care
2/6/2025	ECMO Management and Cannulation Strategies
2/5/2025	Vasopressors
1/9/2025	A Fluid is a Fluid is a Fluid
1/8/2025	Vasopressors
1/3/2025	ECMO Management and Cannulation Strategies
10/30/2024	A Fluid is a Fluid is a Fluid
10/28/2024	ECMO Management and Cannulation Strategies
9/23/2024	Inotropes
9/6/2024	The PAC and Cardiac Filling Pressures
8/8/2024	A Fluid is a Fluid is a Fluid
8/6/2024	The PAC and Cardiac Filling Pressures
8/5/2024	ECMO Management and Cannulation Strategies
7/1/2024	POCUS: Ultrasound physics and Cardiac Anatomy
4/11/2024	POCUS: Cardiac and Lung Anatomy
4/3/2024	POCUS: Cardiac and Lung Anatomy
3/27/2024	POCUS: Cardiac and Lung Anatomy
3/4/2024	POCUS: Cardiac and Lung Anatomy

11/27/2023	POCUS: Cardiac and Lung Anatomy
10/9/2023	A Fluid is a Fluid is a Fluid
10/9/2023	The PA Catheter and Cardiac Filling Pressures
8/15/2023	POCUS: Cardiac and Lung Anatomy
8/11/2023	POCUS: Cardiac and Lung Anatomy
8/3/2023	Diastology
5/31/2023	ECMO Weaning and Decannulation
5/29/2023	ECMO Physiology and Cannulation Strategies

*UNC Anesthesiology Residency Program*

3/20/2025	Resident Simulation Session Facilitator
1/21/2025	Resident Simulation Session Facilitator
11/6/2024	Mock Oral Board Examiner
10/31/2024	Objective Structured Clinical Exam Scenario Grader
10/23/2024	Mock Oral Board Examiner
9/6/2024	Resident Simulation Session Facilitator
9/3/2024	Opioids and Benzodiazepines
8/22/2024	General Anesthesia Journal Club Moderator
8/8/2024	Postoperative Management of CABG
8/7/2024	ICU Management of Lung Transplant
8/6/2024	ECMO Types and Management
7/31/2024	A Fluid is a Fluid is a Fluid
5/22/2024	Cardiovascular System and Hemodynamic Management
5/21/2024	It's Electric: Managing Perioperative Arrhythmias
5/16/2024	Practice Management Journal Club Moderator
5/15/2024	Mock Oral Board Examiner
5/8/2024	Mock Oral Board Examiner
4/22/2024	POCUS: Ultrasound physics and Cardiac Anatomy
4/10/2024	POCUS: Cardiac Anatomy
4/1/2024	Objective Structured Clinical Exam Scenario Grader
1/2/2024	ICU Potpourri
12/6/2023	Mock Oral Board Examiner
11/27/2023	POCUS: Focused Cardiac Exam
11/14/2023	Planning Your Future as an Anesthesiologist
11/8/2023	Communication and Conflict Resolution
11/7/2023	Cardiac Pharmacology
10/31/2023	Objective Structured Clinical Exam Scenario Grader
10/9/2023	PA Catheters: Turning Data Into Practice
9/27/2023	POCUS: Lung pathologies
8/15/2023	Gabapentinoids in the ICU
8/14/2023	POCUS: Focused Cardiac Exam
8/11/2023	POCUS: Gastric and abdominal exam
7/28/2023	Cardiovascular System and Hemodynamic Management
6/12/2023	Cardiovascular System and Hemodynamic Management
5/30/2023	ECMO Physiology and Cannulation Strategies

5/8/2023	Mock Oral Board Examiner
4/19/2023	Mock Oral Board Examiner
4/13/2023	ECMO Physiology and Cannulation Strategies
4/4/2023	Cardiac Pharmacology
3/30/2023	Objective Structured Clinical Exam Scenario Grader
3/21/2023	ECMO Physiology and Cannulation Strategies
3/9/2023	POCUS: Focused Cardiac Exam
2/21/2023	ECMO Physiology and Cannulation Strategies
2/9/2023	Medical Student Shadowing Day
2/2/2023	POCUS: Lung and FAST Exam
1/20/2023	TEE Review Series
12/8/2022	Effective Communication and Conflict Resolution
11/16/2022	Mock Oral Board Examiner
11/7/2022	Hemodynamic Instability
10/31/2022	ECMO Physiology and Cannulation Strategies
10/28/2022	Right Ventricular Dysfunction: A Multidimensional Approach
9/29/2022	Hemodynamic Monitoring with LVAD
9/27/2022	Inotropes and Mechanical Assist Devices

### **Grand Rounds**

#### *Outside UNC*

5/21/2025	Critical Care Medicine for Non-Critical Care Providers. Department of Anesthesiology. Wake Forest School of Medicine. Winston Salem, NC
-----------	---

#### *Inside UNC*

5/15/2024	Critical Care Medicine for Non-Critical Care Providers. Department of Anesthesiology. UNC School of Medicine. Chapel Hill, NC
-----------	---

5/31/2023	Residency Education: An Update. Department of Anesthesiology. UNC School of Medicine. Chapel Hill, NC
-----------	---

### **Continuing Education Lecture/Workshops**

#### *Outside UNC*

6/21/2025	Stop the Bleed: Managing Coagulopathies During the Perioperative Period. Carolina Refresher Course. Kiawah Island, SC.
-----------	--

6/20/2025	Ethical Dilemmas in Anesthesiology: Informed Consent, DNR's and End-of-Life Care. Carolina Refresher Course. Kiawah Island, SC.
-----------	---

6/19/2025	POCUS Workshop (invited). Carolina Refresher Course. Kiawah Island, SC.
-----------	---

6/18/2025 Hemodynamic Monitoring for All: Techniques and Applications Beyond the Cardiac OR. Carolina Refresher Course. Kiawah Island, SC.

6/22/2024 Hot Topics in ICU Medicine – Cooling, Vasoplegia, and Renal Protection. Carolina Refresher Course. Kiawah Island, SC.

6/20/2024 It's Electric: Management of Perioperative Conduction Disorders. Carolina Refresher Course. Kiawah Island, SC.

6/20/2024 Critical Care medicine for Non-Critical Care Providers. Carolina Refresher Course. Kiawah Island, SC.

6/19/2024 Heart, Lung and Gastric Ultrasound. Workshop. Carolina Refresher Course. Kiawah, SC.

5/17/2019 Critical Procedural Skills. Workshop. Society of Cardiovascular Anesthesiologists Thoracic Anesthesia Symposium. Chicago, IL.

4/27/2018 Chest Decompression: Tubes, Needles and Emergencies. Workshop (invited). Society of Cardiovascular Anesthesiologists Thoracic Anesthesia Symposium. Orlando, FL.

*Inside UNC*

4/10/2024 Point of Care Ultrasound: Cardiac Exam. POCUS Bootcamp. Workshop. Department of Anesthesiology. University of North Carolina. Chapel Hill, NC.

4/4/2024 And the Beat Goes On: Managing Conduction Disorders. Tar Heel Boot Camp. Chapel Hill, NC.

9/13/2023 Point of Care Ultrasound: Cardiac Exam. POCUS Bootcamp. Workshop. Department of Anesthesiology. University of North Carolina. Chapel Hill, NC.

4/12/2023 Post-Cardiopulmonary Bypass Syndrome. Tar Heel Boot Camp. Chapel Hill, NC.

3/4/2023 Life in Private Practice. Invited Speaker. Transition to Practice Symposium. Chapel Hill, NC.

3/4/2023 The Hiring Process. Invited Speaker. Transition to Practice Symposium. Chapel Hill, NC.

12/9/2022 Targeted Temperature Management. CT Coffee Rounds. Chapel Hill, NC.

**Clinical Teaching**

CTCCU Service  
Anesthesiology Perioperative Service

**Mentorship**

2024 – Present Anesthesiology Resident: Andrea Fritz, PSQI Project Mentor  
2024 – Present Anesthesiology Resident: Thomas Quisenberry, PSQI Project Mentor  
2022 – Present Anesthesiology Resident: Mike Wisniewski  
2024 – Present Anesthesiology Resident: Jacqueline Quinn  
2024 – Present Medical Student: Rebecca Schopfer, PSQI Project Mentor  
2024 – 2025 Surgical Resident: Harrison Bardsley  
2024 – 2025 Medical Student: Hope Ghele  
2024 – 2025 Medical Student: Madeline Laughon  
2024 – 2025 Medical Student: Bryan Obika  
2024 – 2025 Anesthesiology Resident: Eli Strong, PSQI Project Mentor  
2024 – 2025 Anesthesiology Resident: Eli Strong, PSQI Project Mentor  
2023 – 2024 Medical Student: Om Dave  
2023 – 2024 Medical Student: Kevin Welch  
2022 – 2025 Medical Student: Carlos Jimenez Rosado  
2022 – 2023 Medical Student: Joshua Romero

**Research Teaching**

5/17/2024 Medical Student Poster Symposium Moderator

**GRANTS**

**Active Grants**

2024 – 2025 Co-Investigator  
Development and Effect of an Electronic Learning Module on Defibrillator Competence in Anesthesia Providers. Research Grant. Site investigator.  
Amount \$100,000.00  
Foundation for Anesthesia Education Research

2024 – 2025 Co-Investigator  
Enhancing Competency-Based Assessment: An AI-Powered, Real-Time Support System for Personalized Trainee Feedback  
Amount \$100,000.00  
Curricular Innovation Grant  
University of North Carolina School of Medicine

**Pending grants**

Co-Primary Investigator  
Setting the PACE: A Precision-Aligned Coaching Ecosystem for Competency-Based Education. 40% Effort.  
Amount \$1,100,000.00

American Medical Association. Transforming Lifelong Learning Through Precision Education Grant Program

**Unfunded- grants written and submitted but not funded** Incivility in the Perioperative Setting: A Multi-Institutional Crossover Study on Anesthesiology Residents' Decision-Making  
Society for Education in Anesthesiology

## PROFESSIONAL SERVICE

### *Service to University of North Carolina*

2025 – Present	Heart Transplant Clinical Pathway Committee, Physician Leader
2025 – Present	LVAD Clinical Pathway Committee, Physician Leader
2024 – Present	Epic/IT Committee, Member
2024 – Present	Alteplase for Hemodialysis Catheters Committee, Physician Leader
2024 – Present	Citrate for CRRT Implementation Committee, Physician Leader
2023 – Present	Frailty in Thoracic Surgery PSQI, Physician Leader
2023 – Present	Sugammadex & Aprepitant PSQI, Physician Leader
2023 – Present	Resident Controlled Substance Monitoring, Leader
2023 – Present	Enhanced Recovery After Cardiac Surgery, Physician Leader
2023 – Present	Resident Recruitment Committee, Member
2023 – Present	Clinical Competency Committee, Member
2023 – Present	Program Evaluation Committee, Member
2023 – Present	TEACHER Lab, Member
2022 – 2023	Pain/Anesthesia P&T Subcommittee, Member

### *Service to Profession*

2024 – Present	Clinical Practice Committee: Mechanical Circulatory Support. Member. Society of Critical Care Anesthesiologists.
2024 – Present	Technology Education Initiative 3 Committee: Manual External Defibrillator. Co-Course Director. Anesthesia Patient Safety Foundation
2023 – Present	Perioperative Clinical Research Committee. Member. Multicenter Perioperative Outcomes Group.

### *Service to Community*

2021 – 2022	Cardiac and Endovascular Service Line Accreditation Committee. Member. University of Colorado Hospitals, Department of Anesthesia.
2021 – 2022	Anesthesia Governance for Epic Optimization. Co-director. University of Colorado Hospitals, Department of Anesthesia.
2020 – 2022	Enhanced Recovery after Thoracic Surgery. Physician Lead. University of Colorado Hospitals, Department of Anesthesia.

### *Professional Memberships*

2020 – Present	Society of Critical Care Medicine
2019 – Present	Society of Critical Care Anesthesiologists
2018 – Present	Society of Cardiovascular Anesthesiologists
2014 – Present	American Society of Anesthesiologists

### **Teaching Statement** (required for reappointment and promotion)

As an assistant professor and assistant residency program director in the Department of Anesthesiology at UNC School of Medicine, I am dedicated to transforming medical education through precision learning and compassionate mentorship. My mission integrates rigorous clinical teaching with data-informed innovation to prepare diverse, adaptable physician leaders who deliver equitable care.

My teaching approach is anchored in deliberate practice—decomposing complex skills, structured repetition, and providing real-time, actionable feedback. In my varied educational roles—from leading board preparation initiatives to directing our objective structured clinical examinations (OSCEs)—I foster a learning environment that balances high expectations with meaningful support. Residents consistently note how this structured yet nurturing approach accelerates their mastery of complex anesthesiology skills while building clinical confidence.

In parallel, I am advancing a vision for AI-enabled precision education that aligns with UNC’s mission to prepare future healthcare professionals through innovative, inclusive, and integrated learning. As the proposed principal investigator of the *Setting the PACE (Precision-Aligned Coaching Ecosystem)* initiative, I intend to lead a multidisciplinary team in the development of an AI-powered educational ecosystem that supports individualized learning across the medical education continuum. This project aims to design a unified CBME architecture for communication and professionalism, integrate real-time assessment data from OSCEs and clinical evaluations, and create a coaching infrastructure enhanced by AI-generated feedback.

This work is rooted in the belief that educational data, when thoughtfully aggregated and interpreted, can be a powerful driver of just-in-time learning and tailored developmental guidance. AI tools have the potential to help educators synthesize disparate performance data into coherent narratives, allowing us to meet each learner where they are and support their unique growth trajectories. By embedding these tools within a cloud-based platform, we can also

democratize UNC's educational excellence across campuses and beyond, promoting a more equitable distribution of learning opportunities.

In my teaching, I emphasize the integration of clinical and technical knowledge with humanistic, patient-centered care. Whether at the bedside or in the operating room, I strive to develop learners who are emotionally intelligent, collaborative, and reflective—traits essential for delivering effective healthcare.

Looking ahead, I aim to position UNC as a national leader in precision medical education. Through partnerships across medicine, data science, and instructional design, we have the opportunity to build a scalable, AI-enhanced ecosystem that equips tomorrow's health professionals with the skills, insight, and adaptability they need to serve our communities with excellence and empathy.

### **Research Statement (required for reappointment and promotion)**

My research centers on developing innovative, scalable approaches to medical education that leverage artificial intelligence, structured feedback, and simulation to improve clinical performance and learner development. These projects are grounded in a shared aim: to create data-driven systems that enhance how we assess, coach, and prepare the next generation of physicians.

One of my primary research efforts involves designing a precision education framework that uses AI to support competency-based medical education. I am leading the planning phase of a multi-institutional initiative to build an AI-powered infrastructure capable of aggregating clinical assessment data—such as OSCE results, narrative evaluations, and workplace-based observations—into actionable learner profiles. This system would allow for personalized coaching, just-in-time learning, and longitudinal support across training stages, ultimately improving the consistency and equity of learner development across institutions.

Another project, recently submitted for publication, evaluated whether large language models like ChatGPT could augment faculty feedback to residents. In a randomized crossover study, we found that while AI-augmented feedback did not significantly outperform traditional feedback, AI-generated responses alone were rated highest in domains such as specificity and constructiveness. Faculty also noted that AI helped structure difficult conversations, especially around professionalism. These findings suggest that AI may play a valuable role in faculty development and in supporting consistent, high-quality feedback delivery.

In ongoing work, I am leading a randomized crossover OSCE study investigating how exposure to incivility affects anesthesiology residents' decision-making and performance. Using scripted civil and uncivil perioperative encounters, the study assesses resident behavior through blinded evaluations of clinical reasoning, communication, and professionalism. This research offers insight into how disruptive interpersonal dynamics can influence clinical performance under pressure and may inform future training interventions aimed at resilience and communication under stress.

Collectively, my research integrates clinical expertise, simulation-based assessment, and emerging AI technologies to improve the learning environment for medical trainees. I collaborate across departments and institutions, drawing from diverse disciplines including anesthesiology, education, and data science. My long-term goal is to contribute to a national shift toward precision medical education—one that equips all learners with the tools, coaching, and feedback necessary to thrive in complex, team-based healthcare environments.

## Learner Evaluations of Daniel Rosenkrans, MD

### *Medical Students:*

- Dr. Rosenkrans promotes an environment of autonomy and respect, and he always made the time to go into teaching sessions appropriate to our level while in the OR.
- An awesome human being. Very knowledgeable and yet very humble. I would recommend 10/10.
- One of the best attendings I have worked with - very clear how invested he is in the education of medical students and is extremely skilled at making critical care topics digestible at the mechanistic level.
- Dr. Rosenkrans was an exceptional attending who took the time and effort to explain the WHY behind clinical reasoning in order to help us understand. He made time to give lectures on topics of our choice and always answered our questions thoroughly. He did a great job at tailoring our experience to our career interests.
- I was always excited to see when I was working with Dr. Rosenkrans because I knew my day would be filled with great teaching. He is very supportive of medical students particularly when trying difficult procedures, approaching them with patience and reassurance. He uses each patient as a learning opportunity, drawing out the physiology of their disease and teaching students how their presentation aligns with their physiology. What is most fantastic about his teaching style is that he makes you think you are discovering information about the patient when, really, he is leading you to that discovery. I learned so much from Dr. Rosenkrans and am excited for future medical students who get to learn from him!
- I worked with Dr. Rosenkrans on the second to last day of my rotation. We had a bronchoscopy and a robotic thoracic case. He coached me through putting in an ET tube over a bougie into a tracheostomy. He makes sure that students are learning and comfortable, and I had a fun and informative day!
- Dr. Rosenkrans is an excellent teacher. He is able to explain complex topics in a way that is easily digestible at a medical student level. He allows the students enough freedom to troubleshoot themselves while performing procedures while also providing useful feedback to improve our skills. It was truly a pleasure to work along side him during my rotation.
- Dr. Rosenkrans is one of the most intentional instructors I have had in medical school. He uses any opportunity as a teaching opportunity. He guides students through medical decision making in a way that is not only educational but a way that also makes students feel like they are discovering the information themselves. He also makes sure that students time is used effectively and that they are getting the best learning they can out of a rotation. I especially appreciated how he walked through the pathophysiology, decision making, and emotional understanding of a code we encountered as a team.
- Dr. Rosenkrans was a great teacher! He took extra time to draw out diagrams to make sure I understood what he was saying. He was consistently kind and professional.
- Wonderful attending, very attentive to the team. Enthusiastic about teaching and promotes a positive learning environment.
- Phenomenal attending. Made every effort to hammer home important teaching points both during and after rounds. Fantastic leader, which was especially appreciated given the acuity of the patient population and my limited experience with such ill patients.

Personable and approachable, he always created a welcoming environment to learn and grow.

*Residents:*

- A true pleasure to work with. Dr. Rosenkrans is one of the smartest and humble attendings I have worked with. I feel comfortable being challenged to reach that next step towards becoming an independent anesthesiologist.
- It is always so fun to work with Dr. Rosenkrans. He encourages you to think critically and look into concepts and ideas beyond just "I like to do it this way" but allows you to think about the alternatives and pros and cons for anesthetic techniques.
- Always extremely helpful and a pleasure to work with.
- Great to work with!
- Always a good experience working with Dr. Rosenkrans.
- Promoted clinical reasoning during rounds as well as helpful teaching.
- Dr. Rosenkrans is undoubtedly one of the best attendings at UNC. Ever since I started as a CA-1, he finds a great balance between allowing autonomy, maintaining high expectations, and remaining supportive as my attending. He very clearly cares about me as a person and as a physician and has endless ways to challenge me to be better. He is incredibly patient when engaging in intraoperative teaching in a way that exemplifies a) that he truly enjoys it and b) that he will put forth the time and effort to discuss a topic in a meaningful manner.
- Gives residents autonomy as appropriate, always available for questions.
- Dr. Rosenkrans is an incredible teacher. He strikes a difficult balance between autonomy and instruction. shares thought processes and is open to other input. Really appreciated the didactic form of education as well.
- The best.
- Approachable and always willing to teach.