March was an extremely busy month. In the realm of education, the residents took their in service examination and attended a mini TEE symposium. The department elected our chief residents for next year, Drs. Caroline McKillop and Scott Stewart. I’m sure they will do a phenomenal job. The department matched nine extremely competent first year residents from throughout the country. Al Perrino, MD, Professor Yale School of Medicine gave the annual Joseph S. Redding lecture entitled, “Fluid vs. Phenylephrine ‘A Tale of Dogma and Data’.” This lecture was also our first lecture jointly sponsored by the SCTR Seminar Series.

In clinical care, the Ashley River Tower team participated in the first islet cell transplant at MUSC. In research, the NIH TMS trial enrolled its first patient. The university received NCI center status for the Hollings Cancer Center. MUSC became # 47 in the country in NIH funding, an increase of four places. The department is currently number nineteen in the country, one behind Duke. Yes you read that correctly, the department’s strategic research plan will be discussed in a future edition of Sleepy Times.

Finally, our people continue to excel with Susan Harvey being chosen to be the master of ceremonies for the 8th LDI. She has also been elected as the next UMA treasurer. Her ELAM executive training is already paying dividends. Horst Rieke spearheaded an extremely tight glucose control mechanism for our first islet cell transplantation. Brad Hullett and Tommy Burch kept their cool during a Saturday morning fire outside the university operating rooms. Tony Chipas and the department were recognized for leadership in substance abuse education. The Work Distribution Task Force composed of Cal Alpert, Tommy Burch, Grayce Davis, Larry Field, GJ Guldan, Susan Harvey, Brad Hullett and Michelle Rovner worked tirelessly on creating a new equitable work plan. Over all it was another eventful month!

2009 CPIA Wellness Innovation Award

The Medical University of South Carolina’s Anesthesia for Nurses Program and Department of Anesthesia have been awarded the 2009 Council of Public Interest in Anesthesia Wellness Innovation Award. This award was received for the annual substance abuse education program developed by Tony Chipas PhD, CRNA and Scott Reeves, MD, Chairman of Anesthesia and Perioperative Medicine. This unique program is designed to educate incoming student nurse anesthetists, anesthesiology residents and their spouses or significant others to the signs and symptoms of stress and substance abuse. The session occurs over dinner every August. The program consists of a didactic lecture on substance abuse, watching the ASA’s Wearing Mask video and personal testimony from faculty. The goal is to keep this significant problem facing our specialty in the light and to recruit the spouses and significant others of our trainees as members of our team in combating this problem.
MEET THE NEW CHIEF RESIDENTS

Caroline McKillop is a native South Carolinian that loves the warm weather and people in Charleston! She grew up in Florence, SC with her parents and two sisters. She spent four wonderful years at Davidson College from 1998-2002 and a semester studying Art and Biology in Glasgow, Scotland. During her summers away from college she worked right outside of Charleston at Camp St. Christopher on Seabrook Island. In 2002 she moved to Charleston for medical school training at MUSC and has been here ever since. Caroline is married to John McKillop, and they are expecting their first child in September. She is passionate about spending time with her friends and family, running, reading, cooking, and traveling. She and John hope to settle somewhere in South Carolina after residency.

Scott Stewart, MD

Caroline McKillop, MD

As many of you may already know Scott hails from the frozen tundra of the north they call Michigan. He grew up in a hockey family in Milford, MI with 3 brothers. He went to Kalamazoo College to play football, after realizing that he was not going to be the next LT, he went to Michigan State University. After graduating he and a few friends built and managed a successful ice rink in Lansing, MI and sold it 2 years later. He then went to the University of Michigan and spent 2 years doing transthoracic echocardiography research and intracardiac echo device development, the ones they now use in the cath labs for atrial ablations (cool huh). After realizing his love for medicine, he went to Michigan State University College of Medicine. He did an away month of Anesthesia here at MUSC his 4th year, fell in love with the area and department, and the rest is history. He now lives on Johns Island with his two best friends (Mulligan and Guinness), his chocolate labs, and his girlfriend Kara. He still enjoys a good game of ice hockey at the Carolina Ice Palace, fishing and snowboarding (out west of course). As chief, he will use his leadership, teamwork skills and hard work ethics to make a positive difference in the department and residency.

MESSAGE FROM THE CRNAs at Rutledge Tower

Rutledge Tower has spent the last several months facing new challenges. PICIS is up and running. The staff has adapted well to the new form of charting. Dr. Grace Brown, Tammy Lamont and Deb Feller have been instrumental in customizing the system to our quick pace, high volume cases. Many thanks to Dr. Psenka and her team in the Pre-op Clinic. Their cooperation and team work have helped to facilitate preoperative workups. Cathleen Nixon, NP (ENT Service) has been assisting in the holding area, performing H&P assessments on our patients. Tracy Gordon, NP (Pre-op Clinic) has been phone screening many pediatric patients to help facilitate flow on the day of surgery.

Our case load has increased and is becoming more diverse. We hope to open a ninth operating room by mid-summer. We have become more efficient with our regional anesthesia program by having strong attending support and senior residents designated to perform blocks.

Cecilia Franko, Robin Buchanan, and Alice Michaux have formed an unofficial task force to streamline our supplies. The entire CRNA team is always looking for new ways to cut costs and improve efficiency.

On a lighter note, we had our Rutledge Tower “Christmas Party” in March. It was hosted by Drs. Baker and Wallace. Dr. Baker was kind enough to have the gathering at his home. Everyone attended with their families. We enjoyed oysters on a beautiful Saturday afternoon. Jack Owens, CRNA gave thanks that “we have woven a special family.” In these hard economic times, we are truly blessed.

MESSAGE FROM THE PAIN CLINIC

Excellence is a word too easily used. Like “love,” the term has lost its original meaning, and is often used in a self-serving manner. The “Puzzle Pieces of Excellence” include fundamental and adaptive competencies. Individuals who commit to excellence, and deal with interpersonal stressors, learn to listen effectively, share information, and analyze behavior, thus they bring out the best in people. They also possess the ability to negotiate. Another piece of the puzzle is assertiveness. Excellence means being opinionated!

The Pain Management Clinic has one employee we are proud to label excELLENce. She is committed to making a difference everyday by doing the work uncommonly well even when no one is watching.

We would like to express our gratitude to Ellen McClellan for being an essential piece of the Pain Management puzzle. Everyday you make a difference . . . Thank you!!

Cynthia Fitzgerald, RN
A Message From Your Compliance Manager

As we begin to enjoy our Spring Season we also spring forward into our Annual Compliance Education for 2009. The compliance training deadline for all faculty, staff, and agents of MUSC and its affiliates is Dec. 1, 2009.

Auditing tip:

CCI Policy Manual, Version 13.3, Chapter 2 notes that in order to meet medical necessity for post-operative pain there must be a surgeon’s request and a note on the Anesthesia record that states an epidural was placed for post-operative pain.

Jennifer Simmons, CPC, MA
Leadership Development Institute #8

The College of Medicine held its eighth LDI on February 27, 2009 at Trident Technical College. The theme of the retreat was “A Brave New World: How to Thrive and Not Just Survive.” Our own Susan Harvey, MD, Vice Chair of Clinical Operations was the Master of Ceremony. The keynote speaker was Mr. Robert Dickler formerly the head of the AAMC. This LDI was unique in that specific breakout sessions were offered to the participants on a range of topics including:

- High Middle and Low Faculty Focus- Tools for Managing Performance
- High Middle and Low Staff Focus- Tools for Managing Performance
- Dealing with the Budget and Cuts
- Optimal Financial Data for Successful Clinical Management
- Operational Best Practices in Administration/Research

Dr. Harvey did a marvelous job leading the event and keeping us all on task!

Transcranial Direct Current Stimulation (tDCS)

In 2006 a collaborative effort between the Departments of Psychiatry, Anesthesiology and Surgery at MUSC made us the first group in the world to investigate the effects of transcranial magnetic stimulation (TMS) on post-operative pain. These efforts have yielded some fruit as we are now collecting data for an NIH-funded, double-blind, sham-controlled trial of TMS for the management of post-operative pain. However, we continue to push the envelope here and remain on the cutting-edge of this exciting new area of study...

On March 18, 2009, at MUSC, in another pioneering collaborative effort, investigators in Psychiatry, Anesthesiology and Gastroenterology & Hepatology launched a pilot investigation into the effects of a new brain stimulation technique (transcranial Direct Current Stimulation; tDCS) on post-procedural (ERCP) pain. Studies such as this are not easy to do, and a lot of hard work, thought, coordination, communication, patience and flexibility are required to make them happen.

We will continue to have to work out bugs along the way, but such is the price of traversing uncharted territory. Today’s case went exceedingly well! A special thanks to Dr. Romagnuolo, Dr. Reeves, Dr. George, Dr. Nahas, and the whole team of clinicians and nurses in the DDC today for facilitating this exciting work!

Congrats to all on another "world’s-first" accomplishment at MUSC!

-Jeffrey J. Borckardt, Ph.D.
FIRE AT MUSC!

On March 7th, the OR’s of the Main Hospital were evacuated due to a fire in the area pictured to the right. One of the backup generators was damaged and threatened the use of electrical equipment should the loss of power occur and a hold was placed on all surgical procedures due to this concern regarding backup power supply. This was mostly a nuisance as the physicians and nurses had to play catch-up for the rest of the evening.

In the hospital environment, potential disasters are fueled by the extreme flammability of oxygen, and the presence of heat-generating instruments and other equipment. Our physicians and nurses did a remarkable job evacuating patients and preventing injuries during this scary situation.

To sum up this day, Tommy Burch quotes, “It was really annoying, as we had lots of smoke and water damage but no one was hurt and everything turned out OK.”

Our department matched 3 students for the FAER (Foundation for Anesthesia Education and Research) MSARF (Medical Student Anesthesia Research Fellowship) for this summer: Jeremy Smalley (MS4), Jenna Walters (MS4), and Andrew Voris (MS1). They will be working from May-August. Of note, only 38 scholarships were awarded across the nation. Jeremy and Jenna will be working with Matt McEvoy and John Schaefer on simulation research concerning resuscitation after cardiac arrest. Andrew Voris will be working on several projects in the gastric bypass population with Scott Reeves and Matt McEvoy.

MUSC medical students, John Germeroth and Jenny Matos (pictured to the left) presented research with Matt McEvoy at the 2009 International Anesthesia Research Society Meeting in San Diego, CA on March 21-23. They presented 4 abstracts: one describing the effects of gabapentin on pain scores and opioid consumption after gastric bypass surgery and three concerning simulation education research in ACLS training.

Teamwork is the ability to work together toward a common vision. The ability to direct individual accomplishment toward organizational objectives. It is the fuel that allows common people to attain uncommon results.

-Andrew Carnegie
**WHALE OF A TALE**

It was a great day to be 60 miles out on the maiden fishing trip of Captain Kyle Comley’s “Props to Ya” a 35 foot Contender. For non-boating folks, a beautiful cabin cruiser built for fishing. A higher than normal February temperature and a sun filled sky welcomed us to nearly flat seas that were turquoise blue. Gary Hoefer, myself, plus one other toughed it out on this incredible day that just kept getting better. This time of year is good bottom fishing and today was no exception. It was the kind of trip where as soon as your bait hit the bottom another fish was on, sometimes two! A nice harvest of Vermillion snapper, Porgy, and the catch of the day was an 18 lb red grouper. Dinner was now had. We were heading back to shore around 3pm on a glass like ocean when we noticed a large break in the water, and then another and another. When we got closer to see what it was, it was quite clear we stumbled upon a small pod of Right Whales. Right Whales are a species of whales that live predominantly on the Southeast seaboard. With only 300 left in existence this was truly a chance happening. They are called Right Whales because early whalers found them to be the “right” whales to hunt. They travel about 20 miles off the coast and once harpooned and killed they remain floating, hence easy to harvest. They grow 30-60 feet in length and these today were easily 30 plus feet long. The four we encountered were lumbering on the water top in no obvious hurry to go anywhere and appeared to just be having a good time. We turned the engines off and sat for a good 20 minute show with the whales about 300 feet away. Their graceful movements and obvious good nature were on full display in this environment so peacefully removed from the hard week we all put in. I was able to take some great pictures and have shared them with many of you. I also posted them on Charleston Fishing.com, a bragging site for local fisherman! Sarah Demarco, an avid fisherwoman and anchor person at the ABC station in town, stumbled on the pictures and asked to use them for a story she was doing on Right Whales. I gave her permission to use them, and she was also gracious enough to come to the hospital and interview me as part of her story. Kyle Comley ditched me on that part, and I had to meet this beautiful anchorwoman by myself. I guess one of the harder aspects of fishing. -Michael Wolfman, CRNA

**TRANSCRANIAL MAGNETIC STIMULATION NIH TRIAL OFFICIALLY BEGINS**

After significant fanfare, the first TMS post operative pain patient was treated on March 11, 2009. The hard work of recruiting 150 patients in two years has just begun. Our first patient, an engineer, was fascinated about the science behind the study. He did extremely well. His wife was also very pleased and asked to be a part of our team photo.
Chronic Pancreatitis

Chronic pancreatitis affects 8-10 new patients per 100,000 people each year and has a prevalence of 26 per 100,000 people. Those who carry the diagnosis have a diminished 5 and 10 year survival. Treatment begins with conservative, medical therapy consisting of alcohol abstinence, enzyme replacement, octreotide, acid reduction, appropriate analgesia and can progress towards more invasive measures such as celiac plexus blocks and endoscopic stenting. Surgery is considered for intractable pain unresponsive to medical management. Fortunately, total pancreatectomy alleviates pain in 72-100% of patients. Unfortunately, difficulty controlling the subsequent diabetes occurs in up to 75% of patients. The resulting brittle diabetes ultimately is responsible for 50% of the postoperative deaths.

Islet Autotransplantation after total pancreatectomy can ameliorate the brittle diabetes and improve patient morbidity. Two more patients will have this procedure in the near future.

Islet Cell Preparation

After removal of the pancreas, the pancreatic duct is flushed with solutions containing digestive substances / enzymes. The pancreatic tissue is closely monitored with a variety of parameters indicating when to stop this “digestion” and when to “rescue” the islet cells from the remaining pancreatic tissue. The islet cells get isolated and prepared for injection into the portal vein. This preparation took 5 to 6 hours in our case (the time the islet cells are out of their physiologic environment and in vitro). The injectate causes variable thrombosis of the portal venous system. Since the islet cells have to get comfortable in their new surroundings (liver tissue with portal venous thrombosis), they need all their remaining strength to “settle” and to “build up their new home” included making friends with strange neighbors. So they should not get any additional oxygen consuming work, like producing insulin, hence the emphasis on tight glucose control.

The Patient

The patient is a pleasant 48 year old female who initially presented to MUSC in 2007 regarding her episodic abdominal pain and nausea and multiple episodes of pancreatitis. After unsuccessful attempts at treating her pain with endoscopic procedures and despite multiple previous abdominal operations, including a gastric bypass in late 2007, she underwent an open surgical sphincteroplasty for sphincter of Oddi dysfunction. Despite this, her chronic pain and nausea worsened. On March 9th, 2009, she presented for total pancreatectomy with islet cell autotransplantation - a first at MUSC.
**ISLET CELL AUTOTRANSPLANTATION CONTINUED...**

**The Procedure**

The patient was anesthetized in the OR by Jake Abernathy and Marianne Fiutem. During the interventional radiology portion she was managed by Marianne and Horst Rieke.

She presented in good health and in good spirits for her pioneering role at MUSC. Her intraoperative anesthetic plan did not differ greatly from most of the pancreatic procedures done at MUSC. She was offered and accepted a thoracic epidural for her postoperative pain control which was placed preoperatively. A thoracic epidural catheter is very helpful because good pain control is essential to good glucose control. Once asleep in the OR, an arterial catheter and central venous catheter were placed. Given her extensive previous intraabdominal operations, a large degree of blood loss was expected but never materialized. We anticipated wide swings in her blood glucose and checked it frequently but this turned out to largely be a postoperative issue. She left the OR with her insulin drip paused. After a successful total pancreatectomy, she was taken to the DDICU intubated and sedated on propofol where she awaited her islet cell preparation.

Preparation of the islet cells takes several hours and once the cells were ready, the patient was transported to interventional radiology. Anesthesia was maintained and the blood sugar was controlled by Ms. Fiutem, Dr. Rieke, and a DDICU nurse. The radiologist obtained transcutaneous and transhepatic access to the portal vein. This is not a particularly painful procedure but the patient must remain motionless.

The infused solution contains albumin, 5000 units of heparin, and the islet cells in a volume of around 300 cc’s and it looks like platelet transfusion. The infusion is from two separate bags which require continuous stirring and each requires about a forty-five infusion time. During infusion of islet cells the portal venous pressure increases and in this case it increased from 4 mmHg to 17 mmHg, due to inflammation from the coating of the islet cell preparation and their thrombogenic effect. Concerns were bleeding due to increased portal venous pressures and transhepatic approach, thrombosis of the portal venous system, and blood glucose control. After the approximately two hour IR procedure, she was extubated soon and without problems.

**Blood Glucose Control**

Intraoperative and postoperative blood glucose control is critical and should be kept precisely between 90 and 120 mg/dL. Using the Insulin Calculator of the MUSC net was a good idea (every one is used to it and it did a really good job). Starting the insulin drip during the surgery and having time between the procedures in DDICU to learn how the patient’s blood glucose responds to the insulin was also extremely helpful. Almost all values prior to the islet cell infusion were slightly out of range, but with the beginning of the infusion, they finally “behaved” more. Glucose measurements were checked every 20 minutes. That may have been extreme but it helped us to adjust it properly. Later on, the intervals were extended to 30 and 60 minutes. The insulin drip had its own dedicated IV access. The glucose ran out of range only when the patient had episodes of pain during the night, so the pain control concept is important for the glucose control as well. She had the thoracic epidural with 5 cc/hour of 0.2% Ropivivaine which was increased to 8 cc/hour as well as fentanyl boluses and a Dilaudid PCA the next morning.
Please Help Us Welcome Our 2009 Interns!

Matt Crumpler  
MUSC

Kyle Branham  
MUSC

Young Choi  
MUSC

James Perrott  
Wake Forest University

Wendy Suhre  
University of Arizona

Matt Elliott  
University of South Carolina

Alan Mann  
Kansas City University

Trevor Adams  
Eastern Virginia Medical School

Bennett Cierny  
Tulane University
SCTR SEMINAR SERIES
Joseph S. Redding Lecturer
Co-Sponsored by: Anesthesia and SCTR

“Fluid vs Phenylephrine ‘A Tale of Dogma & Data’”

Albert C. Perrino, Jr., MD
Professor
Cardiac & Pediatric Anesthesiology
Yale School of Medicine

Tuesday, March 24, 2009
College of Health Professions, Room 204A
6:30 AM – 7:30 AM
Enter through 2nd Floor Door by Ashley/Rutledge Parking Garage
Refreshments Provided

In honor of his accomplishments, the Joseph Redding, MD Critical Care Fund was established to support the department and the University in their missions of service in patient care, research and education.
Introduction to Transesophageal Echocardiography
March 28, 2009
Gazes Auditorium, Charleston, SC

Course Purpose: This course is designed to benefit anesthesiologists interested in learning about perioperative transesophageal echocardiography (TEE) and intent upon gaining sufficient knowledge and experience to integrate this modality into their clinical practice. The scope and pace of this course is specifically designed for those with little or no TEE experience.

Learning Objectives: Upon completion of the course the participant should:
- Understand the basic physics of ultrasound imaging: understand the operation and optimization of TEE ultrasound machines; be able to understand and interpret 2-D TEE images of the normal heart; be able to recognize global and regional left ventricular dysfunction; be able to recognize significant aortic, mitral, and tricuspid valve pathology; be able to assess left and right ventricular filling; be able to apply TEE outside of the operating room.

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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>7:30 – 8:00</td>
<td>Breakfast</td>
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<tr>
<td>8:00 – 8:30</td>
<td>How TEE Images are Created (US Physics) Will Whitney, MD</td>
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<td>8:30 – 9:00</td>
<td>Making a Perfect Image (Knobology) Jake Abernathy, MD</td>
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<td>9:00 – 9:45</td>
<td>The Standard Exam</td>
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<td>9:45 – 10:15</td>
<td>Leg Stretch</td>
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<td>10:15 – 10:45</td>
<td>The Main Squeeze (Ventricular Function)</td>
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<tr>
<td>10:45 – 11:30</td>
<td>Going With the Flow (Doppler Echocardiography and hemodynamics)</td>
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<tr>
<td>11:30 – 12:15</td>
<td>Lunch</td>
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<td>12:15 – 13:00</td>
<td>Mitral Valve</td>
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<td>13:00 – 13:45</td>
<td>Aortic Valve and Aorta</td>
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<tr>
<td>14:15 – 14:45</td>
<td>Can we use this thing outside the OR? (TEE for the ICU)</td>
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<tr>
<td>14:45 – 15:15</td>
<td>Wait, this isn’t TEE (Epicardial and Epiaortic Ultrasound)</td>
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<tr>
<td>15:15 – 16:00</td>
<td>Little Boy Blue (Congenital Heart Lesions)</td>
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Scott Reeves, MD
Livis Marica, MD
GJ Guidan, MD
Scott Reeves, MD
Cesar Rodriguez-Diaz, MD
Will Whitney, MD
Will Whitney, MD
Tommy Barch, MD
I Hung The Moon!

The departmental members below have been recognized by our patients and their peers. This month’s drawing winner is Dr. Frank Overdyk!

Anthony Consonery- For service above and beyond the expected standard in supporting the main OR and periphery areas on 2/19/09. Excellent work! 2 techs in 16 rooms!

James Williams- For outstanding support of the anesthesia department being one of only two techs covering the main OR on 2/19/09. 2 techs in 16 rooms! Great job!

Eric Pourmand- Going above and beyond to make sure a patient on Labor and Delivery was able to get an epidural. He helped coordinate all necessary tests so the patient could get pain relief.

Carol Martin- Her excellent work ethic, professionalism, adaptability, and respect shown to patients and co-workers over the last 10 weeks despite staffing shortages and restructuring. She continues to demonstrate leadership while being a true and dedicated team player.

Vic Bansal- Going the extra mile to help the Anesthesia Interest Group by being a panelist at the meeting on 2/23/09 and discussing the ins and outs of private practice. Thanks for your time and willingness to participate.

Matt McEvoy- Always going the extra mile to make each situation a ‘teachable’ moment. Always showing appreciation for all co-workers and support staff.

Ray White- For being an outstanding break buddy. Thanks for the coffee talk.

Dr. Overdyk- Great bedside manner. The patient said she was uneasy and you made her feel comfortable and explained the process to her. She thanks you for a job well done!

Heather Highland- Always having a smile.

Michelle Rosecrans- Lending a helping hand whenever, wherever.

Tommy Burch- Great attitude, strong patient advocate, always willing to go the extra mile. Stayed late to finish a case and support a patient to PICU.

SAVE THE DATE

Department Night at the Riverdogs

After such a great turnout last summer, the Department of Anesthesia has decided to sponsor another Night at the Riverdogs. This year’s event will be held on Saturday, July 18, 2009. RSVP information to come!

We hope to see you there!