



SLEEPY TIMES

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MESSAGE FROM THE CHAIRMAN: WEBSITE & SOCIAL MEDIA REFRESH -SCOTT T. REEVES, MD, MBA AND JACQUELINE FISHER

In recent months, both the Department of Anesthesia and MUSC Health have seen a tremendous surge in technological and social media growth. On December 10th, the enterprise's webpages transitioned to a new content management system that incorporated a fresh look and feel as the website was reorganized to a universal, mobile-friendly format that meets ADA compliance requirements. The content is largely the same, but with a few updates and some restructuring to make information more focused on areas of interest for our external audience in accordance with industry best practices. After completing the transition, the URLs to access MUSC websites changed from:

- academicdepartments.musc.edu to web.musc.edu for the enterprise pages on the website
- academicdepartments.musc.edu/education to education.musc.edu for the education and colleges section of the website
- academicdepartments.musc.edu/research to research.musc.edu for the enterprise research section of the website

Additionally, we are making remarkable strides towards bringing the "OR of the Future" to MUSC, as you'll see in this edition of *Sleepy Times*. On the social media front, the Department is now on [Twitter!](https://twitter.com/MUSC_Anesthesia) Follow us on Twitter to find information such as enterprise construction updates and Department current events along with retweets from MUSC Health. We're working on a Facebook page in the near future.



Follow @MUSC_Anesthesia

GUYANA MISSION TRIP BY CLAY FORET, MD

Dr. Sirianni and I recently had the opportunity to spend two weeks in Georgetown, Guyana, working in a teaching role with the relatively new anesthesia residency program at Georgetown Public Hospital Corporation (GPHC). You might remember that Guyana is in the northeast part of South America, where Drs. Nelson and Osburn went last year, and is unfortunately most known in the US for the Jim Jones' Peoples mass murder-suicide 41 years ago. Guyana is an interesting place as it is the only country in South America where English is the official language, although still difficult to understand until one gets used to the Creole changes. The native tribes or Amerindians were in Guyana until settled by Dutch colonists looking for El Dorado who later surrendered the land to the British. As slavery was outlawed the British then brought "indentured servants" from India. Guyana ultimately became independent in 1966 from the British. All of this helps explain why Cricket is huge, left sided driving still exists with horns blaring nonstop, lotus flowers cover the canals, and they have amazing local foods. Hinduism and Christianity are the major religions, but the country is so mixed that everyone celebrates each other's holidays regardless of belief system. Three-fourths of the country is covered in trees and most of it is accessed by planes on small jungle landing strips or through river navigation. There are several major rivers; Guyana literally means "land of many waters." About 90% of the people live on 10% of the land along the coast with Georgetown being the capital. They affiliate themselves with the Caribbean Community and even house the Headquarters of CARICOM. Guyana remains one of the poorest countries in the western hemisphere despite having huge oil reserves. One problem is that 80% of people with tertiary education move out so this leaves a large gap for advancement. Despite all of its issues, Guyana possess many amazing sites, including the St. Georges Cathedral (tallest wooden church), one of the longest "floating bridges" in the world in the Demerara Harbour Bridge, and Kaieteur Falls, which is the widest single-drop waterfall in the world. The weather is mostly sunny with 75-85 degree temperatures year round and a nice breeze off the coast. Plus, who doesn't love a place where the kids are taught to call everyone older than them either auntie/uncle or granny/grandpa?



Our trip was organized by the Canadian Anesthesiologist's Society for International Education (CASIEF), whose motto is "Safe Surgery Saves Lives." CASIEF currently has ongoing projects in Rwanda, Guyana, Ethiopia and Burkina Faso, and frequently schedules international educators from Canada and the United States (through ASA-GHO volunteers) to come to Georgetown in teaching roles for 2-4 weeks at a time. Additionally, GPHC has contracts with both China and Cuba through which attendings from these countries rotate for 1-2 years at a time. The anesthesia program at GPHC was started approximately 6 years ago by Dr. Alexandra Harvey, an enthusiastic anesthesiologist, who is a native of Georgetown and trained in the Caribbean. The program has graduated two residents in the last two years, and currently has two 4th year residents, three 3rd year residents, three 2nd year residents, and six 1st year residents. They complete medical school, followed by service in different hospitals and departments for a few years and then complete an intern year before starting the 4-year anesthesia residency, which is divided into 2 years to obtain your "Post Graduate Diploma in Anaesthesia" and 2 more years to gain a "Masters in Anaesthesia and Intensive Care." Once finished, they become a Junior Registrar, advance to Registrar, Junior Consultant, and then finally Consultant.

Our first few days in the hospital were spent acclimating to their operating rooms and approach to anesthesia. There are five operating rooms in the main hospital and one in the obstetrics ward to cover a population of over 750,000. There are additional private hospitals in the country, but the majority of Guyanese residents cannot afford to pay for health care. There is a team approach in the operating theatre as there are often four or more anesthesia providers covering one room, including an upper and lower level resident, nurse anesthetist and student nurse anesthetist, registrar (junior attending) and consultant (senior attending). Three to four of these providers are often in the room at any given time. Although the resources there are often limited, everyone does a phenomenal job of providing a high level of care. For example, halothane is still commonly used, as they often have a limited supply of sevoflurane and isoflurane. Additionally, they have little to no continuous infusions that we use frequently every day, such as propofol or phenylephrine. As such, these infusions are only administered in bolus form unless absolutely necessary. Furthermore, China contributes a large amount of medical supplies and drugs, and providers have to ensure these drugs are correctly translated by the Chinese consultant prior to administration. Paper charting is the norm, temperature monitoring capabilities are mostly lacking but fluids are warmed via microwave as needed.

GUYANA MISSION TRIP CONTINUED...

Only one OR had air lines, so almost every case had O₂/N₂₀ mixtures to avoid 100% O₂. One of the providers told us they practice economic anesthesia at GPHC, saying “you use what you have - it might not be the best, but experienced users using the wrong things are better than inexperienced users using the right things.”

They often utilize spinal anesthetics for a wide variety of procedures, and infrequently use sedation intraoperatively during spinal anesthetics. The staff has one Chinese consultant with strong regional skills who is working hard to teach the other staff members, and as such they are doing an increasing number of procedures under regional anesthesia alone. The caseload at GPHC is very heavy in both orthopedic and general surgery, and they have several other surgical subspecialties on staff including urology, obstetrics and gynecology, otolaryngology, thoracic and neurosurgery. All four years of residency are spent training in anesthesia and the residents have a high degree of autonomy from the start of residency. For example, a lone resident will cover the busy obstetric operating room during the day, with attending back up from the main hospital across the street only for emergencies. Additionally, the residents cover overnight cases on call alone, but have a consultant available to come in from home for emergencies. Regarding obstetrics, they unfortunately do not have the supplies or staffing for labor epidurals, and therefore they are not offered at the hospital. Even the senior residents have only done 5-10 epidurals in their 4 years! With the help of CASIEF, McMaster University in Canada has helped to arrange a 3-4 month rotation at McMaster for the 3rd year residents to assist with epidural exposure.

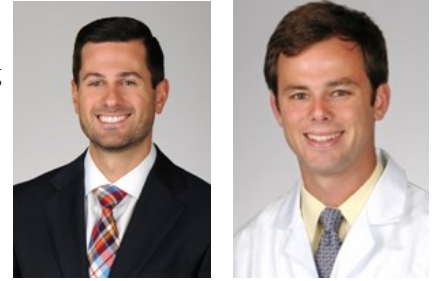
We had the opportunity to provide teaching in a variety of ways. Each day (after finding scrubs that fit - sometimes quite the adventure!), we moved between the five different operating rooms to do both informal lectures and hands on teaching to the residents. At times, our teaching would focus on the case at hand, discussing pre-, intra- and postoperative care, as well as how we might approach the anesthetic differently if we were at MUSC. Initially, we were hesitant to talk about equipment/drugs/etc. that they were unfamiliar with, but we quickly learned how excited and happy they were to increase their knowledge and expand their horizons. We also had the opportunity for hands-on teaching with spinals, intubation techniques, and ultrasound guided IV placement. We also taught simpler things like 2-hand masking techniques; the art of flipping prone (not done often in Guyana); how to use nerve stimulators and reversal, although not often done due to limited stimulators and neostigmine; and nerve block/ultrasound anatomy. Our formal teaching included one afternoon of lecture each week with the 3rd and 4th year residents. Our preassigned topics included neuroanatomy, neurophysiology, and neuro anesthesia. We also incorporated case discussions into our lectures, which the residents particularly enjoyed. Additionally, we had formal teaching in the operating room prior to first start cases each Friday, which they referred to as “trouble rounds.” During these discussions, we presented several upcoming complex cases and the residents discussed overall plans and general considerations for each case, with some oral board-type intra-op disaster scenarios thrown in. Dr. Sirianni and I were both quite impressed with the residents’ fund of knowledge, their very clear dedication to reading and studying, along with their thirst for exposure and opportunity, and their overall clinical decision making and autonomy.

We are incredibly grateful to have been able to represent MUSC internationally. We watched firsthand and learned from colleagues in the same field, practicing in an extraordinarily different set of conditions, which was a phenomenal experience. However, it was even more rewarding to feel that we were making an impact abroad by teaching the local residents, who quickly became our friends. We were also fortunate to have them show us around their home country and expose us to the foods, sites, and culture. We can only hope they learned as much from us as we did from them.



GUYANA MISSION TRIP BY JOEL SIRIANNI, MD AND CLAY FORET, MD

Drs. Joel Sirianni and Clay Foret recently represented the department in training anesthesiology residents in cooperation with the American Society of Anesthesiologists in Guyana. A brief collection of their emails back to the department is included below, along with an essay by Dr. Foret.



January 9, 2019

Dr. Reeves,

Joel and I wanted to send you a quick update from Guyana. We arrived late on the night of 1/6, and quickly got to work the following morning. We have had three full days of working with Guyanese residents in the OR. It has been interesting to see different ways of doing things, as evidenced of the use of halothane. Their resources are limited in certain areas but they find creative ways to continue a high level of care. For example, protective gloves are used as probe covers for regional blocks (condoms, if available, are the preferred method) and as tourniquets for IV placement. They also have a significant amount of supplies from China, including drugs, which they have to make sure are translated appropriately prior to administration (picture below). Their team approach is very unique and admittedly confusing as there are often 4+ anesthesia personnel in any given room including: a junior and senior attending, anesthesia residents (1-2 junior/senior), CRNA, SRNA, and sometimes nurse anesthesia intern. We have also enjoyed getting to teach the residents and are continuing to prepare for a lecture we are giving at the end of the week. Attached are some additional photos from both our work at the hospital and exploration in Georgetown. Also pictured below is St. George's Cathedral, the main entrance to the hospital and various other pictures from around Georgetown and the hospital.

Clay Foret



GUYANA MISSION TRIP CONTINUED...

January 14, 2019

Dr. Reeves,

Joel and I continue to both teach and learn as we move into our second week in Guyana. Teaching in the OR has continued to get easier as we learned everyone's name and role in the OR, as well as the general work flow. We finished up the week with two formal teaching sessions. The first session was referred to as "trouble rounds" which was a 30-minute session in the OR prior to the start of cases, during which we presented a difficult case and the residents discussed their pre-, intra-, and postoperative plan. The difficult case was actually one they canceled the day before due to the patient not realizing the severity of the surgery, which would have been a thoracic case involving the removal of a tumor compressing the right hilum (PA/bronchus). The second teaching session was an entire afternoon that the upper level residents had dedicated to teaching, during which Joel lectured on neuroanatomy, neurophysiology and neuroanesthesia, followed by several open discussion cases in the same areas. It seemed that the case discussions were especially helpful for the residents, as they have a very low volume of neurosurgery cases. They mainly do scheduled VP shunts on children and emergency craniotomies for epidural/subdural hemorrhages. However, the residents' knowledge has been really impressive despite the low case volume as it is very clear they take pride and initiative in their studies. Below are pictures from our lecture day and the infusion pumps they very infrequently use for a TIVA. Our trip to the Kaieteur Falls was canceled last weekend due to the plane not filling up, but the residents have taken us around to see and experience some of their colorful and bustling city. We look forward to our lecture session tomorrow with the 3s/4s and the final week of our visit. Hope all is well in Charleston!

Clay Foret



OR OF THE FUTURE

Rethinking the OR: Simulation tests researchers' ideas for improving operating room design

With clipboards and iPads in hand and pens and pencils at the ready, dozens of people surrounded a mock operating room to scrutinize in silence the smallest movements of a surgical team. Their observations, as well as the operating team's critiques, will be collated and analyzed in the coming weeks as part of a joint project between MUSC and Clemson University to re-imagine the operating room.

Operating rooms haven't changed much since he first set foot in one in 1994, said Robert Cina, a pediatric surgeon who's been participating in this study since the beginning. In fact, they hadn't changed for decades even before that. There's better and more technology, but the actual setup of the room is basically the same.

But MUSC and Clemson researchers wondered if the operating room couldn't be reconfigured to improve quality, safety and outcomes both for patients and the medical staff.

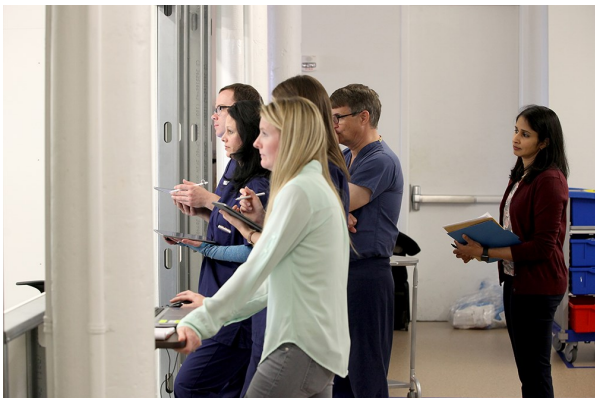
Adverse events happen in 1 out of every 10 surgeries, and while better training and processes can help improve that statistic, better design is also part of the solution, according to Anjali Joseph, the Spartanburg Regional Health System endowed chair in architecture + health design and director of the Center for Health Facilities Design and Testing at Clemson University.

She and Scott T. Reeves, M.D., the John E. Mahaffey, M.D. endowed chair and chairman of the MUSC Department of Anesthesia and Perioperative Medicine, are the lead investigators on the four-year, \$4 million research grant from the Agency for Healthcare Research and Quality.

The project is now in its fourth year. What started as a basic simulation, with tape on the floor to indicate the placement of equipment, is now an almost fully realized operating room within the Clemson Design Center on the second floor of the Cigar Factory in Charleston.

The results of this research will be felt in the MUSC Children's Health R. Keith Summey Medical Pavilion in North Charleston and the new MUSC Health West center in West Ashley, both under construction – not to mention in operating rooms around the country as other health care systems apply the research findings to their own construction projects.

On Wednesday, surgical teams walked through a couple of common children's surgeries: hernia repair and ear tubes and tonsil surgery.



“Surgeons are creatures of habit. We learn to do things a certain way. In some ways, from a patient safety perspective, you want it to be routine. You want us to be doing things the way we always do them,” said Clarice Clemmens, a children's ear, nose and throat surgeon who participated in a simulation for the first time on Wednesday.

So asking Clemmens not to turn the operating table 90 degrees, as she was taught to do and has always done, was a big step. Even though, as she explained, turning the table 90 degrees really doesn't work well. “That can be an inefficiency in the OR. There are multiple cords and circuits that are easily tangled during the turn, which ultimately adds time to the case,” she

OR OF THE FUTURE CONTINUED...



Instead, the room setup allowed the team to turn the operating table 45 degrees.

“It worked beautifully,” Clemmens said. The anesthesiologist had better access to the patient and everything moved more efficiently. “This has clearly been very well thought out,” Clemmens said. Though she can’t make the change in the current operating room, because there isn’t enough space, she’d welcome the new design in the new children’s medical pavilion in North Charleston.

Changing where the operating table faces sounds like a small step, but not to researchers who are intently focused on the purpose of every square inch of space. The idea is to

ensure that only items that absolutely must be in the room are there, to eliminate as much as possible surfaces that must be cleaned and clutter that’s distracting.

During the simulated surgeries, each member of the surgical team had an assigned Clemson observer who noted where that person moved, where there were potential conflicts and where things seemed to work well. General observers kept track of overall movement in the room.

Following the surgeries, the medical and architectural teams reviewed the action. For example, Reeves and Joseph thought they had the overhead booms for lights and display screens in the best places. But Cina said one display screen was in the way. On the other hand, he liked that the floor is color-coded, giving both the medical teams and cleaning crews a visual cue as to where the equipment should go.



The room zones, as designated by the colors on the floor, are an important part of the design. The researchers divided the room into anesthesia, sterile and circulation zones. “By putting anesthesia in the corner, they’re out of the fray,” said Byron Edwards, professor of practice in architecture and health at Clemson.

Dee San, MUSC’s perioperative quality and safety manager, added that the zones are about more than keeping people from bumping into each other or tripping over cords.

Nurses have long worked to minimize the amount of traffic in and out of the room during a surgery to prevent germs from entering. But when San incorporated a microbial load study into the project, they discovered that the amount of movement from people already in the room increased the risk of contamination more than people coming in and out of the room.

Clearly, she stressed, it’s important to minimize how much the people in the room have to move around to get what they need in order to meet the overall goal: “To improve patient outcomes by reducing controllable risks.”

Joseph said the team will run more simulations after the children’s medical pavilion opens to see if they need to make any design or operational changes. Once the pavilion has been open for six months, they’ll record some surgeries and compare those recordings to recordings of surgeries in the existing operating rooms to determine if the new design is successful.

A key part of the project is the fact that investigators will openly share what they’ve learned. Reeves said the researchers recently hosted a group from MedStar Health, a health care system in the mid-Atlantic region that’s preparing to build more ambulatory operating rooms. The team will also create a free web-based how-to tool with all its findings.

OR OF THE FUTURE



OR OF THE FUTURE CONTINUED...



OB SAFETY BUNDLES PART III BY LATHA HEBBAR, MD

National Partnership for Maternal Safety: Bundles of Maternal Care

Maternal Safety Bundle for Severe Hypertension in Pregnancy – Revised July 2017



This is the concluding segment on Maternal Safety Bundles. Safety bundles, organized into four R domains: **R**eadiness, **R**ecognition and Prevention, **R**esponse, and **R**eporting and Systems Learning, outline critical clinical practices that should be implemented in every maternity unit. The aim for this bundle is to reduce the maternal morbidity associated with severe hypertension during pregnancy and early postpartum period. Complications arising from hypertensive disorders of pregnancy are among the leading causes of severe maternal morbidity and preventable maternal mortality. At MUSC we have most of the 14 components of the ACOG recommended maternal hypertension bundle – work is still on-going on some elements of the bundle. The bundle should be completed by mid-2019.

READINESS (EVERY UNIT): The Readiness domain includes five elements to prepare health care facilities for the timely management of women who present with hypertensive emergencies during pregnancy.

1. Standard Diagnostic Criteria and Monitoring and Treatment for Severe Preeclampsia or Eclampsia. **(Box 1)**
2. Unit Team Education, Reinforced by Regular Unit-Based Drills With Debriefs. **(Box 2)**

Blood pressure

- Greater than or equal to 140 mm Hg systolic or greater than or equal to 90 mm Hg diastolic on two occasions at least 4 hours apart after 20 weeks of gestation in a woman with a previously normal blood pressure
- Greater than or equal to 160 mm Hg systolic or greater than or equal to 110 mm Hg diastolic, hypertension can be confirmed within a short interval (minutes) to facilitate timely antihypertensive therapy

and

Proteinuria

- Greater than or equal to 300 mg per 24-hour urine collection (or this amount extrapolated from a timed collection)
- or
- Protein/creatinine ratio greater than or equal to 0.3*
- Dipstick reading of 1+ (used only if other quantitative methods not available)

Or in the absence of proteinuria, new-onset hypertension with the new onset of any of the following:

Thrombocytopenia

- Platelet count less than 100,000/microliter

Renal insufficiency

- Serum creatinine concentrations greater than 1.1 mg/dL or a doubling of the serum creatinine concentration in the absence of other renal disease

Impaired liver function

- Elevated blood concentrations of liver transaminases to twice normal concentration

Pulmonary edema

Cerebral or visual symptoms

*Each measured as mg/dL.
Reprinted with permission from Executive summary: Hypertension in pregnancy. American College of Obstetricians and Gynecologists. *Obstet Gynecol* 2013;122:1122–31.

Potential Scenarios

- Hypertensive emergency
- Eclampsia
- Magnesium Toxicity

Learning Objectives

- Recognition of signs and symptoms of hypertensive disorders in pregnancy
- Describe management of hypertensive disorders in pregnancy
- Stabilization of the pregnant woman before intervention on fetal behalf
- Proper use of medications
- Team communication
- Appropriate escalation
- Appropriate use of emergency checklists

Participants

- Maternity care providers
- Nursing
- Pediatrics
- Anesthesia
- Primary care providers
- Emergency medicine
- Critical care
- Pharmacist or other support staff

BOX 2: Hypertension in Pregnancy Simulation Training (work in progress at MUSC)

Box 1: Diagnostic Criteria for Preeclampsia

OB SAFETY BUNDLES PART III CONTINUED...

3. Process for timely triage and evaluation of pregnant and postpartum women with hypertension including ED and outpatient areas.
4. Rapid access to medications used for severe hypertension/eclampsia: Medications should be stocked and immediately available on L&D and in other areas where patients may be treated. Include brief guide for administration and dosage. **(Box 3)**
5. System plan for escalation, obtaining appropriate consultation, and maternal transport, as needed.

RECOGNITION: (EVERY PATIENT)

6. Standard protocol for measurement and assessment of BP and urine protein for all pregnant and postpartum women. **(Box 4)**
7. Standard response to maternal early warning signs including listening to and investigating patient symptoms and assessment of labs (e.g. CBC with platelets, AST and ALT).
8. Facility-wide standards for educating prenatal and postpartum women on signs and symptoms of hypertension and preeclampsia. ACOG link for patient education which is shared with patients at the prenatal wellness center. <https://www.acog.org/Patients/FAQs/Preeclampsia-and-High-Blood-Pressure-During-Pregnancy>

Magnesium Sulfate

- Magnesium sulfate not recommended as an antihypertensive agent
- Should be used for: seizure prophylaxis and controlling seizures in eclampsia
- Intravenous (IV) bolus of 4–6 g in 100 mL over 20 minutes followed by IV infusion of 2 g/h; continue for 24 hours postpartum
- Contraindications or relative contraindications: renal failure, myasthenia gravis

Labetalol

- 20 mg IV bolus followed by 40 mg if not effective within 10 minutes; then, if not effective, 80 mg every 10 minutes; maximum total dose of 300 mg in the first hour
- Contraindications or relative contraindications: asthma, congestive heart failure

Hydralazine

- 5–10 mg IV every 20 minutes; maximum total dose of 20 in the first hour
- Contraindications or relative contraindications: tachycardia

Nifedipine

- 10–20 mg orally every 30 minutes; maximum total dose of 50 mg in the first hour
- Note: Nifedipine is not given sublingually
- Contraindications or relative contraindications: tachycardia

Box 3: Commonly used medication in preeclampsia**Step 1: Prepare Equipment**

- a. Mercury sphygmomanometer is the gold standard, can use validated equivalent automated equipment
- b. Check cuff for any defaults
- c. Correct size cuff: width of bladder 40% of circumference and encircle 80% of arm

Step 2: Prepare the Patient

- a. Sitting or semireclining position with back supported and arm at heart level
- b. Patient to sit quietly for 5 minutes before measurement
- c. Bare upper arm, free of any restrictive clothing
- d. Feet should be flat, not dangling from examination table or bed, and legs uncrossed

Modified from Peters RM. High blood pressure in pregnancy. Nurs Womens Health 2008;12:410–21. Copyright 2008, with permission from the Association of Women's Health, Obstetric and Neonatal Nurses.

Box 4: Steps to obtain accurate blood pressure

OB SAFETY BUNDLES PART III CONTINUED...**RESPONSE: (EVERY CASE OF SEVERE HYPERTENSION OR PREECLAMPSIA)**

9. Facility-wide standard protocols with checklists and escalation policies for management and treatment of:

- * **Severe hypertension:** Treatment guidelines recommend that whenever a systolic blood pressure 160 mm Hg or greater or diastolic blood pressure 110 mm Hg or greater is reached, it should be verified within 15 minutes and if confirmed by a second reading, prompt antihypertensive treatment should be given, ideally within 30–60 minutes of verification. Intravenous labetalol and hydralazine are first-line medications in this situation (Box 3).
- * **Eclampsia:** Magnesium sulfate is recommended for women with preeclampsia with severe features to prevent, and reduce recurrence of, convulsions in patients presenting with eclampsia (Box 3). For women without severe features but with a blood pressure of greater than 140 but less than 160 mm Hg systolic or greater than 90 but less than 110 mm Hg diastolic, it is recommended that magnesium sulfate not be administered universally for the prevention of eclampsia.
- * **Seizure prophylaxis:** Following a loading dose, the maintenance dose should be reduced and serum magnesium levels followed to sustain serum concentrations in the 4.8- to 8.4-mg/dL (4–7 mEq/L) range. Relatively predictive symptoms of magnesium sulfate toxicity are seen at the following maternal serum concentrations: loss of deep tendon reflexes 9.6–12 mg/dL (greater than 7 mEq/L), respiratory depression 12–18 mg/dL (greater than 10 mEq/L), and cardiac arrest 24–30 mg/dL (greater than 25 mEq/L).
- * **Magnesium over-dosage:** If magnesium toxicity is suspected, an appropriate health care provider must be notified, the magnesium infusion should be immediately discontinued, supplemental oxygen administered, and a serum magnesium level assessed. If magnesium toxicity is recognized, 10 mL of 10% calcium gluconate should be administered intravenously (1 g total). Symptoms of magnesium toxicity can recur after calcium gluconate if the magnesium level remains elevated. If respiratory arrest is identified, prompt resuscitative measures including intubation and assisted ventilation are indicated
- * **Postpartum presentation of severe hypertension/preeclampsia:** Seventy-five percent of deaths secondary to gestational hypertensive disorders occur after birth. Because maternal blood pressure has been shown to decrease for the first 48 hours and then increase with a peak 3–6 days after birth for a woman with preeclampsia during the postpartum period, peak blood pressures are likely to occur after most women have been discharged home.

10. Minimum requirements for protocol:

- The physician or primary care provider should be notified (eg, systolic blood pressure 160 mm Hg or greater or diastolic blood pressure 110 mm Hg or greater for two measurements within 15 minutes);
- Timely treatment after the second elevated measurement (as soon as possible, preferably within 60 minutes);
- guidelines for initiation and duration of magnesium sulfate administration;
- escalation measures for patients who are unresponsive to standard treatments;
- procedures for follow-up 7–14 days postpartum;
- postpartum education of women with preeclampsia.

11. Support plan for patients, families and staff for ICU admissions and serious complications of severe hypertension.

REPORTING: (EVERY UNIT) The elements of this component are being established at MUSC.

12. Establish a culture of huddles for high risk patients and post-event debriefs to identify successes and opportunities.

13. Multidisciplinary review of all severe hypertension/eclampsia cases admitted to ICU for systems issues.

14. Monitor outcomes and process metrics.

References:

National Partnership for Maternal Safety Consensus Bundle on Severe Hypertension During Pregnancy and the Postpartum Period. (Obstet Gynecol 2017;130:347 – 57) https://www.preeclampsia.org/images/pdf/Bernstein_Consensus%20Bundle%20on%20Severe%20Hypertension%20During%20Pregnancy%20and%20the%20Postpartum%20Period_2017.pdf

RESEARCH CORNER

ORIGINAL ARTICLE

Retrospective Evaluation of the Perioperative Management of Patients Undergoing Total Pancreatectomy With Islet Autotransplantation

Single Institution Review

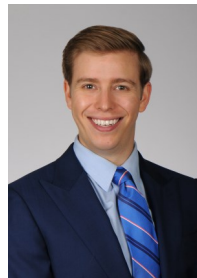
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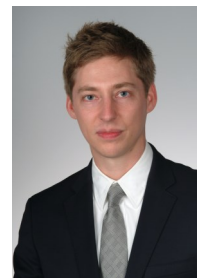
Dr. McSwain



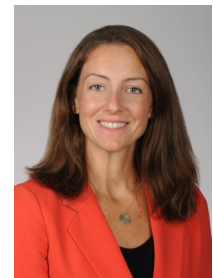
Dr. Wolf



Dr. McMurray



Dr. Skorke



Dr. Clark

ANESTHESIA ICCE AWARD



Congratulations to Carlee Clark and Brenda Dorman on their recent award for the "Most Improved ICCE of the Year" for 2018!



CRNA WEEK 2019



PHYSICIAN ANESTHESIOLOGISTS WEEK 2019



American Society of
Anesthesiologists™

Physician
Anesthesiologists Week

JANUARY 27 – FEBRUARY 2, 2019



PHYSICIAN ANESTHESIOLOGISTS WEEK 2019 CONTINUED...



ANNUAL MANDATORY LESSONS IN MYQUEST



University Human Resources Management

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Tel 843-792-2071
Fax 843-792-9533

www.musc.edu/hr/university

MEMORANDUM

TO: University Deans, Department Heads, and Administrative Officials
FROM: Susan H. Carullo, University Human Resources Director
DATE: January 25, 2019
SUBJECT: **2019 Annual Mandatories**

Starting January 25, 2019, we began assigning the annual mandatory online lessons in MyQuest. The mandatories have a new updated look this year as we move toward a more engaging and user-friendly experience. This will be the only official announcement regarding mandatory assignments from the University; please share with your employees. Reminder emails will be sent to employees by MyQuest beginning in April. Listed below is the breakdown of the mandatory assignments:

| 2019 MUSC General Mandatories (Enterprise-wide) | 2019 MUSC Health Mandatory Training (MUSC Health Care Team Members Only) |
|---|---|
| Crime Prevention and Clery Act Code of Conduct and HIPAA Family Educational Rights and Privacy Act (FERPA) Prohibited Discrimination and Harassment Information Security Active Shooter OSHA Review Digital Accessibility at MUSC | MUSC Health General Compliance (includes Billing) Culture of Safety Emergency Management Campus Security Infection Control Stroke and Heart Early Recognition Meeting the Unique Needs of Patients |
| 2019 Annual Clinical Education (MUSC Health Clinical Staff Only) <ul style="list-style-type: none"> Varies depending on your clinical role | |
| MSO Mandatories (Credentialed Providers Only) <ul style="list-style-type: none"> To be assigned dependent upon Medical Executive Committee approval. | |
| Conflict of Interest Training (Hourly employees only) <ul style="list-style-type: none"> Hourly employees are excluded from the annual COI disclosure process. To ensure they continue to receive conflict of interest policy training, a COI module has been developed and assigned to those employees in MyQuest. Salaried employees of the MUSC enterprise receive annual COI training every April, in combination with their annual COI disclosure form; training modules precede the mandatory disclosure. | |
| Overview of Research at MUSC (Role-based Only) <ul style="list-style-type: none"> Employees and students of the University only. | |
| Leadership Diversity Requirement <ul style="list-style-type: none"> <i>Designated leaders</i> are responsible for completing a minimum of 4 hours of Diversity and Inclusion training by June 30, 2019. Education is available in the MyQuest Diversity catalog. | |

All the annual mandatory training modules must be completed no later than **June 30, 2019**. University employees who fail to complete annual mandatory training requirements will be subject to disciplinary action. If you have any questions, please email the MyQuest Administrators at myquesthelp@musc.edu.

WELCOME TO THE DEPARTMENT

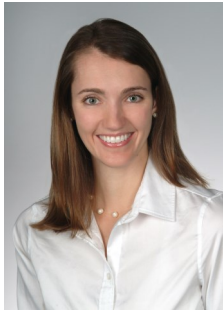
Brent Holway, MD, is a pediatric anesthesiologist joining the Department of Anesthesia & Perioperative Medicine. Originally from Charlotte, Brent trained in pediatrics at Children's Hospital of Philadelphia and Anesthesiology/Critical Care Medicine at the University of Florida. Brent returned to Charlotte in 1995 with his wife and 3 daughters. He worked as a pediatric anesthesiologist for 23 years at Carolinas Medical Center. With the kids now grown, Brent has moved to Charleston with his wife Jennifer and is looking forward to meeting and working with everyone at MUSC. Outside the hospital, Brent enjoys hiking, reading, and biking.

Ilka Theruvath, MD, PhD, is a pediatric anesthesiologist who will be re-joining the Department on a part-time basis. She finished her anesthesia residency at MUSC in 2009 and completed her pediatric anesthesiology fellowship at the Children's Hospital of Philadelphia in 2010. Ilka was a faculty member in the Department from 2010 to 2015 and then moved with her husband Tom to Charlotte, NC, where she held a position as staff anesthesiologist at the Charlotte Medical Center from 2015 to 2018. She has two sons, Ben (6) and Leo (3) who keep her busy in her time off work. Ilka is looking forward to seeing old friends and colleagues again and meeting everyone who has joined MUSC in recent years.



The Department of Anesthesia and Perioperative Medicine welcomes Mr. James Masse, MSNA, CRNA, to the University Hospital staff. Mr. Masse is a graduate of the University of Kentucky College of Nursing 2004. After working in the surgical intensive care unit of Chandler Medical Center at UK, he was accepted to MUSC College of Health Professions, Anesthesia For Nurses Program. Upon completion of a Master of Science in Nurse Anesthesia in 2008, he began his practice at St. Francis Hospital in West Ashley. Mr. Masse transferred his practice to MUSC in November 2018. He is excited to be back in an academic institution and looking forward to working with all the talented individuals and teams that practice here.

GRAND ROUNDS FOR THE MONTH OF FEBRUARY



**“Advantages of TIVA”
February 5, 2019
Katherine Tobin, MD, Associate Professor
Dept. of Anesthesia & Perioperative Medicine
Medical University of South Carolina**

**“EP Lecture”
February 12, 2019
Tod Brown, MD, Assistant Professor
Dept. of Anesthesia & Perioperative Medicine
Medical University of South Carolina**



**“Neurosurgeon’s Perspective on the Working
Relationship with Anesthesia”
February 19, 2019
Jonathan Lena, MD, Assistant Professor
Dept. of Neurosurgery
Medical University of South Carolina**

**“Morbidity & Mortality Conference”
February 26, 2019
Team Presentation
Dept. of Anesthesia & Perioperative Medicine
Medical University of South Carolina**





DEPARTMENT OF ANESTHESIA AND PERIOPERATIVE MEDICINE

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Fax: 843-792-9314

[CHECK OUT OUR WEBSITE](#)

Future Events/Lectures

Intern Lecture Series

February 7th—Bleeding and Transfusion, Dr. Roberts, SEI 314
February 21st—Fluids, Electrolytes, Acid/Base, Dr. Heine, SEI 314

CA 1 Lecture Series

February 15-20th—ITE Study/Exam, No Lecture
February 27th—Anesthesia for Neurosurgery, Dr. Whiteley, CSB 429

CA 2/3 Lecture Series

February 11th—OSCE, Drs. Condrey & Francis
February 18th—Visiting Professor Lecture—All Residents, CSB 429

Grand Rounds

February 5th—Advantages of TIVA, Dr. Tobin
February 12th—EP Lecture, Dr. Brown
February 19th—Visiting Professor Lecture, Dr. Lena (MUSC Neurosurgery)
February 26th—Morbidity & Mortality Conference, Team Presentation



I HUNG THE 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. Thank you!



Resident Graduation 2019
Friday, June 14, 2019
Founders Hall

Holiday Party 2019
Saturday, December 7, 2019
Carolina Yacht Club



[Imagine 2020 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 15, 2019.