

Curriculum Vitae



Nima Sarani, MD, AEMUS FDP

Email: nsarani@kumc.edu

Cell Phone: 818.371.0502

Address: 4016 W. 72nd Ter. Prairie Village, KS 66208

Summary of Expertise:

I am a board-certified emergency medicine physician and Associate Professor with expertise in emergency department standards of care, sepsis recognition and management, clinical decision-making, and point-of-care ultrasound. I serve as the Emergency Department Director of Sepsis Care for a large academic health system, where I conduct detailed chart-level review of CMS SEP-1 cases, analyze diagnostic and treatment decisions, and monitor system-wide performance metrics.

I am a published researcher and served as consultant in sepsis diagnostics, biomarkers, and clinical decision support, with extensive experience supervising physicians and advanced practice providers. I regularly provide education and guidance on emergency department operations, documentation, coding, and quality metrics, with a focus on real-world clinical workflows, risk assessment, and standard-of-care evaluation in high-acuity emergency medicine settings.

1. Education

Graduate Education

- **Doctor of Medicine (2007–2011)**
University of Oklahoma College of Medicine

Undergraduate Education

- **Bachelor of Science, Neuroscience** (2003–2006), *Magna Cum Laude*
University of California, Los Angeles
- **Undergraduate Coursework, Biology** (2001–2003), *Magna Cum Laude*
Los Angeles Pierce College

2. Postgraduate Training

- **Clinical Fellowship, Emergency Medicine and Critical Care Ultrasound** (2019–2020)
University of Kansas Medical Center
- **Residency, Emergency Medicine** (2012–2014)
University of Oklahoma Department of Emergency Medicine
- **Internship, Emergency Medicine** (2011–2012)
University of Oklahoma Department of Emergency Medicine

3. Medical Licensure

- **Kansas Medical License** (Issued 2019; Active)

4. Board Certification

- **American Board of Emergency Medicine** – Emergency Medicine (Initial Certification 2015; Current)
- **Advanced Emergency Medicine Ultrasonography**, American Board of Emergency Medicine (Initial Certification 2024; Current)

5. Academic and Clinical Appointments

- **Associate Professor, Emergency Medicine** (2024–Present)
University of Kansas Medical Center
- **Assistant Professor, Emergency Medicine** (2020–2024)
University of Kansas Medical Center
- **Clinical Instructor, Emergency Medicine** (2019–2020)
University of Kansas Medical Center
- **Emergency Medicine Attending Physician** (2016–2019)
St. John Regional Medical Center; St. John Pleasant Valley; Santa Ynez Valley Cottage Hospital
- **Emergency Medicine Attending Physician** (2015–2016)
St. Anthony Medical Center; Hillcrest South Hospital
- **Emergency Medicine Attending Physician** (2014–2015)
Southern California Kaiser Permanente Medical Group

6. Leadership and Administrative Roles

- **Director of Sepsis Care**, University of Kansas Medical Center (2020–Present)
Lead a comprehensive emergency department and health-system-wide sepsis quality

initiative. Responsibilities include detailed chart-level review of Centers for Medicare and Medicaid Services SEP-1 fallouts to determine the etiology of each failure, followed by structured discussion and feedback with the multidisciplinary care team. Continuously monitor SEP-1 compliance trends, sepsis mortality indices, and performance metrics to identify system gaps, prioritize targeted interventions, and maintain high performance. Deliver ongoing provider education across specialties to increase sepsis awareness, reinforce standards of care, highlight recurrent pitfalls, and disseminate lessons learned from prior fallouts.

- **Associate Director, Emergency Medicine Ultrasound Fellowship**, University of Kansas Medical Center (2020–Present)
- **Assistant Director, Orr Academic Society**, University of Kansas Medical Center (2020–Present)

7. Areas of Clinical Expertise

- Emergency Medicine
- Sepsis recognition, management, and quality metrics
- Emergency department operations and quality improvement
- Point-of-care ultrasound in acute care
- Sepsis Diagnostic biomarkers and clinical decision support
- Emergency department documentation, coding, and patient complexity capture

8. Honors and Awards

- **Best Attending for Bedside Teaching**, University of Kansas Emergency Medicine Residency (2024)
- **Attending of the Year for Quality Improvement and Research**, The University of Kansas Health System (2022)
- **Best EM Attending of the Year**, St. John Regional Medical Center (2018)

9. Professional Affiliations

- American College of Emergency Physicians

10. Research, Grants, and Subject-Matter

Served as principal investigator and collaborator on multiple funded and unfunded studies focused on emergency medicine standards of care, sepsis recognition and management, diagnostic biomarkers, clinical decision support, emergency department operations, and point-of-care ultrasound. This work includes prospective and retrospective clinical research, implementation science, and quality improvement initiatives conducted in collaboration with academic medical centers, health systems, and industry partners.

Selected Studies and Research Programs:

1. **Emergency Department Sepsis Initiative:** Health-system-wide quality improvement program evaluating SEP-1 compliance, sepsis mortality, and cost indices, with iterative interventions driven by detailed case review and performance trend analysis.
2. **Linking Novel Diagnostics with Data-Driven Clinical Decision Support in the Emergency Department:** Industry-sponsored study evaluating integration of diagnostic biomarkers and clinical decision support tools to improve early identification of patient deterioration and sepsis.
3. **Early Stratification of Septic Patients:** Biomarker-based research examining early phenotyping of sepsis, disease severity, and outcomes.
4. **Monocyte Distribution Width Threshold Determination for Sepsis:** Multicenter evaluation of Monocyte Distribution Width as an early indicator of occult infection and sepsis in emergency department patients.
5. **Positive Deviance in Sepsis Care:** Implementation science research identifying high-performing clinicians and nurses to reduce antibiotic administration delays and translating successful behaviors into department-wide education and practice change.
6. **Point-of-Care Ultrasound in Acute and Critical Illness:** Clinical research evaluating the diagnostic and procedural utility of bedside ultrasound in emergency and critical care settings.
7. **Stoic Philosophy-Informed Interventions for Physician Resilience and Burnout Reduction:** Educational and evaluative work examining the application of core Stoic philosophy teachings and daily practices to improve physician resilience, reinforce moral duty and professional character obligations, and reduce burnout among physicians, with particular focus on high-stress clinical environments such as emergency medicine.

11. Peer-Reviewed Publications

1. Sarani N, Che R, Jackson BS, Hanson C, Selby S, Ronvelia D, Wilson M, Gude KP, Fernandes RL. Personalized Baselines in Vital Signs: Insights from Wearable-Derived Sleep Data in Healthy Adults. *Journal of Biotechnology and Biomedicine*. 2025.
2. Frank HE, Sarani N, Hayes JF, Martinez RG, Goldstein J, Evans L, Phillips G, Dellinger RP, Portelli D, Schorr C, Terry KM, Harmon L, Townsend S, Levy MM. Formative Evaluation to Inform Implementation of Sepsis Bundles in Emergency Departments. *Annals of Emergency Medicine*. 2025.
3. Patel N, Jackson BS, Sarani N. Unconscious Male With Reported Seizure. *Journal of the American College of Emergency Physicians Open*. 2025.
4. Hill TM, Kerivan LT, Vilain KA, Windham S, Sarani N, Simpson SQ, Guidry CA. Decision Analysis Model of Rapid Versus Deferred Antibiotic Initiation in Patients With Suspected Sepsis in the Emergency Department. *Intensive Care Medicine*. 2025.
5. Jayaprakash N, Sarani N, Nguyen HB, Cannon C. Sepsis Resuscitation: Caution Against Conflating Initial Fluid Resuscitation and Overall Sepsis Management. *Journal of the American College of Emergency Physicians Open*. 2025.
6. Levin S, Sarani N, Hinson J, Naiman M, Cannon C, Smith A, Steinhart B, DeBraine A, Kehoe S, Imhoff B, Taribichi Y, Malinovska A, Badaki-Makun K. The Complete Blood Count Sepsis Index Using Monocyte Distribution Width for Early Detection of Sepsis. *Critical Care Explorations*. 2025.

7. Malik AN, Thom S, Helberg T, Jackson BS, Sarani N, Thomas M, Cook M, Thompson D, Petz A, Gunsolley M, Ehrman RR. Handheld Ultrasound Versus Standard Machines for Placement of Peripheral IV Catheters. *American Journal of Emergency Medicine*. 2025.
8. Hamadah K, Elue J, Jackson BS, Sarani N, Bernath K. Man With Chest Pain and Vomiting. *Annals of Emergency Medicine*. 2024.
9. Jayaprakash N, Sarani N, Nguyen HB, Cannon C. State of the Art of Sepsis Care for the Emergency Medicine Clinician. *Journal of the American College of Emergency Physicians Open*. 2024.
10. Sarani N, Dasgupta A, Enders M, Rowan L, Elsarraj H, Gralnek S, Shay M, Lemar LR, Simpson SQ, Cunningham MT, Zheng XL. Clinical Utility of FDA-Approved IntelliSep Test for Early Diagnosis of Sepsis. *Journal of Clinical Medicine*. 2024.
11. Johnson S, Jackson BS, Sarani N. Female With Acute Left Eye Vision Changes. *Annals of Emergency Medicine*. 2023.
12. Frank HE, Evans L, Phillips G, Dellinger R, Goldstein J, Harmon L, Portelli D, Sarani N, Schorr C, Terry KM, Townsend SR, Levy MM. Assessment of Implementation Methods in Sepsis. *Trials*. 2023.
13. Enders M, Sarani N, Malik A. Isolated Left Ventricular Cardiac Tamponade Diagnosed on Point-of-Care Ultrasound. *Journal of the American College of Emergency Physicians Open*. 2023.
14. Thompson DL, Jackson BS, Sarani N. Woman With Voice Changes and Cough. *Annals of Emergency Medicine*. 2022.
15. Imhoff B, Marshall K, Joshua J, Sarani N. Effect of Batched Patient–Physician Assignment on Emergency Department Length of Stay. *Journal of the American College of Emergency Physicians Open*. 2022.
16. Cook MW, Dougherty K, Sarani N, Jackson BS. Man With Syncope and Hypotension. *Annals of Emergency Medicine*. 2022.
17. Malik A, Thom S, Haber B, Sarani N. Regional Anesthesia in the Emergency Department. *Current Emergency and Hospital Medicine Reports*. 2022.
18. Jackson BS, Sarani N, Marx JT, Cannon CM. Suture Granuloma Diagnosed and Treated With Bedside Ultrasound. *Journal of Emergency Medicine*. 2022.
19. Imhoff B, Marshall K, Joshua J, Sarani N. Batched Patient–Physician Assignment. *Journal of the American College of Emergency Physicians Open*. 2022.
20. Frantz E, Sarani N, Pirotte A, Jackson BS. Woman in Respiratory Distress. *Journal of the American College of Emergency Physicians Open*. 2021.
21. Nguyen D, Sarani N, Marshall KD, Cannon CM, Jacobsen RC, Pirotte A, Pittenger C, Wong EK, Dodson NP, LaCapra M, Howe K. CODE BLUE-19. *Western Journal of Emergency Medicine*. 2020.

12. International, National, and Departmental Service

International and National Service

1. American College of Emergency Physicians Coding and Nomenclature Advisory Committee (2023–Present) – Member.

2. Assessment of Implementation Methods in Sepsis Steering Committee (2022–2025) – Co-Chair, Education Committee.
3. Beckman Coulter (2021–2024) – International Consultant; Monocyte Distribution Width (MDW) utility, sepsis diagnostics, national/international education.
4. Abbott Point of Care Inc. (2022- 2023) – International Consultant, sepsis diagnostics, CMS compliance, performance indices.

KUMC, School of Medicine, and Departmental Service

1. Sepsis Committee (2020–Present) – Member and Co-Chair.
2. Coding Committee (2023–Present) – Member.
3. POCUS Committee (2019–2021) – Member.
4. Airway Committee (2019–2020) – Member.
5. ED Sepsis Policy and Order Set Reviewer (2021).

13. Poster Presentations

1. Fallahian A, Sarani N. AI in Health Conference. Houston, TX. 2025.
2. Che R, Sarani N. GME Research Forum. Kansas City, KS. 2025.
3. Roe R, Sarani N. AAEM Scientific Assembly. New Orleans, LA. 2023.
4. Enders M, Sarani N. AIUM Ultracon. Orlando, FL. 2023.
5. Rowan L, Sarani N. Emergencies in Medicine. Park City, UT. 2023.
6. Sarani N. ACEP Scientific Assembly. San Francisco, CA. 2022.
7. Sarani N. AAEM Scientific Assembly. Baltimore, MD. 2022.
8. Patel J, Sarani N. AIUM. San Diego, CA. 2022.
9. Thompson D, Sarani N. AIUM. San Diego, CA. 2022.
10. Sarani N. ACEP Scientific Assembly. Boston, MA. 2021.
11. Wilson B, Sarani N. KU Faculty Research Day. Kansas City, KS. 2022.
12. Rande R, Sarani N. KU GME Research Forum. Kansas City, KS. 2023.

14. Presentations and Invited Seminars

1. Sarani, N., 2nd Annual Time Critical Diagnosis (TCD), “Sepsis: Early Intervention,” KUMC, Kansas City, Kansas, United States. (September 2025).
2. Sarani, N., Assessment of Implementation Methods in Sepsis and Respiratory Failure, “System-Level Approaches For Sustained Improvement,” AIMS Research Study. (August 2025).
3. Rowen, L., Sarani, N., Emergencies in Medicine Conference, “Clinical Utility of Recently FDA-Approved IntelliSep Test for Early Diagnosis of Sepsis: Comparison with Other Biomarkers,” Park City, Utah, United States. (February 2025).
4. Sarani, N., Emergencies in Medicine Conference, “Leveraging Wearable Technology to Identify Illness Early,” Park City, Utah, United States. (February 2025).
5. Hill, T. M., Kerivan, L. T., Sarani, N., Surgical Infection Society (SIS) 43rd Annual Meeting, “Comparative Effectiveness of Rapid Selective Antibiotic Initiation in Patients with Suspected Sepsis,” Miami, Florida, United States. (June 2024).

6. Elsarraj, H., Rowan, L., Enders, M., Sarani, N., ACLPS Laboratory Medicine 2024 Annual Conference, “Clinical Utility of Recently FDA-Approved IntelliSep Test for Early Diagnosis of Sepsis: Comparison with Other Biomarkers and von Willebrand Factor/ADAMTS13 Ratio,” New York City, New York, United States. (June 2024).
7. Sarani, N., ICEM 2024, “Clinical Utility of Monocyte Distribution Width,” Beckman Coulter, Taipei, Taiwan. (June 2024).
8. McKee, D., Sarani, N., Society of Academic Emergency Medicine Annual Conference, “Utilizing Positive Deviance as a Strategy to Improve Antibiotic Administration Time in Sepsis,” Phoenix, Arizona, United States. (May 2024). *
9. Sarani, N., Emergencies in Medicine Conference, “Improving the Predictive Value of Clinical Decision Support in Sepsis,” Park City, Utah, United States. (February 2024).
10. Wilhelm, N., McKee, D., Sarani, N., Eighth Annual Kansas City Nurse Research Consortium, “Positive Deviance Approach in Sepsis: Improving Nursing Antibiotic Administration Times,” Kansas City, Missouri. (November 2023).
11. Sarani, N., Hospital Sepsis Program Core Elements Webinar Series, “Monitoring Trends in Sepsis Performance,” Centers for Disease Control and Prevention. (November 2023).
12. Sarani, N., “The Role of Monocyte Distribution Width in Sepsis Screening,” Beckman Coulter, New York City, New York. (August 2023).
13. Hinson, J., Sarani, N., American Association of Clinical Chemistry Annual Scientific Meeting, “Unlocking the Complete Blood Count: Derivation of a Single-Panel Laboratory Test Including Monocyte Distribution Width to Create a Universal Sepsis Screening Tool,” Anaheim, California, United States. (July 2023).
14. Hinson, J., Sarani, N., Society of Academic Emergency Medicine Annual Conference, “Monocyte Distribution Width and Time to Antibiotics for Septic Patients with Atypical Presentations,” Austin, Texas, United States. (May 2023). *
15. Sarani, N., Emergencies in Medicine Conference, “Making Sense of New Sepsis Biomarkers,” Park City, Utah, United States. (February 2023).
16. Sarani, N., Monocyte Distribution Width: Severity of Infection Marker, “Real-World Utilization of MDW in the Emergency Department,” Beckman Coulter, Singapore. (November 2022).
17. Sarani, N., The Utility of MDW in Infection, “The Clinical Utility of MDW: Panel Discussion,” Beckman Coulter, Miami, Florida, United States. (October 2022).
18. Sarani, N., Hinson, J. S., American College of Emergency Physicians Scientific Assembly, “A Better CBC for You and Me,” Beckman Coulter, San Francisco, California, United States. (October 2022).
19. Sarani, N., Sepsis Alliance Summit 2022, “Achieving SEP-1 Compliance: One Emergency Department’s Pathway to Success,” Sepsis Alliance. (September 2022).
20. Sarani, N., American Academy of Emergency Medicine (AAEM) 28th Annual Scientific Assembly, “How We Went From Worst to First, and Saved Lives in the Process,” Baltimore, Maryland, United States. (April 2022).
21. Sarani, N., KUMC Laboratory Education, “Utility of MDW in Acute Care Setting: Clinical Cases,” Beckman Coulter, Kansas City, Kansas, United States. (December 2021).
22. Sarani, N., Hinson, J. S., American College of Emergency Physicians Scientific Assembly, “A Role for Monocyte Distribution Width in ED-Based Sepsis Diagnosis,” Beckman Coulter, Boston, Massachusetts, United States. (October 2021).

23. Sarani, N., American College of Emergency Physicians Scientific Assembly, “Unlocking the CBC: A Role for MDW Biomarker in ED-Based Sepsis Diagnosis Through Patient Case Studies,” Beckman Coulter, Boston, Massachusetts, United States. (October 2021).
24. Sarani, N., MDW Clinical Case Studies LIVE Field Training Call, “Guest Speaker on Clinical Utility of MDW in the Acute Care Setting,” Beckman Coulter. (June 2021).
25. Badgett, R., Sarani, N., Society of General Internal Medicine Annual Meeting, “The Relative Influence of the Resident and Attending in Antibiotic Ordering Speed in Severe Sepsis and Septic Shock,” SGIM. (April 2021).

15. Development of Educational Material

1. **TriageGO – AI Utility in Emergency Department Triage (2023):** Created an educational packet for TUKHS Emergency Department providers and nursing staff on the use of TriageGO, an AI-enabled triage support tool. Materials included instructional content outlining clinical utility, workflow integration, and appropriate use cases.
2. **Provider Documentation Improvement – 2023 E/M Coding Changes Education (2023):** Led development of the updated Medical Decision Making (MDM) section of the Emergency Department note in compliance with 2023 E/M coding changes. Created a comprehensive educational packet for The University of Kansas Health System TUKHS ED providers, including an instructional video, MDM reference grid, and assessment quiz.
3. **Positive Deviance Approach in Sepsis Quality Improvement – Nursing Antibiotic Administration Times (2021):** Developed an educational packet based on analysis of ED nursing antibiotic administration times for septic patients. Identified positive deviant nurses and translated their strategies into an educational packet consisting of a short video, poster, and quiz.
4. **Performance Index – Observed Versus Expected (O/E) (2021):** Developed and implemented an educational curriculum for TUKHS ED providers focused on understanding and improving the Observed versus Expected performance index. Materials included an educational video, tables of high-impact diagnoses, and a quiz, with ongoing provider- and department-level feedback in collaboration with Clinical Documentation Improvement.
5. **Monocyte Distribution Width (MDW) Clinical Utility in the Acute Care Setting (2021):** Introduced the clinical utility of MDW, a CBC-derived biomarker, for infection and sepsis diagnosis in the Emergency Department. Developed an educational video that was nationally distributed by Beckman Coulter.
6. **Emergency Medicine Ultrasound Division Education (2020 – 2023):** Developed online ultrasound quizzes tailored to level of training, including medical students, residents, off-service residents, and fellows. Added a monthly journal club to the Emergency Medicine ultrasound fellowship curriculum featuring structured review of high-impact point-of-care ultrasound literature.
7. **EM SonoCorner Educational Website (2020 – 2021):** Created and maintained an educational website featuring curated point-of-care ultrasound video clips demonstrating normal and abnormal findings. Developed an “Ultrasound Case of the Month” module integrating clinical presentation, ultrasound interpretation, and final diagnosis, and added trauma-focused ultrasound content and fellow-level assessments.

8. **Diagnosing COVID-19 Pneumonia Using Point-of-Care Ultrasound (2020):** Created a short educational video demonstrating lung ultrasound findings consistent with COVID-19 pneumonia for Emergency Department providers.
9. **COVID-19 Airway Drape Education (2020):** Created a video presentation to educate TUKHS Emergency Department providers on the use and clinical utility of a COVID-19 airway drape during airway management.
10. **TUKHS COVID-19 Airway Management Education (2019 – 2020):** Developed educational materials, including a flow diagram, to teach standardized COVID-19 airway management practices to TUKHS Emergency Department providers.
11. **COVID-19 Cardiopulmonary Resuscitation Education (2019 – 2020):** Co-developed an educational packet for TUKHS Emergency Department physicians and nurses addressing cardiopulmonary resuscitation in patients with known or unknown COVID-19 status, including diagrams and instructional presentations.

16. Clinical Supervision and Teaching Experience

1. **Supervision of Emergency Medicine Interns and Residents in the Emergency Department (2019 – Present):**
Served as attending physician providing direct supervision of emergency medicine interns and residents during clinical shifts. Oversaw clinical assessment, diagnostic testing, medical decision-making, procedural performance, and patient disposition across a wide spectrum of emergency presentations, including high-acuity and time-sensitive conditions.
2. **Emergency Medicine Intern Rotators – Bedside Ultrasound Training (2019 – Present):**
Supervised and instructed rotating emergency medicine interns in bedside ultrasound, including image acquisition, interpretation, documentation, quality assurance, and appropriate clinical integration into patient management.
3. **ERMD 921 Emergency Ultrasound Course (Medical Students) (2019 – Present):**
Faculty instructor and supervisor for a formal emergency ultrasound course. Provided structured didactic and hands-on instruction focused on foundational ultrasound principles, recognition of normal and abnormal findings, and appropriate clinical use.
4. **Emergency Medicine Ultrasound Fellowship – Hands-On Training (2021 – 2025):**
Provided advanced supervision and mentorship to emergency ultrasound fellows, including direct oversight of complex point-of-care ultrasound examinations, quality assurance review, teaching methodology, and integration of ultrasound into emergency department workflows and patient management.
5. **Supervision of Advanced Practice Providers (Physician Assistants and Nurse Practitioners) (2016 – 2019):**
Provided direct clinical supervision of emergency medicine APPs, including oversight of patient evaluation, diagnostic decision-making, treatment plans, procedures, and disposition decisions. Ensured adherence to evidence-based emergency medicine standards, departmental protocols, and appropriate escalation of care.

17. Instructional Experience (Didactics and Non-Didactics)

1. **Emergency Medicine Residency Didactic Curriculum – Sepsis Care and Updates (2020 – 2025):** Delivered recurring residency-level didactic instruction on emergency department sepsis management, including SEP-1 workflows, sepsis care updates, and system-level performance improvement. Instruction emphasized evidence-based decision-making, protocol adherence, and high-risk clinical judgment.
2. **Emergency Medicine Intern Orientation – Emergency Department Sepsis Management (2021 – 2025):** Led annual intern orientation sessions focused on emergency department sepsis recognition and management, including early identification, bundle compliance, escalation of care, and real-world operational considerations.
3. **Emergency Medicine Residency Didactic Curriculum – Ultrasound in Shock and Fluid Management (2019 – 2024):** Provided didactic instruction to emergency medicine residents on point-of-care ultrasound applications in shock states and fluid management, including RUSH examination, assessment of fluid responsiveness, and integration into clinical decision-making.
4. **Emergency Medicine Ultrasound Didactics and Image Review (2021 – Present):** Conducted ongoing ultrasound image review conferences for fellows, residents, interns, and medical students, focusing on image interpretation, quality assurance, clinical correlation, and limitations of point-of-care ultrasound.
5. **Emergency Medicine Ultrasound Journal Club (2021 – Present):** Organized and led recurring ultrasound journal club sessions reviewing high-impact point-of-care ultrasound literature. Facilitated critical appraisal of study design, diagnostic accuracy, limitations, and applicability to emergency medicine practice.
6. **Emergency Medicine Residency Core Conference – Case-Based Emergency Medicine Foundations (2021 – 2025):** Delivered case-based conference instruction on high-risk emergency medicine topics including abdominal pain, altered mental status, pediatric rash, pulmonary edema, and bowel ischemia, emphasizing diagnostic reasoning and standard-of-care considerations.
7. **Emergency Medicine Residency and Faculty Didactic Lectures – Ultrasound in the Critically Ill (2019 – 2021):** Delivered invited and guest lectures at multiple emergency medicine residency programs on ultrasound evaluation of critically ill patients, focusing on rapid diagnostic pathways and bedside decision-making.
8. **Emergency Medicine Residency Didactic Curriculum – Emergency Department Operations and Academic Practice (2020):** Delivered didactic instruction on emergency department practice models, including academic versus community emergency medicine, workflow considerations, and system-level responsibilities.
9. **Emergency Medicine Ultrasound Orientation Workshop (2019 – Present):** Developed and led annual comprehensive ultrasound orientation workshops introducing fellows, residents, interns, and medical students to point-of-care ultrasound principles, indications, limitations, and hands-on scanning techniques.
10. **Emergency Medicine Procedural Skills Instruction – Central Venous Access and Cadaver Labs (2020 – 2022):** Provided hands-on procedural instruction to emergency medicine interns and residents, including ultrasound-guided central venous catheter placement and cadaver-based procedural training, emphasizing patient safety, anatomy, and complication avoidance.

11. **Medical Student Ultrasound Curriculum – M1 Simulation and Scanning Labs (2020 – 2024):** Served as faculty instructor for medical student ultrasound simulation and scanning laboratories covering ultrasound physics, cardiopulmonary ultrasound, abdominal/pelvic ultrasound, vascular ultrasound, and musculoskeletal ultrasound.
12. **Medical Student Case-Based and Problem-Based Learning Instruction (2021 – Present):** Served as Assistant Director within the Orr Academic Society, facilitating problem-based learning sessions for medical students focused on core clinical reasoning topics including shock, myocardial infarction, dysrhythmias, venous thromboembolism, bowel obstruction, and infectious disease.

Expert Not Retained