November 2023

CURRICULUM VITAE OTTO LIEBMANN, MD, FACEP

Brown Emergency Medicine 593 Eddy St. Providence, RI 02903 401-444-2840 otto@brown.edu

EDUCATION:

Undergraduate: Yale University BA Philosophy (Distinction in the Major) August 1991-May1995

Medical School NYU School of Medicine Doctor of Medicine August 1998-May2002

POST-GRADUATE TRAINING:

Residency, Emergency Medicine University California San Francisco (UCSF)/Highland Hospital Oakland, CA June 200 2-July 2006

Fellowship, Emergency Medicine Ultrasound University California San Francisco (UCSF)/Highland Hospital Oakland, CA August 2006-2007

POSTGRADUATE HONORS AND AWARDS

Dean's Excellence in Teaching Award Alpert Medical School, Brown University August 2018 Dean's Excellence in Teaching Award Alpert Medical School, Brown University September 2017

Fellow Status American College of Emergency Physicians 2012

The Unsung Hero Award (Dedication, attitude, & pursuit of excellence) Highland Hospital - Alameda County Medical Center June 2006

Resident of the Year Award Department of Emergency Medicine, UCSF Medical Center July 2006

Resident of the Year Award Department of Emergency Medicine, Highland Hospital July 2006

Excellence in Emergency Medicine Procedures Department of Emergency Medicine, UCSF/ Highland Hospital July 2005

PROFESSIONAL LICENSES AND BOARD CERTIFICATION

State of Rhode Island, Board of Medicine – MD12526 (2007-Present) State of California, Board of Medicine – A87026 (2002-2009) Drug Enforcement Agency Certificate – BL8785062 (2002 - Present) Board Certification in Emergency Medicine – (June 2007 - Present) Buprenorphine X-Waiver Training – (2019 - Present)

ACADEMIC APPOINTMENTS

Associate Professor of Emergency Medicine The Warren Alpert Medical School of Brown University July 2015-Present Assistant Professor of Emergency Medicine The Warren Alpert Medical School of Brown University November 2007-June 2015

HOSPITAL APPOINTMENTS

Attending Physician Department of Emergency Medicine Rhode Island, Miriam Hospitals November 2007-Present

Director, Division of Emergency Ultrasound Department of Emergency Medicine Rhode Island, Miriam and Hasbro Hospitals November 2007-2018

Director, Emergency Ultrasound Fellowship Department of Emergency Medicine Rhode Island Hospital July 2009-2012

OTHER APPOINTMENTS

Peer reviewer Western Journal of Emergency Medicine 2008-2015

Peer Reviewer Journal of Critical Care 2009-2015

Peer Reviewer Annals of Emergency Medicine 2012, 2022

Team Physician Ocean State Studios Brazilian JiuJitsu 2019-present

HOSPITAL COMMITTEES

Residency Advisory Committee Warren Alpert Medical School of Brown University 2008-2020

MEMBERSHIP IN NATIONAL SOCIETIES

American College of Emergency Physicians 2004-Present

American College of Emergency Physicians Ultrasound Section Member 2004-Present

Society for Academic Emergency Medicine 2006-2020

Society for Academic Emergency Medicine Emergency Ultrasound Academy Member 2011-2020

American Institute of Ultrasound in Medicine 2008-2020

ORIGINAL PUBLICATIONS IN PEER-REVIEWED JOURNALS

- Liebmann O, Price D, Mills C, Wang R, Wilson S, Gray A. Feasibility of UltrasoundGuided Nerve Blocks of the Forearm Radial, Ulnar, and Median Nerves for Hand Procedures in the Emergency Department. Annals of Emergency Medicine. 2006; 48: 558-562.
- Mills C, Liebmann O, Stone M, Frazee B. Ultrasonographically Guided Insertion of a 15-cm Catheter into the Deep Brachial or Basilic Vein in Patients With Difficult Intravenous Access. Annals of Emergency Medicine. 2007; 50: 68-72

- **3.** Liebmann O, Salz T, Price D, Wilson S. An Initial Description of a Sonographic Sign That Verifies Intra-thoracic Chest Tube Placement. American Journal of Emergency Medicine. July 2009; Published Online.
- Beaudoin FL, Merchant RC, Lincoln J, Gardiner F, Liebmann O, Cohn J. Bedside ultrasonography detects significant femoral vessel overlap: implications for central venous cannulation. Canadian Journal of Emergency Medicine. July 2011;13(4):245-50
- Daulaire S, Fine L, Salmon M, Liebmann O, Shah S, Teismann N. Ultrasound assessment of optic disc edema in patients with headache. American Journal of Emergency Medicine. October 2012; 30(8):1651-4
- Mackenzie D, Liebmann O. Identification of mononucleosis-related spleen infarction by emergency department ultrasound. Journal of Emergency Medicine. February 2013; 44(2):450-2
- Taggart I, Voskoboynik N, Liebmann O. Emergency Department Point-of-care Ultrasound in the Diagnosis of Ankle Fractures in Children. The American Journal of Emergency Medicine. September 2011; 30 (7):1328.
- Beaudoin F, Haran J, Liebmann, O. A Comparison of Ultrasound-Guided Three-in-One Femoral Nerve Block Versus Parenteral Opioids Alone for Analgesia in Emergency Department Patients with Hip Fractures: A Randomized Controlled Trial. Academic Emergency Medicine. June 2013; 20 (6) 584-591.
- Mackenzie DC, Liebmann O. Point of Care Ultrasound Facilitates Diagnosis of Posterior Shoulder Dislocation. Journal of Emergency Medicine. The Journal of Emergency Medicine. May 2013; 44 (5): 976–978.
- Limpahan L, Baier R, Gravenstein S, Liebmann O, Gardner R. Best practices for emergency department cross-setting communication. American Journal of Emergency Medicine. September 2013; 31 (9): 1297-1301
- 11. Jauregui J, Nelson D, Choo E, Stearns, B, Levine A, Liebmann O; Shah S. External Validation and Comparison of Three Pediatric Clinical Dehydration Scales. PLOS ONE-Peer Reviewed Open Access Journal. May 2014; 10.1371/journal.pone.0095739
- **12. Liebmann O**, Kummer T. Emergency Ultrasound: Point-of-care Ultrasound in Emergency Medicine. Rhode Island Medical Journal. June 2014: pp12-16.

- Jauregui J, Choo E, Stearns B, Levine A, Liebmann O, Shah S. Bedside Ultrasound to Detect Dehydration in Youth: The BUDDY Study. Critical Ultrasound Journal. 2014; 6(15): 1-8.
- Frenkel O, Liebmann O, Fischer J. Forearm Ultrasound-Guided Nerve Blocks in Kids (FUNK): A Novel Method for Pain Control in the Treatment of Hand Injured Pediatric Patients in the Emergency Department. Pediatric Emergency Care. 2015; 31(4): 255-259
- **15.** Janicki A, Liebmann O. Ultrasound Evaluation of Upper Extremity Deformity. Western Journal of Emergency Medicine. 2016; 17(1): 61-62
- 16. Gaspari R,...Liebmann O. et al (multiple authors). Emergency Department pointofcare ultrasound in out-of-hospital and in-ED cardiac arrest. Resuscitation. Dec 2016; 109: 33-39
- 17. Gaspari R....Liebmann O. et al. A retrospective study of pulseless electrical activity: bedside ultrasound identifies interventions during resuscitation associated with improved survival at hospital admission. A REASON study. Resuscitation. Nov 2017; 120:103-107
- Al-Sadhan N...Liebmann O. et al. Point-of-care Ultrasound Identification of Iliopsoas Abscess in Emergency Department: A Case Report. Emergency Medicine. Aug 2020; 4(3) 404-406
- **19.** Gaspari R...**Liebmann O**. et al. Comparison of outcomes between pulseless electrical activity by electrocardiography and pulseless myocardial activity by echocardiography in in out-of-hospital cardiac arrest; secondary analysis from a large prospective study. A REASON study. Resuscitation. Sep 2021; PMID 34798178
- **20.** Gardner R, **Liebmann O**, et al. Rethinking the Language of Bedside Rounds. American Journal of Medicine. March 2023; 136 (3) 222-224

OTHER NON-PEER REVIEWED PUBLICATIONS & CHAPTERS

 Liebmann O, Simon B. Evaluating the Patient with Altered Level of Consciousness: Case-Based Clinical Pearls. Emergency Medicine: Acute Medicine for the Primary Care Physician. December 2005.

- **2. Liebmann O.** Inferior vena cava measurement in emergency department patients presenting with undifferentiated hypotension. The Pulse. November 2011
- **3.** Levinson A, Liebmann O. Critical Care Ultrasound Education (*chapter*). Ultrasound in the Intensive Care Unit. Springer Publishing.
- **4.** Blackwood B, **Liebmann O**, Binder W. Spontaneous Coronary Artery Dissection in a Young Woman. Rhode Island Medical Journal. August 2017.
- **5. Liebmann O**, Thorndike J. BrownEM Blog Video: Posterior Cervical Plexus Block. January 2018

INVITED PRESENTATIONS - REGIONAL

- 1. Lightning and Electrical Injuries. Presented at Alameda Emergency Medical Services Education Series, Oakland, California. May 2006.
- 2. Ultrasound in Trauma: The FAST and Pneumothorax Exams. Presented at the Highland Hospital Trauma and Emergency Medicine Joint Conference. September 2006.
- **3.** Introduction to Ultrasound in the Emergency Department. Presented at the Community Physician Seminar in Emergency Ultrasound, Oakland, California. September 2006, January 2007.
- 4. Ultrasound Guided Procedures: Vascular Access and Thoracentesis. Presented at the Highland Hospital Medicine and Emergency Medicine Joint Conference. April 2007
- 5. Emergency Ultrasound: From Physics to FAST. Presented at the Rhode Island ACEP Conference, Newport, RI. July 2008.
- **6.** Emergency Ultrasound: DVT and Vascular Access. Presented at the Newport Hospital, Newport, RI. September 2008
- 7. The Effect of Hip Abduction and External Rotation on Femoral Vessel Overlap. New England Regional SAEM Conference. Poster presentation. March 2009.

- **8.** Ultrasound Evaluation of Femoral Vessel Overlap: An Anatomic Study. New England Regional SAEM Conference. Poster presentation. March 2009.
- Critical Emergency Ultrasound Procedures. Presented at the New England Emergency and Critical Care Ultrasound Course, Yale University, New Haven, CT. April 2009
- **10.** Focused Assessment with Sonography in Trauma. Department of Emergency Medicine, Kent Hospital, Warwick, RI. August 2009
- **11.** Procedural Ultrasound for the Critical Care Physician. Presented at the Department of Critical Care Medicine, Miriam Hospital, Providence, RI. August 2009.
- Ultrasound Guided Vascular Access Techniques for the Anesthesiologist. Presented at the Department of Anesthesiology, Women & Infants Hospital, Providence, RI. September 2009.
- **13.** Advanced Ultrasound Procedures in Emergency and Critical Care. Presented at the New England Emergency and Critical Care Ultrasound Course, Yale University, New Haven, CT. May 2010.
- 14. Point-of-Care Ultrasound in Shock. New England Emergency and Critical Care Ultrasound Course, Yale University, New Haven, CT. May 2011.
- **15.** Critical Care Ultrasound in Hypotension. Department of Critical Care Medicine Conference, Miriam Hospital, Providence, RI. July 2011.
- **16.** Rocuronium versus succinylcholine in rapid sequence intubation. Department of Emergency Medicine, Brown University, Providence, RI. October 2011.
- **17.** Bedside ultrasound for the placement of peripheral venous catheters. Miriam Hospital Nursing Training Seminar. Providence, RI. October 2011 (Course director)
- Point-of-care Ultrasound in Undifferentiated Hypotension. Grand Rounds -Department of Emergency Medicine, Harvard University, Boston MA. October 2011
- **19.** Point-of-Care Ultrasound in Shock. Department of Emergency Medicine, Brown University, Providence, RI. February 2012.

- **20.** Difficult Vascular Access. Department of Emergency Medicine, Brown University, Providence, RI. August 2012.
- **21.** Pulmonary Point-of-care Ultrasound. Department of Emergency Medicine, Brown University, Providence, RI. January 2013
- 22. Emergency Care: Critical Decisions in Emergency Ultrasound and Beyond (Undergraduate Course Lecture). Emergency Medical Systems: An Anatomy of Critical Performance. Brown University. Providence, RI. January 2013.
- **23.** Critical Care and EM Ultrasound in Shock: Changes in Diagnosis and Treatment. Yale Point of Care Ultrasound Course. Newport, RI . October 2013
- 24. Point-of-care Ultrasound: Current Concepts and Resuscitation in Sepsis. Department of Medicine, Division of Pulmonary and Critical Care. Miriam Hospital, Providence, RI. April 2014
- **25.** Point-of-care Ultrasound: History and Current Concepts. Grand Rounds, Department of Medicine. Brown University, Providence, RI. April 2014
- 26. Undifferentiated Hypotension Ultrasound for Diagnosis and Management. Yale Point of Care Ultrasound Course. Newport RI. September 2014
- Feasibility of the Martial Arts: Pathology to Power Disability, Health and Community (PHP 1680I) Workshop. Brown University, Providence, RI. November 2014
- **28.** Martial Arts Principles: Progress and Security (Lecture and Practical Seminar). Brown University School of Professional Studies. Providence, RI. September 2016
- **29.** Ultrasound Applications for Army and LifePact Environments. LifePact Critical Are Program, Rhode Island Hospital. January 2017
- 30. Point-of-care Ultrasound Applications for Emergency Physician Assistants. Johnson & Wales University Center for Physician Assistant Studies. Providence, RI. May 2017
- **31.** Special Operations and Security Martial Arts Principles (Lecture and Practical Seminar). Brown School of Professional Studies. Providence, RI. October 2017

- Pediatric Nerve Blocks. The Brown University Pediatric Emergency Medicine Course. Providence, RI. October 2017
- 33. Advanced Clinician-performed Ultrasound. Johnson & Wales University Center for Physician Assistant Studies. Providence, RI. December 2017
- **34.** Renal Ultrasound and STONE Trial. Emergency Medicine Physician Assistant Program. Providence, RI. February 2018
- **35.** Medicine and the Martial Arts. Alpert Medical School of Brown University. Providence RI. March 2018
- **36.** Renal Ultrasound. Emergency Medicine Physicians Assistant Program. Rhode Island Hospital. Providence, RI. March 2018
- **37.** Clinician-performed Ultrasound: Introductory Lecture. Johnson & Wales University Center for Physician Assistant Studies. Providence, RI. May 2018
- 38. Ultrasound-Guided Thoracentesis, Paracentesis and Lumbar Puncture & Point-ofCare Renal Ultrasound. PPOCUS Ultrasound Course, Maine Medical Center. Portland, ME. October 2018
- **39.** Emergency Ultrasound Integration into Clinical Protocols. Department of Emergency Medicine Residency Conference. Providence, Rhode Island. April 2018
- **40.** The Doctor-Patient Relationship: Lessons from Aikido and JiuJitsu. Alpert Medical School of Brown University. Providence, Rhode Island. April 2018
- **41.** The Modern Clinical Practice of Emergency Medicine. Brown University. Providence, Rhode Island. January 2019
- **42.** Emergency Ultrasound: Thoracic Cases. Department of Emergency Medicine Residency Conference. Providence, Rhode Island. September 2019
- **43.** Emergency Ultrasound: An Introduction to Clinical Utility. Emergency Medicine Physicians Assistant Program. Rhode Island Hospital. November 2019
- **44.** Emergency Medicine Marital Arts, Myths and Realities. Brown Undergraduate Course Emergency Medical Systems PHP 1520. Feb 2020

- 45.Acute Diarrhea. Department of Emergency Medicine Residency Conference. Providence, Rhode Island. August 2020
- 46.Emergency Medicine Practice during the COVID Pandemic. Brown Undergraduate Course Emergency Medical Systems PHP 1520. January 2021
- 47.Point of Care Ultrasound for Procedural Guidance: Vascular Access and Peripheral Nerve Blocks. Emergency Advanced Practice Provider . January 2022
- 48. Alcohol Withdrawal Experiences and Advances: Expert Panel. Department of Emergency Medicine Residency Conference. Providence, Rhode Island. August 2022
- 49. Abdominal Ultrasound Essentials. Ultrasound Curriculum Course. Warren Alpert Medical School of Brown University. January 2023
- 50. Emergency Physician Experience: Wellness and the Martial Arts. Brown Undergraduate Course Emergency Medical Systems: An Anatomy of Critical Performance BIOL1530. February 2023
- 51. ENT Emergencies. Department of Emergency Medicine Residency Conference. Providence, Rhode Island. July 2023
- 52. Point-of-care Emergency Ultrasound: Clinical Integration. Brown Emergency Medicine Advanced Practice Providers Core Curriculum. Providence, Rhode Island. November 2023

INVITED PRESENTATIONS - NATIONAL

- Cross-cultural Pain Perception in the Urban Emergency Department. Academic Emergency Medicine National Conference. Chicago, Illinois. May 2002
- 2. Ultrasound-Guided Nerve Blocks of the Forearm Nerves for Hand Procedures. World Congress on Ultrasound and Critical Care. New York, New York. June 2006.
- 3. Cardiac Point-of-Care Ultrasound. Topics in Emergency Medicine National Conference. University of California, San Francisco, California. November 2006.
- 4. Emergency Ultrasound in Trauma Course Instructor. American College of Emergency Physicians National Conference. Las Vegas, NV. October 2010

- 5. Emergency Ultrasound Regional Anaesthesia Course Instructor. American College of Emergency Physicians National Conference. Denver, CO. October 2012.
- 6. Emergency Ultrasound Regional Anaesthesia Course Instructor. American College of Emergency Physicians National Conference. Seattle, WA. October 2013.
- Emergency Ultrasound Regional Anaesthesia Course Instructor. American College of Emergency Physicians National Conference. Chicago, IL. October 2014

INVITED PRESENTATIONS - INTERNATIONAL

- Advanced Topics in Emergency Ultrasound Course Co-Director. Kingston Hospital, Department of Emergency Medicine London, UK. May 2007.
- Ultrasound in Trauma: FAST, Pneumothorax and Hemothorax. International College of Emergency Medicine Conference San Francisco, California. April 2008.
- Emergency Ultrasound: Critical Diagnoses and Procedures -Course Director. Emek Hospital, Department of Emergency Medicine. Afula, Israel. May 2008
- Point-of-Care Ultrasound in Trauma Course Instructor. German Society for Ultrasound in Medicine. Gottingen, Germany. September 2011.

HOSPITAL/MEDICAL SCHOOL TEACHING ROLES

Alpert Medical School, Point-of-Care Emergency Ultrasound Elective (Faculty) Two-week elective to medical students with focus on techniques and applications of point-of-care ultrasound in the field of emergency medicine. Open to medical students nationally and internationally.

Faculty, Alpert Medical School, Point-of-Care Ultrasound Curriculum (Co-founder/ Faculty)

Created and helped design original AMS EUS curriculum. Continue to refine and teach the program for point-of-care ultrasound within the first and second years of the medical school curriculum.

Medical Student Elective Point-of-care Emergency Ultrasound (Faculty) Established the original elective opportunity and curriculum. Continue to supervise medical students on their point-of-care emergency ultrasound clerkships and rotations. Curriculum provides introduction to basic image interpretation, acquisition, and clinical application.

Medical Student Elective (Faculty)

Clinical supervision and teaching of medical students during their emergency department clerkships. Instruction in basic and advanced diagnostic and therapeutic treatment algorithms. Evidence based approach to medical decision making with focus on recent literature.

Emergency Medicine Residency (Faculty)

Supervision and clinical instruction of emergency medicine residents throughout their four year residency. All aspects of emergency department clinical care including diagnostic, therapeutic and procedural skills are taught. An evidence-based approach is emphasized and core values of professionalism are reinforced.

Internal Medicine Resident Supervision (Faculty)

Supervision and clinical instruction of internal medicine residents during their second year of residency. Core features of emergency department clinical care including diagnostic, therapeutic and procedural skills are taught.

Emergency Ultrasound Teaching Rounds Program (Director)

Brown medical students, emergency medicine residents, and fellows (critical care, pediatric emergency medicine, emergency ultrasound) Daily ultrasound teaching shifts in the emergency department. Didactic components

and hands-on instruction in all aspects of emergency ultrasound are included in these sessions compliant with core ACGME requirement of emergency medicine residency training.

Alpert Medical School, Brown University. June 2007 - 2018

Emergency Ultrasound Lecture Series - Residency Conference (Lecturer) Annual lecture series on multiple topics in emergency ultrasound. Alpert Medical School, Brown University March 2008 - present

Emergency Ultrasound Introduction – Intern Course (Instructor)

Annual full-day emergency ultrasound course diagnostic and procedural course. Alpert Medical School, Brown University July 2008 – present

Emergency Ultrasound Quality Assurance and Image Review (Reviewer)
Weekly review of resident, fellow, and attending emergency department point-ofcare ultrasound examinations. Quality assurance and feedback for all images acquired for clinical, credentialing, and educational purposes.
Alpert Medical School, Brown University
October 2007 – Present

Emergency Ultrasound Journal Club Series (Director)

Discuss articles and weekly review of essential and recent peer-reviewed journal publications on the topic of emergency department use of ultrasound, providing evidence-based medical approach to use of this modality. Alpert Medical School, Brown University October 2007- 2018

Brown University Undergraduate Course (Guest lecturer)

Course Title: "The Dynamics of Emergency Department Care and Humanity Emergency Care: Critical Decisions in Emergency Ultrasound and Beyond. Emergency Medical Systems: An Anatomy of Critical Performance." Brown University. Annually, 2011 – Present

- Simulation Center Emergency Medicine Residency Sessions (Course Instructor) SIM based courses in emergency medicine & emergency ultrasound. July 2008-2010
- Longitudinal Medical Student Mentor (Faculty Advisor) Alpert Medical School of Brown University April 2010 –2011
- The Brown Emergency Medicine Ultrasound Course (Course Director) Rhode Island Hospital Medical Simulation Center. January 2013

Pediatric Emergency Medicine Point-of-care Ultrasound (Course Co-Director)

Medical Simulation Center Rhode Island Hospital Annually, 2014-2018

Course Instructor

Integrated Clinical Arts Program The Intersection of Martial Arts and Medicine: A Blackbelt Perspective Alpert Medical School of Brown University Providence, RI. Annually, 2017-2020