

16th Annual Safar Symposium

The Opioid Epidemic

Implications for Resuscitation Medicine



Peter & Eva Safar Lecturer
Lewis S. Nelson, MD
Rutgers New Jersey Medical School
**The Newest Opium War:
Insights into the Current Opioid Crisis**

University Club • Thursday, May 31, 2018 • 8 am to 5:30 pm
WISER • Friday, June 1, 2018 • 8:30 am to Noon



16th Annual Safar Symposium

May 31, 2018

University Club, Ballroom A

123 University Place

(CME Accredited)

7:30	Registration
8:00 – 11:45	THE OPIOID EPIDEMIC: IMPLICATIONS FOR RESUSCITATION MEDICINE
Moderators:	Clifton Callaway, MD, PhD Professor and Executive Vice Chair, Emergency Medicine UPMC Professor of Emergency Medicine Research
	Ericka Fink, MD, MS Associate Professor, Critical Care Medicine and Pediatrics and the Clinical and Translational Science Institute Children's Hospital of Pittsburgh of UPMC
8:00 – 8:15	Opening Comments Patrick M. Kochanek, MD, MCCM Grenvik Professor and Vice Chair, Department of Critical Care Medicine, Director, Safar Center for Resuscitation Research, University of Pittsburgh School of Medicine
8:15 – 8:40	Anthony F. Pizon, MD Chief, Division of Medical Toxicology Department of Emergency Medicine University of Pittsburgh Medical Center Associate Professor, University of Pittsburgh School of Medicine, <i>The Impact of the Opioid Epidemic on Resuscitation Medicine in Western Pennsylvania</i>
8:40 – 8:45	Discussion
8:45 – 9:10	Timothy Girard, MD, MSCI Associate Professor, Dept. of Critical Care Medicine University of Pittsburgh and UPMC Health System <i>Opioid Use in the ICU and Beyond</i>

9:10 – 9:15	Discussion	11:45 – 12:00	Break
9:15 – 9:40	<p>Kurt Kroenke, MD, MACP Chancellor’s Professor of Medicine Indiana University School of Medicine Research Scientist, Regenstrief Institute and the Indianapolis VA Center for Health Information and Communication Indianapolis, IN <i>Opioid Guidelines: Lost in Translation</i></p>	12:00 – 1:00	<p>38th Peter and Eva Safar Annual Lectureship in Medical Sciences and Humanities Lewis S. Nelson, MD Professor and Chair Department of Emergency Medicine Chief, Division of Medical Toxicology Rutgers New Jersey Medical School Newark, New Jersey <i>The Newest Opium War: Insights into the Current Opioid Crisis</i></p>
9:40 – 9:45	Discussion		
9:45 – 10:00	Break		
10:00 – 10:25	<p>Cameron Dezuflian, MD Assistant Professor, Adult and Pediatric Critical Care Medicine, Clinical and Translational Sciences University of Pittsburgh School of Medicine <i>Phenotyping Cardiac Arrest: Injury Mechanisms, Impact on Outcomes and Implications for Patient Care</i></p>	1:00 – 1:45	Reception – CME Adjournment
10:25 – 10:30	Discussion		
10:30 – 10:55	<p>Robert Neumar, MD, PhD Professor and Chair, Dept. of Emergency Medicine University of Michigan, Ann Arbor, MI <i>Neuroprotection after Asphyxial Cardiac Arrest: Hypothermia +</i></p>		
10:55 – 11:00	Discussion		
11:00 – 11:25	<p>Jessica Wallisch, MD Clinical Instructor, Div. of Pediatric Critical Care Medicine Children’s Hospital of Pittsburgh of UPMC NIH T-32 Postdoctoral Scholar Safar Center for Resuscitation Research <i>A New Therapeutic Approach to Asphyxial Cardiac Arrest using the Aquaporin-4 Antagonist AER-271</i></p>		
11:25 – 11:30	Discussion		
11:30 – 11:45	<p>Nancy Caroline Award Presentation and Morning Session Closing Remarks Patrick M. Kochanek, MD, MCCM</p>		

The 38th Peter and Eva Safar Annual Lectureship in Medical Sciences and Humanities

Guest Speaker: **Lewis S. Nelson, MD**
Professor and Chair
Department of Emergency Medicine
Chief, Division of Medical Toxicology
Rutgers New Jersey Medical School
Newark, New Jersey

Topic: The Newest Opium War: Insights into the Current
Opioid Crisis



LEWIS S. NELSON, MD is Professor and Chair of the Department of Emergency Medicine and Chief of the Division of Medical Toxicology at Rutgers New Jersey Medical School in Newark, NJ. He is a member of the Board of Directors of the American Board of Emergency Medicine and a Past-President of the American College of Medical Toxicology. He completed his training in emergency medicine at Mount Sinai School of Medicine New York, and a medical toxicology fellowship at New

York University School of Medicine. In addition, Dr. Nelson is board certified, and actively involved, in addiction medicine. He moved to Rutgers approximately 2 years ago after spending more than 20 years at NYU in various roles including Vice Chair for Academic Affairs and medical toxicology fellowship director. He is actively involved with CDC, FDA, DHS, and several professional medical organizations, having diverse involvement with issues related to the opioid crisis, and also with DHS and DoD focusing on chemical disaster management. Dr. Nelson is an editor of the textbook Goldfrank's Toxicologic Emergencies and on the editorial boards of several journals, including Annals of Emergency Medicine and the Journal of Medical Toxicology. In addition to providing direct clinical care to patients in the ED and his efforts at New Jersey Poison Information & Education System, his areas of specific interest include pain management, safe medication use, particularly opioids, emerging drugs of abuse, and medication safety, while remaining involved with disaster preparedness for chemical events.

Multi-Departmental Trainees' Research Day May 31, 2018

University Club, Ballroom A,
123 University Place
(Non CME)

1:00 – 1:45	Registration and Poster Setup
2:00 – 2:05	Opening Comments Patrick M. Kochanek, MD, MCCM Grenvik Professor and Vice Chair, Department of Critical Care Medicine; Director, Safar Center for Resuscitation Research
2:05 – 3:20	Poster Session
3:20 – 3:30	Break
3:30 – 4:45	Oral Presentations
Moderators:	Hülya Bayır, MD Professor, Depts. of Critical Care Medicine and Environmental and Occupational Health University of Pittsburgh School of Medicine
	Yan Xu, PhD Professor and Vice Chair for Basic Sciences, Department of Anesthesiology, University of Pittsburgh School of Medicine
	<u>Department of Anesthesiology</u> Kerryann Koper <i>T1 Difference Image Voxel by Voxel Variance Analysis Reveals Blood Brain Barrier Changes in Mice Following Cardiac Arrest and Resuscitation</i>
	<u>Department of Critical Care Medicine</u> Alicia Alcamo, MD, MPH <i>Identification of Neuromorbidity in Pediatric Solid Organ Transplant Recipients Using the Electronic Health Record</i>
	<u>Department of Emergency Medicine</u> C. Jacob Pemberton, BS <i>Association of Hypotension Duration with Outcomes after Cardiac Arrest</i>
	<u>Department of Neurological Surgery</u> Tiffany Wilkins, MD <i>Favorable Functional Recovery from Severe Traumatic Brain Injury Beyond Six Months</i>
	<u>Department of Physical Medicine & Rehabilitation</u> Kristen Milleville, BS <i>Chronic Systemic Inflammation and Associations with Cognitive Performance after Traumatic Brain Injury</i>
4:45 – 5:15	Judges Meeting
5:15 – 5:30	Awards Presentation

16th Annual Safar Symposium

June 1, 2018

WISER, 230 McKee Place, Suite 300
(CME Accredited)

8:00 – 8:30	Registration
8:30 – 12:00	ADVANCING YOUR NURSING CAREER THROUGH SIMULATION
Moderators:	Deborah Farkas, PhD Director, Educational Development, Winter Institute for Simulation, Education and Research (WISER), University of Pittsburgh
	John M. O'Donnell, CRNA, MSN, DrPh Professor and Chair, Department of Nurse Anesthesia Director, Nurse Anesthesia Program, University of Pittsburgh School of Nursing, Associate Director, WISER
8:30 – 8:45	Welcome Patrick M. Kochanek, MD, MCCM Grenvik Professor and Vice Chair, Department of Critical Care Medicine, Director, Safar Center for Resuscitation Research, University of Pittsburgh School of Medicine
8:45 – 9:15	Chad Epps, MD Executive Director, Center for Healthcare Improvement and Patient Simulation (CHIPS) Professor, Departments of Anesthesiology and Interprofessional Education, University of Tennessee Health Science Center, Memphis, TN <i>Are Certification and Accreditation Necessary for Excellence?</i>
9:15 – 9:45	Jeffrey Groom, PhD, CRNA Associate Dean and Clinical Professor Simulation Hospital and International Academy for Clinical Simulation and Research School of Nursing and Health Studies, University of Miami, Miami, FL <i>Advancing your Career on the Path of Simulation in Healthcare</i>
9:45 – 10:00	Break

10:00 – 10:30	Kristen M. Brown, DNP, CRNP, CPNP-AC Instructor, Advanced Pediatric Simulation Coordinator Acute and Chronic Care Johns Hopkins School of Nursing, Baltimore, MD Simulation for the Advanced Practice Nurse
10:30 – 11:00	Geoffrey T. Miller, MS, MS, EMT-P Assistant Professor, School of Health Sciences Director, Simulation Research and Technology Sentara Center for Simulation and Immersive Learning Eastern Virginia Medical School, Norfolk, VA Research Scientist and Laboratory Director Medical Modeling, Simulation and Visualization Laboratory TATRC, USAMRMC, Fort Detrick, MD Augmented and Virtual Reality to Support Education, Simulation and Healthcare Delivery
11:00 – 11:30	Morning Wrap Up / Highlights John M. O'Donnell, CRNA, MSN, DrPh
11:30 – 12:00	Closing Comments Patrick M. Kochanek, MD, MCCM

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The Opioid Epidemic: Implications for Resuscitation Medicine



Dr. Anthony F. Pizon is the Chief of the Division of Medical Toxicology and as Director of the Medical Toxicology Fellowship. His current research interests include the novel pharmaceutical management of withdrawal syndromes, the evaluation of cost effective care provided by medical toxicologists, and biomarkers of hepatic injury after acetaminophen toxicity. However, his real passion lies in the education of fellows, residents, and medical students.



Dr. Timothy Girard is Associate Professor in the Department of Critical Care Medicine and a member of the CRISMA (Clinical Research, Investigation, and Systems Modeling of Acute Illnesses) Center at the University of Pittsburgh. He graduated Phi Beta Kappa and Summa Cum Laude from Baylor University and earned his medical degree from the University of Texas Southwestern Medical School in Dallas, Texas. He then completed an internal medicine residency at the University of Virginia and a pulmonary and critical care fellowship at the Vanderbilt University Medical Center. Dr. Girard then spent over a decade on the faculty at Vanderbilt, where he developed expertise in the study of cognitive impairment due to sepsis, ARDS, and other causes of critical illness; delirium and sedation in the ICU; and liberation from mechanical ventilation. Most recently, Dr. Girard joined the CRISMA Center at the University of Pittsburgh to establish a research program that seeks to understand and enhance long-term recovery from critical illness. His research efforts have included, among others, a randomized clinical trial evaluating the effect of a paired sedation and ventilator weaning protocol on short- and long-term outcomes among mechanically ventilated ICU patients; a large, multicenter, randomized controlled trial examining antipsychotics as a treatment for delirium in the ICU; and multiple prospective cohort studies focused on risk factors and outcomes associated with long-term cognitive impairment in survivors of critical illness. He has received funding by the National Institute on Aging and the National Heart, Lung, and Blood Institute.



Dr. Kurt Kroenke is Chancellor's Professor of Medicine at Indiana University and a Research Scientist in Regenstrief Institute and the Indianapolis VA Center for Health Information and Communication. Dr. Kroenke is a past President of the Society of General Internal Medicine and a past President of the Association for Clinical Research Training. His research focuses on physical and psychological symptoms in medical patients including pain, depression, anxiety and somatization. He has conducted more than a dozen clinical trials funded by the VA, NIH, PCORI, and other sponsors to improve the care of patients with common symptoms. These trials have used collaborative care models and more recently telecare interventions. He has also developed the PHQ-9 depression scale, GAD-7 anxiety scale, PEG pain scale, and other brief measures. He has over 350 peer-reviewed publications and is a grant reviewer for the FAER Medical Student Year Long Fellowship program.



Dr. Cameron Dezfulian is an adult and pediatric critical care medicine physician interested in brain injury and neuroprotection after cardiac arrest. His prior pre-clinical research investigating nitrite/NO based pathways of neuroprotection have resulted in two ongoing phase 2 randomized clinical trials of these therapies in human out-of-hospital cardiac arrest. His more recent interests surround the distinct patterns of injury noted after cardiac arrest subsequent to hypoxia (i.e. asphyxia) compared to traditional sudden cardiac arrest where patients are fully oxygenated at the time of cardiovascular collapse. Dr. Dezfulian is married to Audra Dezfulian and they have two adorable children: Emily (5) and Nicholas (3).



Dr. Robert Neumar is Professor and Chair of Emergency Medicine at the University of Michigan Medical School. He is also a member of the Michigan Center for Integrative Research in Critical Care (MCIRCC) and the Extracorporeal Life Support (ECLS) Research Laboratory at the University of Michigan. Dr. Neumar has over 20 years research experience in the field of cardiac arrest resuscitation, and trained with Dr. Safar from 1989 to 1993. His basic science research has been focused on mechanisms of post-cardiac arrest brain injury and therapeutic strategies to improve neurologic

outcomes after cardiac arrest, including therapeutic hypothermia. In 2016, Dr. Neumar was elected to Co-Chair of the International Liaison Committee on Resuscitation (ILCOR).



Dr. Jessica Wallisch earned her B.S. in Biology and Gerontology at Kansas State University and M.D. at the University of Kansas School of Medicine. She completed her residency in Pediatrics and fellowship in Pediatric Critical Care Medicine at the Children's Hospital of Pittsburgh of UPMC. Dr. Wallisch is currently pursuing additional research and neurocritical care training as an NIH T32 postdoctoral scholar in Pediatric Neurointensive Care and Resuscitation while attending as a Clinical Instructor and pediatric intensivist. Her research at the Safar Center for Resuscitation Research on cerebral edema and improving outcomes following cardiac arrest earned the 2018 SCCM In-Training Award.

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June 1, 2018

Advance Your Nursing Career Through Simulation



Dr. Chad Epps is the Executive Director of the Center for Healthcare Improvement and Patient Simulation (CHIPS) at the University of Tennessee Health Science Center where he also holds rank of Professor in the Departments of Anesthesiology and Interprofessional Education. Dr. Epps trained in Anesthesiology and completed a fellowship in Healthcare Simulation at the Mount Sinai Medical Center in New York City. He is past President of the Society for Simulation in Healthcare and past Chair of the Council on Accreditation of Healthcare Simulation Programs. He is published in the areas of simulation-based interprofessional education and co-edited the textbook *Defining Excellence in Simulation Programs* (Lippincott Williams & Wilkins, 2014).



Dr. Jeffrey Groom is a seasoned educator, clinician, researcher and consultant. Combining his clinical background and his doctorate in instructional technology focusing on simulation and patient safety, Dr. Groom has incorporated simulation-based education for nurses, physicians, and allied health professionals for over 25 years. During this time he has designed and implemented instructional simulation methodologies for numerous disciplines during his professional career in emergency medical services, military, hospital practice, and academic settings. Combining his diverse professional and academic background, Dr. Groom has been a frequent invited speaker at numerous national and international venues.

Dr. Groom is a founding member of the Society for Simulation in Healthcare where he serves on the Editorial Board for the *Journal for Simulation in Healthcare* and was a member of the Planning Committee for the 2014 through 2019 International Meetings on Simulation in Healthcare. Since 1985, Dr. Groom has served as a member of the Miami International Alliance for Medical Education Innovation (M.I.A.M.I. Group) sponsored by the University of Miami – Miller School of Medicine and Gordon Center for Research in Medical Education.

Dr. Groom holds a BS degree in emergency medical services from the University of Missouri-Columbia and a BSN degree in nursing from Florida International University. He received his MS degree in biomedical sciences - nurse anesthesia from Connecticut State University and received his PhD degree in instructional technology focusing on simulation from Nova Southeastern University.

Dr. Groom is currently the Associate Dean for Simulation Education and Clinical Professor of Anesthesiology Nursing at University of Miami, Miami, Florida. He directs the International Academy for Clinical Simulation and Research and oversees the new free-standing, five-story, 50,000 sq. ft. Simulation Hospital at the School of Nursing and Health Studies. He holds medical staff privileges for clinical practice with the Department of Anesthesiology at Mount Sinai Medical Center, Miami Beach, Florida. Dr. Groom is President and CEO of jagTEAM Consulting, LLC.



Dr. Kristen M. Brown is faculty and the Advanced Practice Simulation Coordinator at the Johns Hopkins University School of Nursing. In this role, she develops and implements a simulation-based curriculum throughout the advanced practice programs. She has had a 17-year nursing career devoted to the care of critically ill children. She has worked as an acute care pediatric nurse practitioner in the Pediatric Intensive Care Unit (PICU) at the Johns Hopkins Charlotte R.

Bloomberg Children's Center for the past 12 years. Dr. Brown recently completed a two-year simulation fellowship from the Johns Hopkins Medicine Simulation Center. She utilized her simulation and doctoral work to design, develop, and implement an innovative, simulation-based educational training "boot camp" for advanced practice nurses. Dr. Brown has recently been accepted in the National League for Nursing (NLN) Simulation Leadership program. She also maintains her clinical practice in the PICU and incorporates simulation education at the Johns Hopkins School of Medicine where she functions as the Pediatric Critical Care Simulation Coordinator.



Mr. Geoffrey Tobias Miller is an Assistant Professor, School of Health Sciences, and Director of Simulation Research and Technology at the Sentara Center for Simulation and Immersive Learning at Eastern Virginia Medical School (EVMS) in Norfolk Virginia. Geoff joined EVMS in January of 2011, overseeing the expansion of simulation-based educational activities, curriculum development and educational outcomes and translational analysis, with an

emphasis on the creation and improvement of operational and clinical competence assessment using advanced educational technology, modeling, simulation and visualization systems, specializing in immersive virtual environments, augmented reality for remote medical care, serious gaming and innovative educational technology development. Geoff was appointed as a Research Scientist (2015) at the Medical Modeling and Simulation Innovation Center at the Telemedicine and Advanced Technology Research Center (TATRC), U. S. Army Medical Research and Materiel Command (USAMRMC). In this role, Geoff oversees and conducts research and technology development into future generation medical modeling, simulation and visualization efforts focused on Military Health System needs. Recently, Geoff has worked on the invention and development of an innovative, automated and immersive simulation technology, which was recognized by the National Academies of Sciences, Institute of Medicine as the Lead Innovation at the Global Forum on Innovation in Health Professional Education. Previously, Geoff was the Associate Director of Research and Curriculum Development for the Division of Prehospital and Emergency Healthcare (2000-2011) at the Michael S. Gordon Center for Research in Medical Education (GCRME), University of Miami Miller School of Medicine. Geoff is actively engaged in scholarly research and publication in simulation and healthcare education. He has co-authored several books and has authored and co-authored numerous publications. He is a frequent invited speaker at state and national and international conferences.

CONTINUING MEDICAL EDUCATION INFORMATION

Program Overview

The Safar Symposium is a two-day multi-departmental research conference held jointly by the Safar Center for Resuscitation Research and the Peter M. Winter Institute for Simulation Education and Research (WISER) in the University of Pittsburgh School of Medicine. The first day of the Symposium will feature CME accredited a block of lectures titled *The Opioid Epidemic: Implications for Resuscitation Medicine* presented by national authorities. The Peter & Eva Safar Annual Lectureship in Medical Sciences and Humanities will follow at noon, presented by Lewis S. Nelson, MD, Professor and Chair, Department of Emergency Medicine; Chief, Division of Medical Toxicology, Rutgers New Jersey Medical School. The first day of the Symposium will close with the Multi-Departmental Trainees' Research Day, with poster and oral presentations by trainees from the Departments of Anesthesiology, Critical Care Medicine, Emergency Medicine, Neurological Surgery, and Physical Medicine and Rehabilitation. The second Day of the Safar Symposium will feature a block of CME accredited lectures and simulation sessions, which will end at 12:00 pm.

Learning Objectives

1. To become familiar with factors that contributed to the development of the opioid epidemic in the USA.
2. To gain insight into alternative strategies for pain management both in the acute phase, and in rehabilitation of critically ill patients.
3. To gain a new understanding of cardiac arrest phenotype, and how the pathophysiology of arrest of cardiac origin differs from asphyxia.
4. To gain a new understanding of current therapeutic approaches to the treatment of asphyxia cardiac arrests, including arrests from opioid overdose.
5. To become familiar with novel therapies for cardiac arrest such as aquaporin antagonists and other novel neuroprotective agents.

Target Audience

The target audience is clinical practitioners in the fields of Critical Care Medicine, Anesthesiology, Physical Medicine and Rehabilitation, Neurosurgery, Neurology, Emergency Medicine, Surgery, and Trauma Specialists. In addition, the program is relevant to allied care givers such as nurses, respiratory therapists, and pharmacists.

The Safar Symposium is sponsored by the Safar Center for Resuscitation Research, the Peter M. Winter Institute for Simulation, Education, and Research (WISER), the Department of Critical Care Medicine, and the Department of Anesthesiology at the University of Pittsburgh, and the University of Pittsburgh School of Medicine Center for Continuing Education in the Health Services.

CME Accreditation and Designation Statement

The University of Pittsburgh School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The University of Pittsburgh School of Medicine designates this live activity for a maximum of **7.75 AMA PRA Category 1 Credits™**. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Other health care professionals are awarded 0.7 continuing education units (CEU's) which are equal to 7.7 contact hours.

The Americans with Disabilities Act Information:

Participation by all individuals is encouraged. Advance notification of any special needs will help us provide better service. Please notify us of your needs at least two weeks in advance of the program by calling the Safar Center at 412-692-3254.

Disclaimer Statement

The information presented at this CME program represents the views and opinions of the individual presenters, and does not constitute the opinion or endorsement of, or promotion by, the UPMC Center for Continuing Education in the Health Sciences, UPMC / University of Pittsburgh Medical Center or Affiliates and University of Pittsburgh School of Medicine. Reasonable efforts have been taken intending for educational subject matter to be presented in a balanced, unbiased fashion and in compliance with regulatory requirements. However, each program attendee must always use his/her own personal and professional judgment when considering further application of this information, particularly as it may relate to patient diagnostic or treatment decisions including, without limitation, FDA-approved uses and any off-label uses.

Faculty Disclosure:

All individuals in a position to control the content of this education activity are required to disclose all relevant financial relationships with any entity producing, marketing, re-selling, or distributing health care goods or services, used on, or consumed by, patients.

The following relevant financial relationships were disclosed:

Cameron Dezfulian, MD, has disclosed that he has received a grant research support from Mallinckrodt Pharmaceuticals: Investigator Initiated Grant for iNO after OHCA.

Erica Fink, MD, MS, has disclosed a PCORI grant from the NIH.

John M. O'Donnell, RN, CRNA, MSN, DRPH, has disclosed that he is a private consultant in simulation accreditation and speaking, and that he is a stockholder in the Lumis Corp., an augmented reality simulation company.

No other planners, members of the planning committee, speakers, presenters, authors, content reviewers and/or anyone else in a position to control the content of this education activity have relevant financial relationships to disclose.

The University of Pittsburgh is an affirmative action, equal opportunity institution.

*The Safar Center for Resuscitation Research gratefully
acknowledges the support of our sponsors:*

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The Laerdal Foundation
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