DEPARTMENT OF ANESTHESIA AND PERIOPERATIVE MEDICINE



SLEEPY TIMES



VOLUME 15, ISSUE 2 FEBRUARY 2021

MESSAGE FROM THE CHAIRMAN: ANMED HEALTH'S

-SCOTT T. REEVES, MD, MBA

PARTNERSHIP WITH MUSC AND THE DEPARTMENT



In 2014, AnMed Health finalized an agreement with the Medical University of South Carolina to partner on the medical education of selected third- and fourth-year MUSC students. Through this partnership, these students will complete their final two years of education at AnMed Health. A total of 24

medical students will train in Anderson each year — 12 in each class.

AnMed Health's partnership with the Medical University of South Carolina, brings access to extensive research, the most current developments in medicine, and nationally-recognized experts in a wide range of specialties, providing excellent, community-based clinical education. Their local medical student education faculty is comprised of a large group of dedicated, diverse and well-trained physicians.

AnMed Health's medical education program emphasizes primary care and certain specialties (family medicine, internal medicine, pediatrics, OB-GYN, general surgery, psychiatry, emergency medicine and meds-peds) and seeks to recruit and retain students to continue their practice in Upstate communities. Ideally, some of the students that complete the program will continue family medicine residency training at AnMed Health and eventually practice locally. Those completing specialty residencies will be actively recruited to return to the greater Anderson area for their medical practice.

Anesthesiology Services of Anderson has affiliated with our department to provide educational opportunities for MUSC students during their third and fourth years. The group composed of 9 board certified anesthesiologists will be joining us for our grand rounds and other educational opportunities. Please welcome them to our department.



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ANESTHESIOLOGY SERVICES OF ANDERSON AFFILIATES WITH THE DEPARTMENT

Anesthesiology Services of Anderson (ASA) was incorporated in 1996 in order to provide exclusive anesthesia services for AnMed Health in Anderson, SC. AnMed Health is a private, not-for-profit 461 bed hospital serving the Upstate of South Carolina, as well as Northeast Georgia.

ASA is an 11-physician private group that provides services for a wide-range of surgical and obstetric cases. This mixture is made up of general, urology, orthopedic, neurosurgery, gynecologic, thoracic, outpatient pediatric, electrophysiology, and cardiac surgery. ASA also is instrumental in providing an Acute Pain Service (APS) and PreOptimization Clinic (POINT clinic) for our surgical patients at AnMed Health. Lastly, the group is deeply involved in education with an elective for MUSC medical students as well as a rotation for AnMed Family Medicine Residents, where the trainees learn the basics of airway management, perioperative optimization, and elements of critical care.

Group members who are all board certified:

James Austin, MD

Ted Campbell, MD

Matt Elliott, MD

Kyle Evatt, MD

Chris Fennell, MD

Jay Hutson, MD

William Reese, MD

Brian Thompson, MD

Ben Whitehouse, MD

Matt Elliott, MD

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PREVIOUS FACULTY MEMBER FEATURED ON THE NEW YORKER'S INSTAGRAM PAGE

Dr. Ebony Hilton MUSC residency class of 2012 and Critical Care Fellowship class of 2013 was recently featured on the New Yorker's Instagram Page. Dr. Hilton has led a national effort to improve health disparities during the COVID 19 pandemic. She is currently an Associate Professor within the University of Virginia Department of Anesthesiology.



Q. Search

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One day in March, Dr. Ebony Hilton, based in Virginia, got a page. A patient was septic, and her kidneys were starting to fail. Ordinarily, doctors would suspect bacteria as the cause, but the infection's spread had been alarmingly rapid. Hilton entered the room, wearing an N95 mask. The patient had no blood pressure; without intervention, her oxygen-starved brain would start dying within seconds. That was probably Hilton's first COVID-19 patient, but there was no way to know. Virginia had barely any tests at that time.

The moment the first American COVID death was announced, in February, Hilton said, she "started doing a tweet storm to C.D.C. and W.H.O., saying, 'We know racial health disparities exist, and they existed before covid—and we know where this will end up.' "At Hilton's hospital, seven of the first ten COVID fatalities were minorities. "One out of 800 Black Americans who were alive in January is now dead," Hilton said. "There would be another 20,000 alive if they died at the same rate as Caucasians."

At the link in our bio, Lawrence Wright looks back at the yearlong COVID-19 catastrophe, and at the fatal missteps—and heroic efforts—that defined the U.S.'s response. Photo illustration by @tylercomrie; photograph by @nikolatamindzic for The New Yorker.

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RESEARCH CORNER



Dr. Reeves

BJA

British Journal of Anaesthesia, xxx (xxx): xxx (xxxx)

doi: 10.1016/j.bja.2020.08.063 Clinical Investigation

CLINICAL INVESTIGATION

Observational study of anaesthesia workflow to evaluate physical workspace design and layout

Katherina A. Jurewicz¹, David M. Neyens^{1,*}, Ken Catchpole², Anjali Joseph³, Scott T. Reeves² and James H. Abernathy III 4

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Dr. Catchpole

Clinical Simulation in Nursing (2020) 47, 60-64



Short Communication

Use of Simulation-Based Learning to Teach High-**Alert Medication Safety: A Feasibility Study**

Laura Sessions, PhD^{a,*}, Lynne S. Nemeth, PhD, FAAN^b, Kenneth Catchpole, PhD^b, Teresa Kelechi, PhD, FAAN

^aTowson University, College of Health Professions, Towson, MD, USA College of Nursing, Medical University of South Carolina, Charleston, SC, USA



Contents lists available at ScienceDirect

International Journal of Pediatric Otorhinolaryngology

iournal homepage: www.elsevier.com/locate/iiporl





Effects of parental presence during induction of anesthesia on operative and perioperative times in pediatric patients undergoing adenotonsillectomy

Sydney L. Moseley ^c, Christopher Heine ^b, Thomas Valente ^{b,a,c}, Drew Stone ^c, Dylan A. Levy ^{b,a,c}, Jaye Bea Downs ^a, Shaun A. Nguyen ^a, Phayvanh P. Pecha ^a, Clarice Clemmens ^a,

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Clinical Simulation in Nursing

Dr. Heine



Dr. Pecha

CONGRATULATIONS ON YOUR NEW ROLE SARAH!



Sarah Zuniga (your local SpinFusion expert) has taken on the role of Administrative Manager for the department. Sarah has been at MUSC for 6 years and in the department for 3.5 years creating your call schedules and approving your vacation and swaps, among other things. She has a Masters in Healthcare Administration and is excited to continue to grow in the department. Sarah spends her time outside of work with her husband Pablo and 4 year old daughter, Finley. She also has a cookie business (@sarahscookiejarchs) that keeps her very busy!

MEET ALEXANDRIA GARCIA'S (CRNA) NEW BABY BOY!

Rafael Andres Garcia was born November 5th, 2020 at 6:17 pm, weighing 7 lbs 9 oz and 21 inches long. He joins his brother, Sebastian (age 4).



MEET DR. GUTMAN'S NEW BABY BOY!





Jonas Zalman Gutman. Born 1/8/21 at 6:59pm. Named after both his grandfathers. He came a bit earlier than expected at 37 weeks, but Mom and Jonas are doing great. It's Harvard or bust for him! PAGE 5 SLEEPY TIMES

NATIONAL CRNA WEEK JANUARY 24-30, 2021

I want to recognize all our CRNAs and student nurse anesthetists this week as we celebrate National CRNA week which runs from January 24-30. Since 2000, National CRNA Week has been an annual celebration of the nation's more than 57,000 nurse anesthetists. This year has been an especially difficult time as we continue to navigate through the COVID-19 pandemic. Our CRNAs have been instrumental in helping us care for our patients whether they have had an acute COVID infection or not. During our peak surge in July, they also assisted in covering our intensive care units. Your dedication has not gone unnoticed.











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Data on COVID in Charleston County schools stuns doctor who crunched the numbers

Helen Adams | January 19, 2021



Some kids are going to school in person in the Lowcountry while others are taking online classes only. Photo by Sarah Pack

Despite widespread concern that a return to in-person public school would drive a surge in COVID-19 cases in Charleston

County, South Carolina, the data tells a very different story.

<u>Allison Eckard</u>, an infectious disease pediatrician at <u>MUSC Children's Health</u> who is working with the school district on pandemic prevention measures, was shocked."I really was just not in favor of this initially. And now I am a believer. Kids need to be in school, and it's safe."



Dr Allison Eckard

Her research found that only about 1% of the students and staff in <u>Charleston County Public Schools</u> tested positive for COVID-19 between the start of in-person school on Sept. 8 and winter break, which began Dec. 18. That added up to about 500 total cases out of about 38,000 students and staff. The data does not include <u>charter schools</u>, which were not part of this assessment because they can have different rules than traditional public schools.

Thanks to contact tracing by a team of school nurses trained by the <u>South Carolina Department of Health and Environmental Control</u>, Eckard was also able to get a good idea of how the coronavirus spread when it did crop up.

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DATA ON COVID IN CHARLESTON COUNTY SCHOOLS STUNS DOCTOR WHO CRUNCHED THE NUMBERS

"There have only been a handful of cases that may have been transmitted within the schools and within the classroom. There have been cases, there's no doubt, but the majority of them have been acquired outside of the classroom. The ones that did happen inside the classroom most often involved a teacher giving it to a teacher or a teacher giving it to a student. And I have no examples of students giving it to teachers — the thing that everybody was so worried about," Eckard said.



Charleston County School District Chief Operating Officer Jeff Borowy talks with MUSC Health nurse liaison manager Regina Fraiya and Simmons-Pinckney Middle School Principal Stephanie Spann the summer before the 2020-2021 school year about pandemic precautions. Photo by Sarah Pack

"I would put a little asterisk by that and say that yes, there is a possibility that there's an asymptomatic student who has given it to a teacher and we don't really know, because I don't know the source of infection in every case. But there's no evidence of that. In most cases, the infection could be traced to a family member or a friend where they had spent time together outside of school. In some cases, sports activities, carpooling, and social gatherings were identified as the sources of infection."

The success of the Charleston County School District wasn't just luck, Eckard said. The district worked closely with the South Carolina Department of Health and Environmental Control and MUSC Health's <u>Back2Business</u> team, which was created to help organizations operate as safely as possible during the pandemic. Eckard serves as the team's medical director for schools. She said its experts took a series of steps, including:

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DATA ON COVID IN CHARLESTON COUNTY SCHOOLS STUNS DOCTOR WHO CRUNCHED THE NUMBERS

- Assessing schools' physical spaces and workflow.
- Giving the district "playbooks" of specific information on how to minimize the risk of COVID-19.
- Giving schools checklists so teachers could do classroom assessments with guidance on how to make them safer.
- Hosting multiple live-streamed discussions for families and community leaders to get feedback, address concerns and reinforce safety precautions.
- Recommending postponing activities such as basketball that could help the virus spread.

The Back2Business team and the district also stayed nimble, adjusting as needed. When school nurses reported that some families weren't getting their kids tested for COVID-19 because of issues like transportation and slow turnaround times, MUSC Health set up a system for them to do saliva tests on the kids at school. And when vaccines became available for health care workers, the school nurses were able to come on a weekend to MUSC Health and get vaccinated.

Jeff Borowy, chief operating officer for the district, said school leaders are pleased that they've been able to have students on campus five days a week since the start of the school year. "The success is the result of a clearly layered protective protocol that begins with our teachers and students who have practiced and enforced the safety measures, including face coverings throughout the day, social distancing, handwashing and learning behind plexiglass. The protocols were established and adjusted throughout the year with significant support from both the MUSC Back2Business team and the South Carolina Department of Health and Environmental Control."

He noted the hard work that went into that. "Our facilities management staff designed and installed more than 60 miles of plexiglass for all general education classrooms and personal sneeze guards for all teachers, maximized effectiveness of school ventilations systems, increased cleaning and disinfection and acquired and distributed more than 200,000 items of personal protective equipment."

Eckard's assessment, which shows just how well those measures have worked so far, comes as the South Carolina Education Oversight Committee warns of a "COVID slide" in student achievement. <u>Emergency remote learning</u> left some kids struggling to participate due to a lack of supervision, technology or internet access.



Online school has made learning more difficult for some children, but some school districts have seen it as the best way to keep their communities safe.

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DATA ON COVID IN CHARLESTON COUNTY SCHOOLS STUNS DOCTOR WHO CRUNCHED THE NUMBERS

Eckard said her research also found that in the Charleston County School District, the kids whose families chose online learning over in-person tended to come from what she called disadvantaged groups. "Those are children who are already at risk for educational and health disparities. And so that makes it even more important to get them back into school."

She said other issues affecting kids have cropped up during the pandemic as well. At-home learning keeps teachers from being able to spot signs of abuse and neglect, so mistreatment may go unchecked for longer than in the past. And that's not all. "Gun violence and the number of children with suicidal thoughts have also increased because of a lack of supervision and the social isolation that occurs when kids aren't in school," Eckard said.

Charleston County's success in returning to in-person school has raised interest in at least two other Lowcountry school districts that are currently all-virtual or using hybrid models. "It's so compelling that the schools are safe if you put all the mitigation strategies in place, and the risk to the students is so much higher if they're not in school," Eckard said.



Kids' Mental Health

Statistics show sharp increase in kids heading to emergency department during pandemic with mental health problems, including some who are suicidal.



Autistic in Pandemic

COVID-19 has severely disrupted services and structure that children with autism need. Parents are getting creative.



Young Athletes

MUSC Children's Health cardiologist worries about effects of COVID on some young athletes' hearts.

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About the Author

Helen Adams

Keywords: COVID-19, Pediatrics, Research

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ACLS UPDATE 2020



ACLS Update 2020

Dr. Catherine Tobin (American Heart Association Instructor)

Hello Everyone,

I wanted to share the latest 2020 ACLS updates that were released at the end of last year, especially with all the information overload with the pandemic I bet many of you missed! I am sharing those most pertaining to what we do in our anesthesia care. My list below does not include all the updates for 2020. The AHA's CPR and ECC guidelines are typically updated every five years and have transitioned to a new online format for continuous evidence evaluation since they were last updated in 2015.

For more information visit

https://cpr.heart.org/-/media/cpr-files/cpr-guidelinesfiles/highlights/hghlghts 2020 ecc guidelines english.pdf

Adult Bradycardia Algorithm 2020 Changes (Dosage update)

- Atropine was changed from 0.5 mg to 1 mg
- Dopamine was changed from 2 to 20 mcg/kg per minute to 5 to 20 mcg/kg per minute

2. Intravenous Access Preferred Over Intraosseous

- (2020 new) IV access is the preferred route of medication administration during ACLS resuscitation. IO access may be considered if attempts at IV access are unsuccessful or not feasible.
- (old guideline from 2010 said It is reasonable to do IO when IV is not readily available)

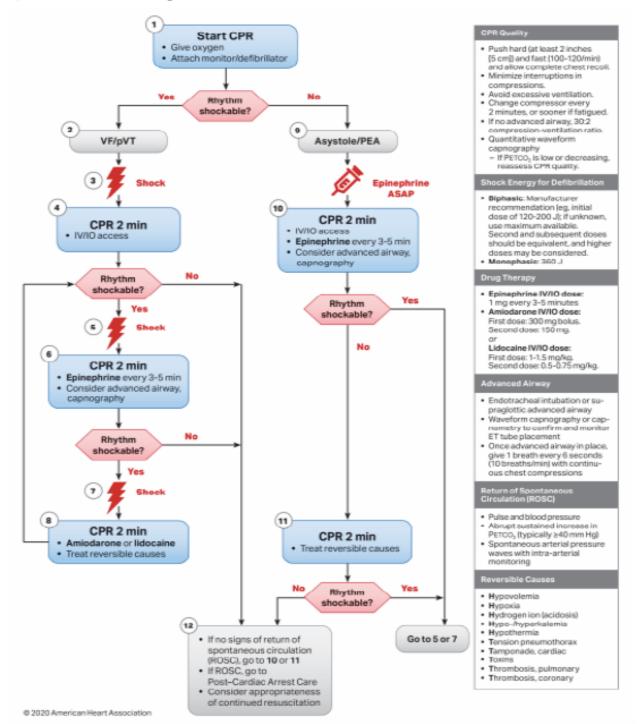
3. Adult Cardiac Arrest Algorithm

- <u>Lidocaine is back!</u> Amiodarone and Lidocaine are now equivalent for cardiac arrest.
 Lidocaine 1-1.5mg/kg as 1st dose, 2nd dose 0.5 to .75mg/kg.
- As a reminder, Amiodarone dose is 300mg as 1st dose and 150mg 2nd dose.
- Give Epinephrine early for non-shockable rhythm. (PEA/Asystole) They added a symbol
 of a syringe in the algorithm to remind you.
- The Epinephrine ASAP has been added to the algorithm for nonshockable rhythms.

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ACLS UPDATE 2020 CONTINUED...

Figure 4. Adult Cardiac Arrest Algorithm.



6 American Heart Association

 Cardiac Arrest in Pregnancy 2020 (New): Because pregnant patients are more prone to hypoxia, oxygenation and airway management should be prioritized during resuscitation from cardiac PAGE 12 SLEEPY TIMES

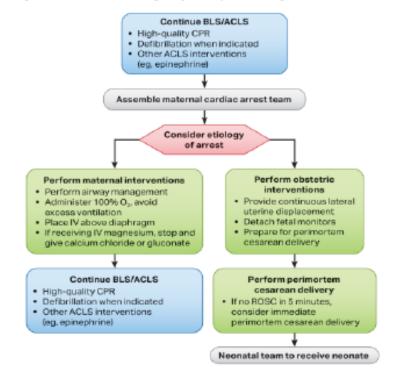
ACLS UPDATE 2020 CONTINUED...

arrest in pregnancy. (For example, you may need to intubate pregnant patient in arrest situations)

- Fetal monitoring should not be undertaken during cardiac arrest in pregnancy. (It interferes maternal resuscitation)
- We <u>recommend targeted temperature management for pregnant women who remain</u> comatose after resuscitation from cardiac arrest.
- During targeted temperature management of the pregnant patient, it is recommended
 that the fetus be continuously monitored for bradycardia as a potential complication,
 and obstetric and neonatal consultation should be sought.
 Why: Airway, ventilation, and oxygenation are particularly important in the setting of
 pregnancy because of an increase in maternal metabolism, a decrease in functional
 reserve capacity due to the gravid uterus, and the risk of fetal brain injury from
 hypoxemia. Evaluation of the fetal heart is not helpful during maternal cardiac arrest,

and it may distract from necessary resuscitation elements. In the absence of data to the contrary, pregnant women who survive cardiac arrest should receive targeted temperature management just as any other survivors would, with consideration for the status of the fetus that may remain in utero.

Figure 9. Cardiac Arrest in Pregnancy In-Hospital ACLS Algorithm.



Maternal Cardiac Arrest

- Team planning should be done in collaboration with the obstetric, neonatal, emergency, anesthesiology, intensive care, and cardiac arrest services.
- Priorities for pregnant women in cardiac arrest should include provision of high-quality CPR and relief of aortocaval compression with lateral uterine displacement.
- The goal of perimortem cesarean delivery is to improve maternal and fetal outcomes.
- Ideally, perform perimortem cesarean delivery in 5 minutes, depending on provider resources and skill sets.

Advanced Airway

- In pregnancy, a difficult airway is common. Use the most experienced provider.
- Provide endotracheal intubation or supraglottic advanced airway.
- Perform waveform capnography or capnometry to confirm and monitor ET tube placement.
- Once advanced airway is in place, give 1 breath every 6 seconds (10 breaths/min) with continuous chest compressions.

Potential Etiology of Maternal Cardiac Arrest

- A Anesthetic complications
- **B** Bleeding
- C Cardiovascular
- D Drugs
- E Embolio
- F Fever
- G General nonobstetric causes of cardiac arrest (H's and T's)
- H Hypertension

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ACLS UPDATE 2020 CONTINUED...

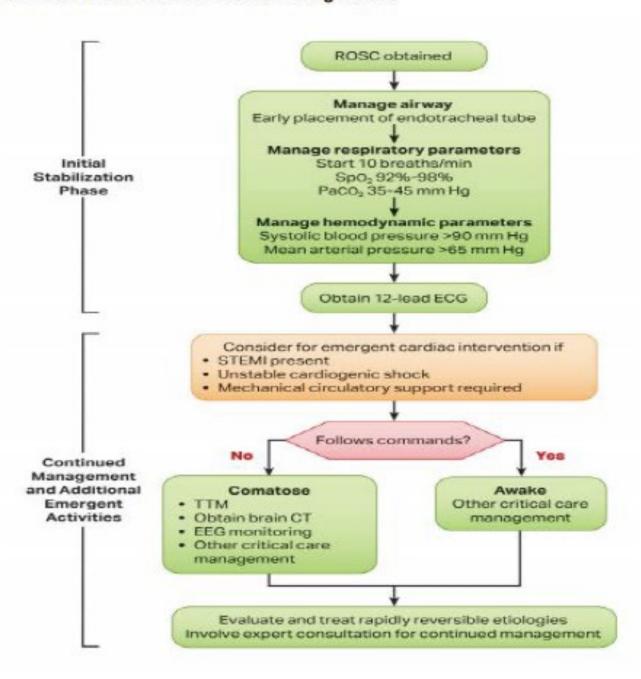
CPR –

- New role of CPR coach-new role to allow team leader to run the code.
- <u>Physiologic Monitoring of CPR Quality 2020</u> (Updated): It may be reasonable to use physiologic parameters such as arterial blood pressure or ETCO2 when feasible to monitor and optimize CPR quality.
- By stander CPR is recommended for presumed cardiac arrest because the risk of harm
 to the patient is low if the patient is not in cardiac arrest
 Why: New evidence shows that the risk of harm to a victim who receives chest
 compressions when not in cardiac arrest is low. Lay rescuers are not able to determine
 with accuracy whether a victim has a pulse, and the risk of withholding CPR from a
 pulseless victim exceeds the harm from unneeded chest compressions.
- Real-Time Audiovisual Feedback 2020 (Unchanged/Reaffirmed): It may be reasonable to
 use audiovisual feedback devices during CPR for real-time optimization of CPR
 performance. Why: A recent RCT reported a 25% increase in survival to hospital
 discharge from IHCA with audio feedback on compression depth and recoil.
- Double Sequential Defibrillation Not Supported 2020 (New): The usefulness of double sequential defibrillation for refractory shockable rhythm has not been established.
- Rescue Breathing Give on breath every 6 seconds. So, 10 breaths in 1 minute. (The old recommendation was 1 breath every 5-6 seconds)
- 8. Return of Spontaneous Circulation-ROSC Algorithm update
 - Titrate oxygen to a saturation of 92% to 98%. (This is a change from the previous 94% recommendation). ETC02 to 35 to 45. (was 35 to 45) BP systolic >90, diastolic at least 65.
 - They removed exact pressor doses on ROSC.
 - More details on what do to if Comatose.

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ACLS UPDATE 2020 CONTINUED...

Figure 7. Adult Post-Cardiac Arrest Care Algorithm.



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GRAND ROUNDS- JANUARY 2021



"Neurocritical Care from the Battlefield to the Operating Room" February 2, 2021 Patrick Britell, MD, Assistant Professor Dept. of Anesthesia & Perioperative Medicine Medical University of South Carolina



"Neurophysiology and Anesthesia"
February 9, 2021
Jessica Barley, PHD, Certified Intraoperative
Tech
Dept. of Neurosciences
Medical University of South Carolina



"The Diagnosis and Treatment of Drug Resistant Epilepsy"
February 16, 2021
Alex Vandergrift, MD, Professor
Dept of Neurosurgery
Medical University of South Carolina



"Antifibrinolytics in Major Spine Surgery " February 23, 2021 Andrew Fisher, MD, Assistant Professor Dept. of Anesthesia & Perioperative Medicine Medical University of South Carolina

DEPARTMENT OF ANESTHESIA AND PERIOPERATIVE MEDICINE

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CHECK OUT OUR WEBSITE

Future Events/Lectures

Intern Lecture Series

2/4/21 Bleeding & Transfusion

2/18/21 EndocrinologyFluids, Electrolytes,

Acid/Base

CA 1 Lecture Series

2/17/21 Geriatric Anesthesia

2/24/21 Anesthesia for Neurosurgery

CA 2/3 Lecture Series

Per Rotations

Grand Rounds

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I HUNGTHE MOON

Please don't forget to nominate your co-workers for going 'Beyond the Call of Duty.' I Hung The Moon slips are available at the 3rd floor front desk and may be turned in to Tammie Matusik.



Holiday Party Friday, December 10, 2021 Carolina Yacht Club



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https://www.facebook.com/MUSCAnesthesia/ https://www.instagram.com/musc.anesthesiology/



ONEMUSC INNOVATION | IMPACT | INFLUENCE

ONE MUSC Strategic Plan

We Would Love to Hear From You!

If you have ideas or would like to contribute to *Sleepy Times*, the deadline for the March edition will be February 23, 2021.