

Curriculum Vitae

Name: Chad E. Wagner
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Education

1993 B.A. from Trinity University, TX United States
1998 M.D. from University of Texas Health Science Center, TX United States

Training

1998 - 1999 Internship in Internal Medicine from UT Medical School, Houston, TX
1999 - 2002 Residency in Anesthesiology from UT Medical School, Houston, TX
2001 - 2002 Chief Resident in Anesthesiology from UT Medical School, Houston, TX
2002 - 2003 Fellowship in Critical Care from Wake Forest University, Winston-Salem, NC
2005 - 2006 Fellowship in Cardiothoracic Anesthesiology from Cleveland Clinic Foundation, Cleveland, OH

Licensure and Certification

N/A State Licensure, Tennessee Medical License of Tennessee United States
N/A State Licensure, Texas Medical License of Texas United States
N/A State Licensure, Ohio Medical License of Ohio United States
2003 - Present Board Certification, Board Certified in Anesthesiology (Recertification 2013 Complete) United States
2004 - Present Board Certification, Board Certified in Critical Care Medicine United States
2006 - Present Board Certification, Board Certified in TEE United States

Academic Appointments

08/2003 - 08/2005 Assistant Professor of Anesthesiology, Critical Care, MD Anderson Cancer Center (Houston, Texas)
08/2006 - 06/2008 Assistant Professor of Anesthesiology, VUMC (Nashville, Tennessee)
06/2008 - 06/2009 Clinical Anesthesiologist, Cleveland Clinic (Cleveland, Ohio)
07/2009 - 06/2010 Assistant Professor of Clinical Cardiac Surgery, Vanderbilt University (Nashville, Tennessee)
07/2009 - 06/2010 Assistant Professor of Clinical Anesthesiology, Vanderbilt University (Nashville, Tennessee)
06/2010 - 06/2013 Assistant Professor of Clinical Anesthesiology, Vanderbilt University (Nashville, Tennessee)
06/2010 - 06/2013 Assistant Professor of Clinical Cardiac Surgery, Vanderbilt University (Nashville, Tennessee)
07/2013 - Present Associate Professor of Clinical Anesthesiology, Vanderbilt University (Nashville, Tennessee)
07/2013 - Present Associate Professor of Clinical Cardiac Surgery, Vanderbilt University (Nashville, Tennessee)

Other Work Experience

2004 - 2005 Residency Coordinator - Anesthesiology, UT MD Anderson Cancer Center (Houston, Texas)
2008 - 2009 Assistant Director CMET, Cleveland Clinic HVI, Cleveland Clinic (Cleveland, Ohio)
2009 - Present Medical Director - CVICU, VUMC (Nashville, Tennessee)

2009 - Present

Medical Director - CVICU Nurse Practitioners, VUMC (Nashville, Tennessee)

Professional Organizations

American Society of Anesthesiologists, Member

American Society of Critical Care Anesthesiologists, Member

Society of Cardiovascular Anesthesia, Member

Professional Activities

Intramural

2009 - Present	CVICU Collaborative, Cardiac Surgery, Co-Chair
2009 - Present	VHVI Impact Meeting, Cardiac Surgery, Member
2009 - Present	VHVI Operations Council, Cardiac Surgery, Member
2009 - Present	VHVI NP Medical Director's Meeting, Cardiac Surgery, Member
2009 - Present	ICU Medical Directors' Forum Board, Anesthesiology, Member
2009 - Present	Institutional Critical Care Committee, Anesthesiology, Member
2009 - Present	VHVI Quality Council, Cardiac Surgery, Member
2009 - Present	CVICU Leadership Meeting, Anesthesiology, Co-Chair
2009 - Present	CVICU Midlevel Meeting, Anesthesiology, Chair
2010 - Present	Committee on Echocardiography in the ICU, Anesthesiology, Chair
2010 - Present	VUMC Credentials Committee, Member

Extramural

04/2011 - Present	SOCCA Critical Care Ultrasound Committee, Anesthesiology, Developing consensus statements/guidelines for education and training in critical care for ultrasound, Member
04/2011 - 04/2012	Scientific Program Committee, Society of Cardiothoracic Anesthesiology, Develop SCA annual scientific course for 2012 SCA in Boston, Member
12/2012 - Present	Reviewer for CardioRenal Medicine
04/2013 - Present	Reviewer for ICU Director
09/2013 - Present	Reviewer for Circulation

Teaching Activities

10/2 - 10/2	The Post Cardiac Surgery patient
10/23 - 10/23	ICU for Cardiac Surgery
09/2009 - Present	CT Surgery M&M, Coordinator / Presenter, Occurs every other month
07/2010 - 07/2010	Surgical fellow lectures: ICU Echo
07/2010 - 07/2010	CT Anesthesia Lectures: ICU For Cardiac Surgery
08/2010 - 08/2010	CT Anesthesia Lectures: ICU for Cardiac Surgery
09/2010 - 09/2010	Hemodynamic Echo workshop, Co-Director and lecturer, Dr Julian Bick and myself created and implemented a new hemodynamic echo course.
09/2010 - 09/2010	CT Anesthesia Lectures: ICU for Cardiac Surgery
09/2010 - 09/2010	FCCS Airway Management
10/2010 - 10/2010	Cook Critical Care Course: Hemodynamic monitoring, lecturer
11/2010 - 11/2010	CCSW: Placement of PA Catheter
11/2010 - 11/2010	CT Anesthesia Lectures: ICU for Cardiac Surgery
01/2011 - 01/2011	ICU for Cardiac Surgery: ICU for Cardiac Surgery
02/2011 - 02/2011	CT Anesthesia Lectures: ICU for Cardiac Surgery
04/2011 - 04/2011	7.5 hour CME Event: Hemodynamic Echo Workshop, Co-Course Director and Lecturer
05/2011 - 2011	CCSW: Placement of PA Catheter, 4 hours of didactic lecture
05/2011 - 2011	CCSW: Shock, 4 hours of didactic lecture

06/2011 - 2011	CT Fellow Lecture Series: Hemodynamic Echocardiography, 2 hours of lecture and review
06/2011 - 06/2011	Cardiac Surgery Critical Care
07/2011 - 07/2011	ICU for Cardiac Surgery
07/2011 - 07/2011	Hemodynamic Echo Workshop Co-directed 7.5 CME hour echo event for 23 participants from all over the country and Vanderbilt. Dr Bick and I created new content from April 2011, I created 4 new lectures which I presented.
08/2011 - 08/2011	ICU for Cardiac Surgery
08/2011 - 08/2011	Echocardiography in the ICU, One hour fellow lecture
10/2011 - 10/2011	Echo in the ICU, Lecture
11/2011 - Present	Extracorporeal Support in Cardiac Surgery, Overview of mechanical assist support and how to take care of them
01/2012 - 01/2012	ICU for cardiac surgery
02/2012 - 2012	Hemodynamics, Echocardiography and Shock: Taking Care of the critically ill, Lecture, 716/CELA, 4 hour lecture and TEE simulator session for 4th year medical student immersion course teaching them the basics of hemodynamics, shock and a basic TEE exam to examine critically ill patients in shock.
03/2012 - 2012	Hemodynamics, Transesophageal Echocardiography and Shock: Taking Care of the Critically ill, CELA, 3 hour lecture and simulation session for medical student curriculum 2.0
03/2012 - 03/2012	ICU for Cardiac Surgery
05/2012 - Present	LVADs and ECMO Support in the ICU
06/2012 - 06/2012	Post CPB Shock
06/2012 - 06/2012	ICU for Cardiac Surgery
07/2012 - 07/2012	ICU for Cardiac Surgery
08/2012 - 08/2012	Critical Care Fellow Echo Bootcamp, 7 Hour Echo Bootcamp I co-coordinated and taught lectures
09/2012 - 2012	Hemodynamics, Transesophageal Echocardiography and Shock: Taking Care of the Critically ill, lecturer, 3 hour lectures and simulation on echocardiography and shock
10/2012 - 2012	Hemodynamics, Transesophageal Echocardiography and Shock: Taking Care of the Critically ill, 2 Hour Lecture and simulation at CELA about using TEE in shock
10/2012 - 10/2012	Post Cardiac Surgery Intensive Care
10/2012 - 10/2012	Post Operative ICU Care
11/2012 - 11/2012	ICU for cardiac surgery
01/2013 - 01/2013	ICU for Cardiac Surgery
02/2013 - 02/2013	Hemodynamics, Transesophageal Echocardiography and Shock: Taking Care of the Critically ill, Lecturer, 2 Hour lecture and simulator based course
09/2013 - 09/2013	ICU for Cardiac Surgery
10/2013 - 10/2013	Episodic TEE: Hemodynamic Monitoring in the ICU for Mechanical Devices
10/2013 - 10/2013	The Post Cardiac Surgery Patient
10/2013 - 10/2013	Fate EXAm and Transthoracic Simulation, 2 hour lecture and simulation of transthoracic echocardiography
12/2013 - 12/2013	ICU For cardiac surgery
12/2013 - 12/2013	Echocardiography and Fluid Responsiveness
02/2014 - 02/2014	LVAD Lecture
02/2014 - 02/2014	Critical Care Journal Club ARDS, Facilitator
02/2014 - 02/2014	Critical care Skills Week: Trauma and Burn Critical care
02/2014 - 02/2014	Critical Care Echo, Lecture/ sim training, 3 hours a day for 2 days
04/2014 - 04/2014	FATE Echo Exam, 2 hour echo lectures, simulation and case based presentations with simulator

Research Supervision / Mentorship

10/2011 - Present	Nick Burjek, B.A. VUMC, Current Position: Medical Student. (Medical Student, Research)
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Other Significant Activities

03/2013	ABSTRACT REVIEWERS - Society of Cardiac Anesthesiology 2013 Annual Meeting & Workshops: Abstract Reviewer for annual meeting, 10 hours of work done 12/2012
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Grants and Funding

Grant number unavailable 04/2010 - 04/2010
ImaCor/Heartworks
In Kind Grant for HTEE Workshop
Role: Co-Principal Investigator
Total Cost: \$3,500.00

Grant number unavailable 08/2010 - 08/2010
ImaCor/Sonosite
Unrestricted Educational Grant for HTEE Workshop
Role: Co-Principal Investigator
Total Cost: \$3,000.00

Grant number unavailable Anne Miller, PhD. (PI) 02/2011 - 01/2012
APSF
Embedding safety related evidence-based protocols in routine practice.
Role: Co-Principal Investigator
Total Cost: \$149,000.00

Grant number unavailable 07/2011 - 07/2011
ImaCor
Unrestricted Educational Grant for HTEE Workshop
Role: Co-Principal Investigator
Total Cost: \$5,780.00

Honors / Awards

2000 Outstanding Junior Resident - Anesthesiology, UT Medical School- Houston

Publications

Peer Reviewed Publications

Case Reports

1. **Wagner C**, Fredi J, Bick J, McPherson J. Monitoring myocardial recovery during induced hypothermia with a disposable monoplane TEE probe. Resuscitation 2011 Mar;82(3):355-7. PMID: 21177014.
2. **Wagner CE**, Bick JS, Webster BH, Selby JH, Byrne JG. Use of a Miniaturized Transesophageal Echocardiographic Probe in the Intensive Care Unit for Diagnosis and Treatment of a Hemodynamically Unstable Patient After Aortic Valve Replacement. Journal of cardiothoracic and vascular anesthesia 2012 Feb;26(1) PMID: 21441039.

Research Articles

1. Bick J, McPherson J, Schaff J, **Wagner C**. Initial Experience with a Disposable Transesophageal Echocardiography Monitoring System during Therapeutic Hypothermia following out of Hospital Cardiac Arrest. The Internet Journal of Emergency and Intensive Care Medicine 2012 Feb;12(2).
2. Julian S Bick, Chad E Wagner, Harold M Hastings, Jacob Schaff and Lee Parmley. A Novel Scoring System May Predict Neurologic Non-Survival at 24Hours during Therapeutic Hypothermia Following Out of Hospital Cardiac Arrest: A Retrospective Review. Emergency Medicine 2012 Mar;2:107.
3. Hollenbeck RD, Wells Q, Pollock J, Kelley MB, **Wagner CE**, Cash ME, Scott C, Burns K, Jones I, Fredi JL, McPherson JA. Implementation of a Standardized Pathway for the Treatment of Cardiac Arrest Patients Using Therapeutic Hypothermia: "CODE ICE". Critical Pathways Cardiology 2012 Sep.
4. Squiers, King, Wagner, Ashby, Parmley. ACNP intensivist: A new ICU care delivery model and its supporting educational programs. Journal of the American Academy of Nurse Practitioners 2012 Oct;1-7.

5. McPherson JA, **Wagner CE**, Boehm LM, Hall JD, Johnson DC, Miller LR, Burns KM, Thompson JL, Shintani AK, Ely EW, Pandharipande PP. Delirium in the Cardiovascular ICU: Exploring Modifiable Risk Factors. Critical Care Medicine 2013 Feb;41:405-413. PMID: 23263581.
6. Chad E. Wagner, Joseph Fredi, John McPherson, and Clifford L. Parmley. Integration of Cardiology and Cardiac Surgery in the Cardiovascular Intensive Unit: Formation of a Multidisciplinary Approach on the Path to Building a High-Reliability Organization. ICU Director 2013 Mar;4(2).
7. Simon Maltais, MD, PhD , William T. Costello, MD ,Frederic T. Billings IV, MD, MSc , Julian S. Bick, MD , John G. Byrne, MD , Rashid M. Ahmad, MD , Chad E. Wagner, MD. Episodic Monoplane Transesophageal Echocardiography Impacts Postoperative Management of the Cardiac Surgery Patient. Journal of Cardiothoracic and Vascular Anesthesia 2013 Aug;27(4):665-669.
8. **Wagner CE**, Bick JS, Johnson D, Ahmad R, Han X, Ehrenfeld JM, Schildcrout JS, Pretorius M. Etomidate Use and Postoperative Outcomes among Cardiac Surgery Patients. Anesthesiology 2013 Nov;EPUB: PMID: 24296761.

Review Articles

1. James Mykytenko, Ricardo Levin, and Chad E. Wagner. Right Ventricular Dysfunction in Sepsis: Now You See It, Now You Don't. ICU Director 2012 Apr.

Non-Peer Reviewed Publications

Abstracts

1. Costello et al. Transesophageal Echocardiography as a Hemodynamic Monitor in Post Operative Cardiac Surgery Patients. American Society of Anesthesiology (ASA)/ Society of Critical Care Anesthesiology (SOCCA) 2011 Oct;A1452.
2. Bick et al. Serial Monitoring of Cardiac Function and Filling in 13 Patients during Therapeutic Hypothermia Following Cardiac Arrest: Performance Characteristics of the ClariTEE Probe. American Society Of Anesthesiology (ASA) / Society of Critical Care Anesthesiology (SOCCA) 2011 Oct;A664.
3. Wagner et al. Etomidate and Adrenal Function in Cardiac Surgery: A Retrospective Cohort Study. ASA/SOCCA 2011 Oct;A638.
4. Wagner et al. Prevalence and Risk Factors of Delirium in the Cardiovascular Intensive Care Unit. ASA/SOCCA 2011 Oct;A088.

Letters

1. McPherson, Boehm, Wagner, Ely, Pandharipande. The authors reply. critical Care Medicine 2013 Jun;41 (6):e101-e102.

Research Articles

1. JS, Demaria S Jr, Kennedy JD, Schwartz AD, Weiner MM, Levine AI, Shi Y, Schildcrout JS, **Wagner CE**. Comparison of Expert and Novice Performance of a Simulated Transesophageal Echocardiography Examination. 2013 Sep; PMID: 24030477.
2. Burjek, Nicholas E.; **Wagner, Chad E.**; Hollenbeck, Ryan D.; Wang, Li; Yu, Chang; McPherson, John A.; Billings, Frederic T. Early Bispectral Index and Sedation Requirements During Therapeutic Hypothermia Predict Neurologic Recovery Following Cardiac Arrest. 2013 Dec; PMID: 24365859.

Book Chapters

1. John A. McPherson, Chad E. Wagner, and E. Wesley Ely. Chapter 73 Acute cognitive disorders: recognition and management of delirium in the intensive cardiac care unit. The ESC Textbook of Intensive and Acute Cardiac Care. New York: Oxford Press; 2011 Feb;756-763.
2. Wagner, Ashby, Kennedy. Anesthesiology: A comprehensive board review for primary and maintenance of certification: Intensive Care Chapter. 2013 Jan;592-611.

Presentations

Invited Presentation - Regional

1. Tennessee Perfusion Society Annual Meeting. Nashville, Tennessee. 2011 Sep 22; Out of the OR into the ICU- Role of Hemodynamic Echocardiography in Weaning Mechanical Support.
2. VUH Respiratory Therapy Spring Seminar. VUH Respiratory Therapy; Nashville, Tennessee. 2012 May 15; Hemodynamic Effects of Mechanical Ventilation.

Invited Presentation - National

1. UHC Cardiac Council. University Healthsystems Consortium; 2009 Oct 11; Collaborative Rounding - The Vanderbilt Perspective.
2. Case Western Reserve Hospital- Anesthesiology; Cleveland, Ohio. 2010 Sep 13; Hemodynamic TEE: The Vanderbilt Experience.
3. Washington Hospital Center Cardiac Surgery; Washington, Dist. Of Col.. 2010 Dec 11; 1) Hemodynamic Echocardiography: The Vanderbilt Experience. 2) Hemodynamic Assessment with TEE.
4. Bethesda Naval Hospital; Washington, Dist. Of Col.. 2010 Dec 11; Hemodynamic TEE: The Vanderbilt Experience.
5. Rob Sladen, MBBS and Chad Wagner, MD. Post Graduate Assembly. IAME; New York, New York. 2011 Dec 12; Hemodynamic Transesophageal Echocardiography: A New Paradigm.
6. SCA/STS Critical Care Symposium. Society of Cardiac Anesthesiology; New Orleans, Louisiana. 2014 Mar 28; Mini-TEE: Is there a place in the cardiac intensive care unit.

Invited Presentation - International

1. Clinical Update in Anesthesiology, Surgery Perioperative Medicine. Mount Sinai School of Medicine; Curaçao, Virgin Islands, British. 2013 Jan 24; Cost, Quality and Value in the Intensive Care Unit.

Invited Presentation - Other

1. American Society of Anesthesiology Annual Meeting. ImaCor Breakfast; San Diego, California. 2010 Oct 17; Hemodynamic Echocardiography.

Presentations at Scientific Meetings

1. Wagner C, Wall M, Butterwoth J, Prielipp R. ASCCA. San Francisco, California. 2003 Oct; Dopamine Kinetics and Cardiopulmonary Bypass.
2. Anthony D, Wagner C, Duncan A. Society of Cardiothoracic Anesthesiologists Annual Meeting. 2009 May; Is Etomidate Associated with Adverse Outcomes Post Cardiac Surgery?.
3. Wagner C, Squiers J, Parmley CL. AACA Leadership Conference. AAMA; Atlanta, Georgia. 2010 Mar; Multidisciplinary ICU Team: Building an Intensivist MD/NP Collaborative Model for Expanded Critical Care Services.
4. Wagner C, Burns K, Squiers J, Parmley CL. AACA Leadership Conference. AAMA; Atlanta, Georgia. 2010 Mar; ICU Collaborative Care and Communication: Structured Rounding and Handovers..
5. McPherson J, Wagner C, Burns K. AHA Quality of Care and Outcomes Research. AHA; Washington, Dist. Of Col.. 2010 May; Integration of cardiology and cardiac surgery in the CVICU: formation of a multidisciplinary approach to optimize patient outcomes.□ .
6. Krosky K, Byrd J, McPherson J, Wagner C. AHA Quality of Care and Outcomes Research. AHA; Washington, Dist. Of Col.. 2010 May; Ultrasound guided peripheral IV insertion by nurses in CVICU.
7. Hasting H, Roth S, Wagner C, McGiffin D, Davies J. FACTS-CVT Critical Care Annual Conference. Washington, Dist. Of Col.. 2010 Sep; TEE guided post- operative hemodynamic management of cardiac surgery patients..
8. Wagner C, Squiers J, Parmley CL. ASCCA. San Diego, California. 2010 Oct; Intensivist MD/NPCCP collaborative model for ICU care..
9. Wagner C, Selby J, Parmley CL. ASCCA. San Diego, California. 2010 Oct; TEE monitoring with a miniaturized disposable probe influences post-operative management of cardiac surgery patients.
10. Costello W, Wagner C, Selby J. ATS: Annual Meeting. 2011 May; Miniaturized trans-esophageal echocardiography as a hemodynamic monitor for burn resuscitation during therapeutic hypothermia.
11. Kathleen Burns, RN MNEd; Chad Wagner, MD; John McPherson, MD; Jeannie Byrd, RN MSN; Wesley Self, MD; Jeffrey B. Boord, MD; Barbara Martin, RN MBA; Thomas R. Talbot, MD MPH. AHA QCOR conference. AHA; Washington, Dist. Of Col.. 2011 May 12; Reduction of Contaminated Blood Culture Rates in a Cardiovascular Intensive Care Setting.
12. Miller, A, Burns, K, Beattie T, Wagner C.. Proceedings of the 55th Annual Meeting of the Human Factors and Ergonomics Society,. Las Vegas, Nevada. 2011 Sep; Using emerging work artifacts to understand the effects of change and as inspiration for the development of new technology in Intensive Care Units.
13. Mykytenko J, Wagner CE, Lenneman AJ, Keebler ME, Maltais S. Society of Cardiac Anesthesiology Update on CPB. SCA; Snowmass, Colorado. 2012 Mar 13; Serial Hemodynamic TEE for Monitoring of LVAD Patients.
14. Burjek et al. Society of Critical Care Anesthesiology Annual Meeting. Society of Critical Care Anesthesiology; Washington, Dist. Of Col.. 2012 Oct 13; Early BIS and Sedative Requirements During Therapeutic Hypothermia Predict Neurologic Outcome at ICU Discharge.
15. Anders et al. Society of Critical Care Anesthesiology Annual Meeting. Society of Critical Care Anesthesiology; 2012 Oct 13; Postoperative Outcomes after Etomidate Induction in Cardiac Surgery.
16. Anne Marie Thompson, Andre Alfirevic, Katherine Gritchnik. Society of Cardiac Anesthesia Annual Meeting. Miami, Florida. 2013 Apr 8; Moving away from the sternotomy, minimally invasive surgery.

17. Vanderbilt Heart Failure Summit. VHVI; Nashville, Tennessee. 2013 Aug 10; Episodic TEE: Hemodynamic Monitoring in the ICU for Mechanical Devices.
18. Society of Cardiac Anesthesiology Annual Meeting. Society of Cardiac Anesthesiology; New Orleans, Louisiana. 2014 Mar 30; Early and Late Outcomes Following Heart Transplantation.
19. Society of Cardiac Anesthesiology Annual Meeting. Society of Cardiac Anesthesiology; New Orleans, Louisiana. 2014 Mar 31; SCA/STS Database Update.

Problem based learning discussion

1. Society of Cardiac Anesthesiology: Annual Meeting. SCA; Savannah, Georgia. 2011 May 1; VADs and SCADs: Neurologic complications of LVAD Therapy.

Panel Presentation

1. One of 5. SCA Annual Meeting. SCA; Savannah, Georgia. 2011 May 2; Hemodynamic TEE in an Unstable Post Cardiac Surgery Patient..
2. Moderator. Annual Meeting. Society of Cardiovascular Anesthesia; Boston, Massachusetts. 2012 Apr 28; War or Truce: Colloids vs Crystalloids.
3. Lee Fleisher, Linda Shore-Lesserson, Joerg Ender. Society of Cardiothoracic Anesthesiology Annual Meeting. Miami, Florida. 2013 Apr 9; Building a high quality organization.
4. Chad Wagner, Michael Wall, Aaron Cheung, Glenn Whitmann. SCA/STS Critical Care Symposium. Society of Cardiac Anesthesiology; New Orleans, Louisiana. 2014 Mar 28; Pro-Con Debate, transfusion in cardiac surgery.
5. Allen Gustin, Pratik Pandharipande, Hilary Grocott- Moderator Chad Wagner. Society of Cardiac Anesthesiology Annual Meeting. Society of Cardiac Anesthesiology; New Orleans, Louisiana. 2014 Mar 29; ICU Delirium: Can we prevent it from the OR?.

Workshop

1. Chad Wagner, Mike Wall, et al. Society of Critical Care Anesthesia (SOCCA) Meeting. SOCCA; Chicago, Illinois. 2011 Oct 12; Critical Care Ultrasound Workshop - Echocardiographic assessment of the aortic and mitral valves.
2. Chad Wagner, Mike Wall, et al. Annual Meeting Society of Critical Care Anesthesiology (SOCCA). SOCCA; Washington, Dist. Of Col.. 2012 Oct 12; Rescue TEE - Critical Care Ultrasound Workshop.
3. Many. American Society of Anesthesiology. ASA; San Francisco, California. 2013 Oct 15; Critical Care Ultrasonography for the Perioperative Physician.
4. Charles Hill, Jason Kennedy- Moderators Chad Wagner and Mark Taylor. Society of Cardiac Anesthesiology Annual Meeting. Society of Cardiac Anesthesiology; New Orleans, Louisiana. 2014 Apr 2; ECMO Workshop.

Internal Grand Rounds

1. Chad Wagner, Julian Bick. Vanderbilt Anesthesiology; Nashville, Tennessee. 2013 May 10; Episodic Echocardiography and Simulation: Hemodynamic Monitoring in the ICU for the 21st Century.

External Grand Rounds

1. Columbia University Critical Care; New York, New York. 2011 Oct 27; Hemodynamic TEE: Out of the OR into the ICU.
2. Baylor Dallas Anesthesiology Grand Rounds; Dallas, Texas. 2012 Feb 15; hTEE: Hemodynamic monitoring for the 21st century.