

DR. WILLIAM R HAND, MD
CURRICULUM VITAE

Name: William Robert Hand, MD

Office Address: GHS Department of Anesthesiology **Email:** whand@ghs.org or handwr6@yahoo.com
67 Creekside Park Ct
Greenville SC 29615

Education:

<u>Institution/Location</u>	<u>Years</u>	<u>Degree/Date</u>	<u>Field of Study</u>
Saint Louis University	1999-2003	BA (s.c.l.) 2003	Applied Mathematics
Saint Louis Univ. School of Medicine	2003-2007	MD 2007	Medicine

Internship:

	<u>Dates</u>
Medical University of South Carolina	2007 - 2008

Residencies or Post Doctoral:

	<u>Dates</u>
Medical University of South Carolina	2008 – 2011
Medical Univ of South Carolina, Chief Resident	2010 – 2011

Licensure and Certification:

	<u>Date</u>	<u>Identifier</u>
Boards, USMLE Step I, passed	6/2004	
Boards, USMLE Step II, passed	1/2007	
Boards, USMLE Step III, passed	10/2007	
Medical, South Carolina	6/2011 – present	License #29918
Boards, ABA Written Exam, passed	7/2011	
Boards, ABA Oral Exam, passed	4/2012	
Boards, American Board of Anesthesiology	4/2012-12/2022	Certificate #3586-6635

Other Certifications:

AHA ACLS Certified Provider (2010 Update)	2007 – present
---	----------------

Faculty Appointments:

2011-2015	Assistant Professor of Anesthesiology, Medical University of South Carolina
2016	Associate Professor of Anesthesiology, Medical University of South Carolina
2016-2017	Assistant Professor of Anesthesiology, University of South Carolina Greenville
2017-present	Assistant Professor of Anesthesiology, Vice-Chairman of Academics, University of South Carolina Greenville

University/Administrative Appointments:

2009-2010	Medical University of South Carolina House Staff Council
2017-present	Greenville Hospital System Academic Council

Academic Committee Activities:

Departmental		
	2015-2016	Doctor of the Day (OR logistics)
	2013-2016	Education Committee
	2013-2016	MOCA Program Co-Director
	2012-2016	Rotation Director: Transition to Practice
	2011-2016	Anesthesia Department Research Committee
	2010-2016	Residency Interview and Selection Committee
University		
	2017-present	OR Board Runner

2016-present Academic Council (GHS)
2011-2016 MUSC Liver Transplant Selection Committee
2009-2011 MUSC OR Cost Containment Committee

Hospital Appointments/Privileges:

2011-2016 Medical University Hospital, Charleston, SC
2016-present Greenville Health System, Greenville, SC

Membership in professional/scientific societies (include offices held):

National Societies

2012-2016 International Anesthesia Research Society
2007-present American Society of Anesthesiologists

State Societies: South Carolina Medical Association
South Carolina Society of Anesthesiologists (Executive Committee member 2012-2016)

Awards, Honors, Membership in Honorary Societies:

2015 MUSC Department of Anesthesiology CA-1 Faculty Teacher of the Year
2014 MUSC Department of Anesthesiology CA-1 Faculty Teacher of the Year
2013 MUSC College of Medicine (Yr 3&4) Teacher of the Month (January)
2013 MUSC College of Medicine (Yr 2) Teacher of the Block (February)
2013 MUSC College of Medicine Teacher of the Year nominee
2013 MUSC Department of Anesthesiology CA-1 Faculty Teacher of the Year
2010 Resident Excellence Teaching Award Nominee for the MUSC College of Medicine
2004 Saint Louis University summer research grant awardee (PI Frank Johnson MD)

Research Interests:

- Intraoperative Goal-Directed Fluid Administration Strategies
- Simulation in Medical Resident Education: High-Stakes, Critical Events and Competency Based Performance Assessment
- Improving Perioperative Patient Safety Through Novel Cognitive Aids & Decision Support Tools
- Pilot of Perioperative Surgical Home for Surgical Subspecialty Patients

Publications:

Published Peer Reviewed Journal Articles:

1. **Hand WR**, McEvoy MD, Burch TB et al. Intraoperative Diagnosis of Stanford Type A Dissection by Transesophageal Echocardiogram in a Patient Presenting for Renal Transplantation. Case Reports in Transplantation, 2011 PMID: 263561
2. **Hand WR**, Sutton BR. A novel technique utilizing the gum elastic bougie and video laryngoscope for intubation in an unanticipated difficult airway. J Clin Anesth. 2012 Dec;24(8):675-7 PMID: 23228873.
3. West JR, Mohiuddin SA, **Hand WR**, Virgo KS, Grossman EM, Johnson FE. Surgery for Constipation in Patients with Prior Spinal Cord Injury: The Department of Veterans Affairs Experience. *Journal of Spinal Cord Medicine*. 2013; 36(3): 207-12
4. Whiteley JR, **Hand WR**, Plunkett HL, Taylor JM, Stoll WD, et al. (2013) Epsilon- Aminocaproic Acid in Liver Transplantation: A Three-Year, Retrospective Review. J Anesth Clin Res 4: 328 doi:10.4172/2155-6148.1000328
5. **Hand WR**, Bridges KH, Stiegler MP, Schell RM, DiLorenzo AN, Ehrenfeld JM, Nietert PJ, McEvoy MD. Effect of a Cognitive Aid on Adherence to Perioperative Assessment and Management Guidelines for the Cardiac Evaluation of Non-Cardiac Surgical Patients. Anesthesiology. 2014; 120:1339-53
6. McEvoy MD, **Hand WR**, Stoll WD, Furse CM, Nietert PJ. Adherence to Guidelines for the Management of Local Anesthetic Systemic Toxicity Is Improved by an Electronic Decision Support Tool and Designated "Reader". Reg Anesth Pain Med. 2014;39(4):299-305

7. Rohan V, Bolin E, **Hand WR**, Stoll WD, McGillicuddy J, Chavin KD. "Right atrial compression due to diaphragmatic eventration after liver transplantation: successful treatment by diaphragmatic plication." *Liver Transpl* 2014; 20(3): 394-396
8. **Hand WR**, Whiteley JR, Epperson TM, Crego H, Chavin KC, Taber DM. Hydroxyethyl Starch and Acute Kidney Injury in Orthotopic Liver Transplantation: A Single Center Retrospective Review. *Anesth & Analg*. 2014 Jul 17
9. Whiteley JR, Taylor J, Henry M, Epperson TI, **Hand WR**. Detection of Elevated Intracranial Pressure in Robot-assisted Laparoscopic Radical Prostatectomy Using Ultrasonography of Optic Nerve Sheath Diameter. *J Neurosurg Anesthesiol*. 2014 Aug 7
10. McEvoy MD, **Hand WR**, Field LC, Furse CM, Clark CA, Rieke H, Nietert PJ. Validity and Reliability Assessment of Detailed Scoring Checklists for Use During Perioperative Emergency Simulation Training. *Simul Healthc*. 2014;9(5):295-303
11. Mardis A, Pilch N, Taber DM, **Hand WR**, C. Bratton, McGillicuddy JM, Baliga PB, and Chavin KD. "Perioperative Albumin vs. HES Products in Orthotopic Liver Transplant." In *TRANSPLANTATION*, vol. 98, pp. 760-760
12. **Hand WR**, McSwain JR, McEvoy MD, Wolf BJ, Algendy AA, Parks MD, Murray JL, Reeves ST. Characteristics and Intraoperative Treatments Associated with Head and Neck Free Tissue Transfer Complications and Failures. *Otolaryngology*. 2015;152:480-7.
13. **Hand WR**, Bridges KH, Stiegler MP, Schell RM, DiLorenzo AN, Ehrenfeld JM, Nietert PJ, McEvoy MD. Effect of a Cognitive Aid on Adherence to Perioperative Assessment and Management Guidelines for the Cardiac Evaluation of Non-Cardiac Surgical Patients. *Survey of Anesthesiology*, 2015,59(1):48-49.
14. Stoll WD, **Hand WR**, Rohan VS, Gaddy PM, Reeves ST, Chavin KC. Utilization of Intraoperative TEE to Assess Supraventricular Tachycardia-Inducing Right-Sided Cardiac Compression by the Liver, Post-Liver-Transplantation Status. *Case Reports in Transplantation*, vol. 2015, 2015.
15. McEvoy MD, **Hand WR**, Stiegler MP, et al. A Smartphone-based Decision Support Tool Improves Test Performance Concerning Application of the Guidelines for Managing Regional Anesthesia in the Patient Receiving Antithrombotic or Thrombolytic Therapy. *Anesthesiology* 2016;124(1):186-98.
16. **Hand WR**, Taylor JM, Harvey NR, Epperson TI, Gunselman RJ, Bolin ED, Whiteley J. Thoracolumbar interfascial plane (TLIP) block: a pilot study in volunteers. *Can J Anaesth*. 2015 Nov;62(11):1196-1200.
17. **Hand WR**, Stoll WD, McEvoy MD, et al. Intraoperative goal-directed hemodynamic management in free tissue transfer for head and neck cancer. *Head Neck* 38: E1974-E1980, 2016.
18. Whiteley JW, Taylor JM, **Hand WR**, et al. The Effect of Non-Invasive Goal Directed Fluid Administration on Graft Function in Deceased Donor Renal Transplantation: a Pilot Study. *Open Journal of Organ Transplant Surgery*, 2016, 6, 13-21.
19. Heinke T, Stewart SR, Steinberg T, **Hand WR**, Abernathy JH. Partial anomalous pulmonary venous return: Scimitar vein. *Ann Card Anaesth* 2017;20(2):259-261.
20. Susan M. Martinelli, Fei Chen, Amy N. DiLorenzo, **William R Hand**, et al. Results of a Flipped Classroom Teaching Approach in Anesthesiology Residents. *Journal of Graduate Medical Education: August 2017, Vol. 9, No. 4, pp. 485-490.*
21. Brown TA, Szabo TA, Bridges KH, Sabbagh MJ, Hand WR, Wolf BJ, Wartens RD. Safety and Effectiveness of a Novel Facemask for Positive Pressure Ventilation. *Anesth Analg*. 2017 Nov 10; 151-156.

Submitted/In Preparation Journal Articles:

1. McEvoy MD, **Hand WR**, Stoll WD, Furse CM, Shealy J, Saylor B, Preston R, Nietert PJ. Adherence to Guidelines for the Management of Acute Coronary Syndrome with Cardiac Arrest and Return of Spontaneous Circulation is Improved by an Electronic Decision Support Tool and Designated 'Reader'. *Crit Care Med*. ***In revision***

Oral and Poster Abstract Presentations (Peer-Reviewed)

1. **Hand WR**, Johnson FJ. Colectomy for Constipation in Spinal Cord Injured Patients. 2007 Missouri College of Surgeons Annual Meeting (Lake of the Ozarks, MO)
2. Sealy C, **Hand WR**. Goal-Directed Intraoperative Therapy Using Arterial Waveform Analysis in Patients Receiving Head and Neck Microvascular Free Tissue Transfer. 2013 ASA FAER Student Symposium (Mentor of Clark Sealy BS) (San Francisco, CA)
3. McEvoy MD, **Hand WR**, Stoll WD, Furse CM, Nietert PJ. Adherence to American Heart Association

- Guidelines for the Management of Acute Coronary Syndrome with Cardiac Arrest is Improved by an Electronic Decision Support Tool and Designated Reader. 2014 ACGME Annual Educational Conference (National Harbor, MD)
4. McEvoy MD, **Hand WR**, Stoll WD, Furse CM, Niert PJ. Adherence to Guidelines for the Management of Local Anesthetic Systemic Toxicity is improved by an Electronic Decision Support Tool and Designated Reader. IARS Annual Meeting, Montreal. 2014: S-303
 5. **Hand WR**, Whiteley JR. Hydroxylethyl Starch and Acute Kidney Injury in Orthotopic Liver Transplantation: a Single Center Retrospective Review. IARS Annual Meeting, Montreal. 2014: S-132
 6. Mardis BA, Pilch NA, Taber DJ, **Hand WR**, Bratton CF, McGillicuddy JW, Baliga PK, Chavin KD. Perioperative Albumin vs. HES Products in Orthotopic Liver Transplantation. World Transplant Congress, San Francisco, CA, 2014
 7. Whiteley JR, Taylor J, Henry M, Epperson TI, **Hand WR**. Detection of Elevated Intracranial Pressure in Robot-assisted Laparoscopic Radical Prostatectomy Using Ultrasonography of Optic Nerve Sheath Diameter. ASA Annual Meeting (New Orleans, LA)
 8. **Hand WR**, Sealy C, McSwain J, Day T, Stoll WD. Goal-Directed Intraoperative Therapy Using Arterial Waveform Analysis in Patients Receiving Head and Neck Microvascular Free Tissue Transfer. IARS Annual Meeting, Honolulu. 2015: S-248

Workshops (Regional/National):

Anesthesia Crisis Resource Management: Perioperative Emergencies Workshop
2012 Carolina Refresher Course: Anesthesia Crisis Management (Kiawah, SC)

Perioperative ACLS Simulation Workshop

2013 American Society of Anesthesiologists Annual Meeting (16hrs) (San Francisco, CA)
2014 American Society of Anesthesiologists Annual Meeting (16hrs) (New Orleans, LA)
2015 American Society of Anesthesiologists Annual Meeting (16hrs) (San Diego, CA)

Invited Lectures (Regional/National):

1. Enhanced Recovery after Surgery, 17th Cardiothoracic Update and Regional Workshops. Hilton Head, SC, June 2014.
2. Goal Directed Intraoperative Fluid management, 17th Cardiothoracic Update and Regional Workshops. Hilton Head, SC, June 2014.
3. Goal Directed Hemodynamic Management, ASA Annual Meeting Supplement, New Orleans, LA. October 2014
4. Goal Directed Therapy: Are We On Target?, Emory University Anesthesiology, Grand Rounds, Atlanta GA, November 2014.
5. Perioperative Goal Directed Therapy Applications Outside the Abdomen. Perioperative Goal Directed Therapy Summit, Irvine, CA, April 2015.
6. Implementing Goal Directed Therapy, Crozer Chester Department of Anesthesiology, Grand Rounds, Chester, PA, April 2015.
7. Perioperative Goal Directed Therapy Applications Outside the Abdomen. Perioperative Goal Directed Therapy Summit, Fort Lauderdale, FL, April 2015
8. Goal Directed Therapy in Head and Neck Free Tissue Transfer, Vanderbilt University, Grand Rounds, Nashville TN, May 2015
9. Improve Quality and Cost with Goal Directed Therapy, Wellstar Kennestone Hospital, Grand Rounds, Atlanta GA, July 2015
10. Goal Directed Therapy Outside the Abdomen, Perioperative Goal Directed Therapy Summit, Denver, CO, September 2015
11. Goal Directed Therapy, Anesthesia Association of Quebec Provincial Meeting, Montreal Quebec, November 2015
12. Enhanced Surgical Recovery, Tampa Regional Medical Center, Tampa FL, Feb 2016

Extramural Grants/award amount (current and past):

Project: Effects of a Novel Cognitive Aid and Team Communication Model on Protocol Adherence During In-Situ Simulated Perioperative Emergencies
Co-Inv: William Hand [PI: Matthew D. McEvoy, MD (15%)]

Source: Foundation for Anesthesia Education and Research (FAER)
Amount: \$100,000 **Date:** 7/1/2011-6/30/2013 [completed]

Project: The Effects of Cognitive Aids on Improving Performance in Simulated High-Stakes Perioperative Events

Co-Inv: William Hand [**PI:** Matthew D. McEvoy, MD (15%)]
Source: Foundation for Anesthesia Education and Research (FAER)
Amount: \$100,000 **Date:** 7/1/2009-6/30/2011 [completed]

Project: Evaluation of intraoperative stroke volume variation to guide fluid and vasopressor management in head and neck free flaps.

PI: William R Hand, MD (unrestricted educational grant)
Source: Edwards Lifescience Corp
Amount: \$25,000 **Date:** 5/1/2013 [completed]

Project: Assisted Fluid Management feature

PI: William R Hand, MD (local site)
Source: Edwards Lifescience Corp
Amount: \$90,000 **Date:** 8/1/2018

Lectures and Presentations (Local):

6/2018	Perioperative Opioid Stewardship GHS Interdisciplinary Grand Rounds
5/2017	Protocol Compliance: Does it matter? GHS Department Grand Rounds
9/2015	Anesthesia Machine, 1 hour
9/2015	Vaporizer Mechanics, 1 hour
8/2015	Inhalational Anesthetics, 1 hour
8/2015	Benzodiazepines and Opioids, 1 hour
6/2015	Board Review Question and Answer, 2 hours
5/2015	Statistics and Board Review, 3 hours
1/2015	Obtaining Commercial Support for Research, Dept research committee, 1 hour
6/2014	MOCA ACRM Simulation Course, ABA Diplomates, Course Director, 8 hours
6/2014	Board Review Question and Answer, 2 hours
5/2014	Statistics and Board Review, 3 hours
10/2013	Ventilator Management, 1 hour
10/2013	Private Practice Panel, moderator, 2 hours
9/2013	MOCA ACRM Simulation Course, ABA Diplomates, Course Director, 8 hours
9/2013	Respiratory Disease and Management, 1hour
8/2013	Kidney Transplant PBLD, 1 hour
8/2013	Goal Directed Therapy: Are we on Target? MUSC Department of Anesthesiology and Perioperative Medicine Grand Rounds, 1 hour
7/2013	ACLS and Perioperative Emergencies, 1 hour
3/2013	Skin and Musculoskeletal Disorders, 1 hour
2/2013	Intern 101: unstable patient, 8 hours
1/2013	Pharmacology Clinical Correlate Series COM2, 4 hours
1/2013	ACLS simulation MS3, 3 hours
11/2012	MOCA ACRM Simulation Course, ABA Diplomates, Course Director, 8 hours
11/2012	Nutritional Diseases and Geriatric Disorders, 1 hour
11/2012	Are Small Tidal Volumes Best for Everyone? MUSC Department of Anesthesiology and Perioperative Medicine Grand Rounds, 1 hour
9/2012	Anesthesia Crisis Resource Management simulations MS3, 3 hours
9/2012	Respiratory disease and management, 1 hour
9/2012	MOCA ACRM Simulation Course, ABA Diplomats, Facilitator, 8 hours
8/2012	Heart Failure and Cardiomyopathies, 1 hour
8/2012	COM Introduction to Clinical Medicine, 2 hours
7/2012	Valvular Heart Disease, Systemic and Pulmonary Hypertensions, 1 hour
7/2012	ACLS simulation MS3, 3 hours

4/2012	Management of Obesity Hypoventilation Syndrome and known Difficult Airway. MUSC Department of Anesthesiology and Perioperative Medicine Grand Rounds, 1 hour
11/2011	Cardiac Auscultation Simulation Workshop, COM1, facilitator, 12 hours
8/2011	Current Recommendations on Perioperative Beta Blockade MUSC Department of Anesthesiology and Perioperative Medicine Grand Rounds, 1 hour
12/2009	Cesarean Hysterectomy MUSC Department of Anesthesiology and Perioperative Medicine Grand Rounds, 1 hour

Current IRB approved Projects (Research and Administrative)

1. Lap Chole protocol adherence (PI)
2. Assisted Fluid Management Feature (PI)
3. Liposomal vs aqueous bupivacaine for PEC II block during mastectomy

Mentorship (mentees with peer-reviewed abstracts and/or publications pending):

2011

Hannah Bell (Resident) – Goal directed fluid administration in kidney transplants

2012

Wallead Hessami (Resident) – Goal directed fluid administration in ENT Free flaps

Katie Bridges (Resident) – Application of ACC/AHA guidelines with use of cognitive aid

Harrison Plunkett (MS4)—Benefits of using aminocaproic acid in liver transplants

Abdu Algendy (Resident)—Goal directed perioperative management in pancreatectomy

Mark Henry (Resident)—Faculty advisor

2013

Clark Sealy (FAER scholar)—Goal directed fluid administration in ENT free flaps

Flora Simmons (FAER scholar)—Goal directed fluid administration in ENT free flaps

Katherine Roden (resident)—Faculty advisor

Marc McLawhorn (resident)—Faculty advisor

Steven Aho (resident)—Faculty advisor

2014

Jordan Friel (resident)—Faculty advisor

Loren Francis (resident)—Faculty advisor

2015

Dennis McKenna (CRNA)—DNAP mentor