



SLEEPY TIMES

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SEPTEMBER 2009

MESSAGE FROM THE CHAIRMAN -SCOTT REEVES, MD, MBA

The department recently held our joint substance abuse dinner with our incoming residents, SRNAs, and their spouses or significant others. Last year was very difficult for the department as we initiated treatment for one of our own who suffered from substance abuse. Fortunately, the department was able to intervene in time.

I am constantly trying to ingrain in my children that "I am (we are) just one mistake away from blowing it." I can not take credit for the saying in that my pastor, Buster Brown of East Cooper Baptist Church, states it in his Sunday message almost weekly. The pretext of the statement means that we all have to be constantly on guard to protect ourselves from seemingly simple errors in judgment that can lead to addiction to narcotics, alcohol, gambling or infidelity, for example.

In contrast, my children and we are constantly hearing the media portray these events as innocent, but they are not. We have all heard the slogan, "What happens in Vegas stays in Vegas." The truth is that we always bring Vegas home with us; and many of the things done in Vegas ought not be done. So how do we protect ourselves from this 'one dumb mistake'? The first way is to recognize that it could easily happen to me, which requires humility. The second way is to have an individual or group of people who will hold us accountable for our actions, which requires transparency at least with a few. This individual could be a parent, spouse, roommate, classmate, faculty member or another resident. It has to be someone who will pull us aside and ask "what are you doing?" In the month of August, the topic of substance abuse was introduced to our new residents and SRNAs. During this time of reflection, I plead with the whole department to develop an accountability relationship with someone. I encourage you to do it today. It might just save your life, marriage, family, or career.



SPECIAL POINTS OF INTEREST:

- *Mark George: Treating Depression with Electro-magnet*
- *Pioneering Brain Stimulation Technologies for Pain Management*
- *HeartMate II Left Ventricular Assist Device (LVAD)*



The *Best Doctors in America* database is a valued resource that includes the names and professional profiles of approximately 45,000 of the best doctors in the United States. An exhaustive peer-review by thousands of doctors determines the physicians included in the database. Only those who earn the consensus support of their peers as well as meet additional qualification criteria are included.

Congratulations to the following faculty for their recognition in the Best Doctors in America for 2009-2010

*Calvert Alpert Kim Payne
Melinda Bailey Jerry Reves
Latha Hebbert Scott Walton*

INSIDE THIS ISSUE:

New Faculty	2
PICIS Pearls	3
Mark George	4
TMS Article	5
LVAD Article	6
Resident Updates	7
Excellence	8

MEET THE FACULTY

Marc Hassid, MD

Marc Hassid grew up in Houston, TX. He went to the University of California at Davis for undergraduate (economics) and stayed there for medical school. He did an internship in Bakersfield, CA before going to St. Louis, MO for residency at Washington University. He stayed in St. Louis to do a one year pediatric anesthesia fellowship at Saint Louis Children's Hospital. He and his wife, Kristen, are expecting their first child in January.



DR. GJ GULDAN NAMED ASSOCIATE RESIDENCY PROGRAM DIRECTOR



GJ Guldan was born and raised in Sumter, South Carolina. After attending high school at Wilson Hall, he moved on to attend the USC Honors college (THE REAL USC - well in baseball anyway), where he received his Bachelors degree. He then attended the USC School of Medicine for his medical / intramural basketball training. After emerging from USC with an MD, a championship and a bad knee, he headed to Charleston to complete his Internship and Residency at MUSC. GJ then decided to stay on for an extra year to complete his training with a fellowship in Cardiac Anesthesia at MUSC. After completing his fellowship in 2008 he signed on to become a member of the faculty in the Cardiothoracic division. In his spare time he enjoys half of Gamecock football seasons, travel, lifting weights, playing golf, and all forms of Motorsports except NASCAR. Please congratulate him as he takes on this important departmental leadership role.

MESSAGE FROM THE PRE OP CLINIC

CHANGES - Rutledge Tower Preop Clinic has instituted some great changes over the last 8 weeks in order to help improve the overall flow of information and volume of patients that require a preanesthesia evaluation started prior to the day of surgery. With the help of the RN staff, we were able to process over 1000 patients per month in June and July through patient visits, phone screens, and chart data entries. That's an increase of over 30% from previous months. Nancy Kitten, CRNA says "it has changed her life" in the ambulatory OR. The RN priorities have been ambulatory OR patients, next day 1st and 2nd cases in the main OR without anesthesia records, and pediatric NORA cases. The NP priorities have been Drs. Howard, McFadden, and Shealy patients and orthopaedic joint patient chart reviews. Our goal is to have the majority of our ASA 1 and 2 level patients screened over the phone or by chart review and leave walk-in clinic visits for our ASA 3 and 4 level patients.

FEEDBACK - We want yours! Improving OR efficiency is a priority for both the RT Preop Clinic (which handles ambulatory OR and main OR patients) and the ART Preoperative Assessment Testing (PAT) Unit. If there is a problem that could have been prevented, please contact Buddy Inabinet, MD with the date, reason, and MRN of any patient cancelled or delayed in ART or contact me for any patient cancelled or delayed in the ambulatory or main ORs. We are continually trying to improve this process for you and our patients. Your feedback helps us be better.

Best regards,

Tam

Contact Information:

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Tam Psenka, MD

PICIS Pearls: by **Pat Tobin**

Well, it has been a couple of months now since we started our new computerized charting system, PICIS. I think the reviews among our group are generally mixed. There are those that seem to have embraced it (or at least tolerate it) and then there are those that are struggling. In an attempt to make life a little easier and your BP a little lower, here are a few PICIS Pearls.

- If you are entering a patient for a pre-op please make sure that you count the numbers in the MRN and that there are 9 numbers. If not just add some zeros at the front to make the MRN 9 numbers.
- Always print your pre-op before heading to the room. It makes breaks & lunch report as well as PACU handoff that much easier and ultimately safer for the patient.
- The patient summary page under the edit tab is very helpful. This short summary of history, meds, fluids, procedure, etc. is especially helpful to anesthesia staff in the PACU if they need case info in a hurry, e.g., pain meds given, antihypertensives, etc.
- If you access a patient protocol before heading to the OR, you can enter a set list of meds that you may use or you can just select individual meds. Even if you don't use them you can easily delete them from the discontinue order button. It is much easier to do this than to have to enter 1 medication at a time. Also you can do this for any fluids, products or drips that you may use and again, may be easily deleted with just a touch of a button if unused at the end of the case.
- If you have a case that will be a quickie or very labor intensive ask for help or pre fill in your induction macro, anesthesia ready macro and anything else you can get on the chart and change the times at a less hectic part of the case. Remember you can always add stuff in PACU if needed.
- If it makes you crazy when trying to enter drugs and the time default is on 1 minute intervals or if you select your drug then scroll back in time and your drug drops down out of sight again, hit the freeze button, select a 5 min interval or just choose the medication summary on the left hand side. A list of all your meds will appear and you can enter the appropriate time or times for multiple drugs.
- When looking at the fluid summary, there is a small icon on the left. By clicking it you get a detailed report of your fluids that I find this easier to read than a pie chart.

Remember to print your charts with the anesthesia end time calculated and give it to the ICU staff so that it can be put on the patient's hard chart.

I am sure that there are dozens more time saving and aggravation saving steps that many of you are currently using. I would be happy to pass these on in subsequent articles. Please email me, Heather Highland, or Ray White and we'll get the info out.

MEET AND GREET THE NEW CARDIOTHORACIC FACULTY

The division of cardiothoracic anesthesia and cardiothoracic surgery recently held a meet the new CT anesthesia and surgical faculty drop in at the Charleston Country Club. Recognized were Drs. Chad Denlinger (Thoracic surgery), Alan Finley (CT anesthesia) and Will Yarborough (Cardiothoracic surgery).



From left to right: Dr. Chad Denlinger, Dr. Alan Finley, and Dr. Will Yarborough

RESEARCH UPDATE

Over the next several months, *Sleepy Times* will be featuring a special section on our department's research initiatives. This section will be designed to highlight an area of active research and to encourage wider participation by the faculty. In this issue, Transcranial Magnetic Stimulation (TMS) is highlighted. Mark George in the department of psychiatry has developed this technology to the point that it is an FDA approved treatment for depression. He has been named one of fourteen medical pioneers who are not holding back by *US News and World Report*. Through a collaborative relationship with his team including Jeff Borckardt, our department's NIH funded research on the effect of TMS in postoperative pain was born. Please read about Dr. George's honor and our work with TMS.



Mark George: Treating Depression With an Electromagnet

Transcranial magnetic stimulation could have many other medical uses, too, says the neurologist

By [Ford Vox](#)

Posted June 30, 2009



Unlike some, Mark George didn't believe that electroconvulsive therapy for severe depression amounted to torture, but he did think the seizures at the heart of the treatment were unnecessary. When he said so at a national psychiatric conference in 1994, his colleagues kicked him to the curb to join the anti-ECT protesters. Justice was served last fall, when the Food and Drug Administration approved George's far gentler alternative—transcranial magnetic stimulation. In an international trial, depressed [patients](#) who hadn't been helped by drugs improved markedly after four weeks of daily, 40-minute TMS sessions. Two more weeks doubled the rate of relief.

In TMS, intense magnetic pulses are aimed at a particular part of the brain to induce a burst of electrical activity. TMS doesn't cause seizures, and anesthesia, required prior to an ECT session because of the seizure-related convulsions, isn't needed. The only [side effect](#) that bothers some patients is a sensation akin to tapping on the skull.

George didn't invent the TMS machine (essentially a powerful electromagnet). More than 20 years ago, scientists were beaming TMS pulses at different locations in the brain to observe how the body reacted. In 1989, while in London to work with TMS as a research tool, George was in an elevator when a fellow passenger exclaimed, "Someone just made my thumb move with a magnet on my head!"

TMS, George came to realize, could be more than a tool for studying the brain. He wondered whether TMS could re-energize the brain's left prefrontal cortex, where in depression the nerve cells turn sluggish, consuming less oxygen and glucose and firing unenthusiastically. His London colleagues didn't jump on board. "Why would you ever want to do that?" one inquired skeptically. Even to George, who now directs the Center for Advanced Imaging Research and the Brain Imaging Center of Excellence at the Medical University of South Carolina, his therapy sometimes seems a little nutty: "I think of that Steve Martin movie *The Jerk*, where he invents these Opti-Grab [eyeglasses](#) that have the unfortunate side effect of making everybody cross-eyed."

Mark George Continued...

But TMS is far from nutty. George recently published a study showing that brief pulses of TMS as surgery patients roll out of the OR reduce their need for pain relief from a morphine pump. TMS may speed the excruciating process of post-stroke rehabilitation, lower the volume of auditory hallucinations and ringing in the ears, and provide a mid-flight attention boost to [fatigued](#) pilots. That's drawn the Pentagon's interest. George sees endless ways to refine the technology—reducing the number of treatment sessions, for example, if, as he suspects, the brain can tolerate more stimulation over less time. Meantime, to depressed patients for whom drugs haven't worked, six weeks of painless, noninvasive therapy counts as a vast improvement.

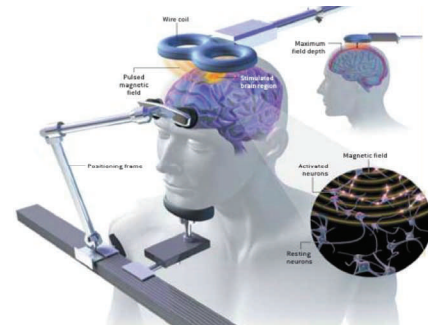
Pioneering Brain Stimulation Technologies for Pain Management at MUSC

In 2005, the Department of Anesthesiology and Perioperative Medicine and the Department of Psychiatry and Behavioral Sciences at MUSC joined-up to begin an intriguing line of brain-based pain management research. At that time, Drs. Jeff Borckardt, Scott Reeves and Mark George teamed-up to investigate whether a new brain stimulation technology called transcranial magnetic stimulation (TMS) could be used to reduce pain. Over the past several years, they have headed several inter-disciplinary teams of investigators from both departments examining the effects of TMS on laboratory-induced pain, chronic pain syndromes, and perioperative pain.

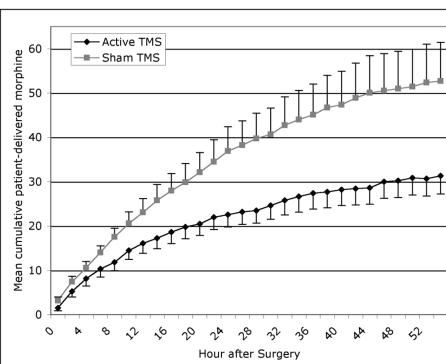
TMS involves specialized equipment that passes a brief, high-intensity electrical current through a figure-8 shaped coil. This electrical current creates a focal, pulsed magnetic field that can pass through a person's hair, scalp and skull unimpeded and causes firing of neurons on the surface of the brain. Investigators can selectively activate or deactivate different brain areas depending upon the frequency and intensity of the stimulation used.

In a laboratory-pain study published in the journal *Pain Research and Management*, we found that high-frequency stimulation of the left-prefrontal cortex (an area thought to be involved with inhibiting negative affect and pain) was associated with a significant increase in thermal pain thresholds in 20 healthy adults. A follow-up clinical pilot study published in *Pain Medicine*, found that 3 sessions of left prefrontal stimulation with TMS was associated with a significant reduction in average daily pain ratings in patients with chronic neuropathic pain. In an ongoing NIH sponsored study, the investigators are systematically evaluating the optimal brain targets and TMS device settings for the management of acute and chronic pain.

Illustration of the TMS technology from Dr. George's 2003 article in *Scientific American*.



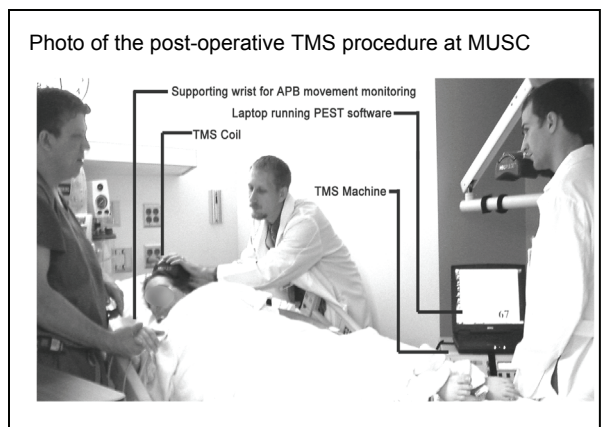
Patient-controlled analgesia use following surgery among patients receiving real or placebo TMS



In a pioneering series of studies, Drs. Borckardt and Reeves became the first in the world to investigate the effects of TMS on perioperative pain. The investigators conducted 2 independent pilot studies where they provided 20 minutes of real or placebo TMS to bariatric surgery patients immediately following surgery. Patient-controlled morphine use was tracked over the following 48 hours. These studies, one published in *Anesthesiology* and the other published in *Brain Stimulation*, showed that the patients that received real TMS used 40% less patient-administered analgesia than those receiving placebo. Drs. Borckardt, Reeves, Abernathy and Field currently have funding from the NIH to conduct a larger scale, controlled investigation of the effects of TMS on perioperative pain. This study is currently ongoing at MUSC.

TMS CONTINUED...

The TMS team has recently teamed-up with investigators in several other departments to examine the effects of TMS and other minimally invasive brain stimulation technologies on chronic pancreatitis pain, fibromyalgia pain, trigeminal neuralgia and post endoscopic retrograde cholangiopancreatography pain. Depending on the outcome(s) of these pilot studies, the investigators plan to continue to pursue extramural funding to support the development of minimally invasive brain stimulation technologies for the management of pain. There may be a real future for TMS and other brain stimulation technologies in the management of pain because the risks are minimal, and the treatment does not involve the use of any medications that might have unwanted side-effects and other more systemic health consequences.



As new treatment options are evaluated, this technology is ripe for expansion of the investigative team of physicians. If you are interested in becoming involved, please talk with Drs. Reeves and Borckardt.

HEARTMATE II LEFT VENTRICULAR ASSIST DEVICE (LVAD)

MUSC's Heart & Vascular Center is the first and only medical center in South Carolina to offer the Thoratec® HeartMate II Left Ventricular Assist Device (LVAD) as a treatment option for advanced-stage heart failure patients. As the state's only transplant center and most advanced heart and vascular center, MUSC was selected to offer the revolutionary mechanical circulatory support therapy as a bridge-to-transplant treatment option following FDA approval of HeartMate II in 2008.

HeartMate II at a Glance

HeartMate II is the latest FDA-approved LVAD for the purpose of providing a bridge to transplant.



- It is smaller than previously approved LVADs
- Intended for a broad range of advanced-stage heart failure patients, including women
- The device can pump up to 10 liters of blood per minute, covering the full output of a healthy heart
- It is implanted alongside a patient's native heart and takes over the pumping ability of the weakened heart's left ventricle.
- HeartMate II is easier to implant than previous devices, and with only one moving part
- It is designed to provide exceptional reliability and improved quality of life for patients.

The device is designed to have a much longer functional life than the previous generation of LVADs and to operate more simply and quietly

The HeartMate II currently is in clinical trial for use as Destination Therapy for advanced heart failure patients who are ineligible for cardiac transplantation.

MESSAGE FROM THE RESIDENTS

New Beginnings!

There have been many changes in our department, but one that is hard not to notice is all the big bellies! Many attendings have recently added new members to their families and now there are many residents who will be doing the same. I'm thinking there might be something in the anesthesia water.

As many of you know, I'm a reality show junkie. As a spinoff of "16 and Pregnant" (of which I never missed an episode), I would like to star in my own reality series "Resident and Pregnant" to answer the question I'm sure everyone wants to know - What is it like to be pregnant during residency? The following would be a few of the show's highlights:

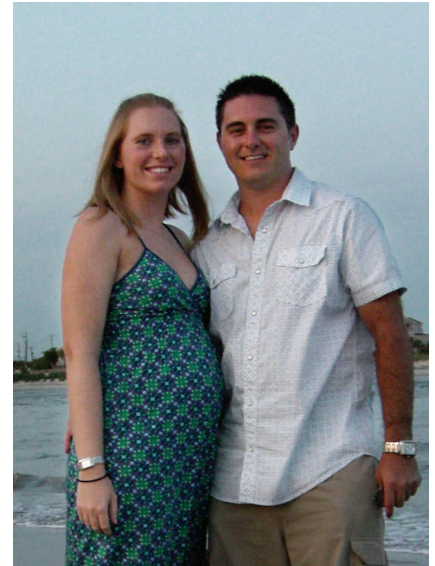
Before I even know I'm pregnant, Will Hand keeps telling me "Missy you look tan," even though I'm fair-skinned. Next, as Will sends out a group email announcing he and Megan's impending parenthood, my husband Ryan and I try to steal their thunder by doing the same. By six weeks I'm keeping Ryan busy making friends with the Walgreen's pharmacist and GlaxoSmithKline (maker of Zofran) has to step up production due to my morning sickness (aka all day and night sickness). Shots of me are shown in the OR constantly popping gum and candy while waiting to get relieved for a break. Producers constantly try to catch Ryan off-guard as he tries his hardest not to fuss about getting up and driving me to and from work every day so I don't have to make the long walk from the parking garage.

As the second trimester begins and the morning sickness slowly fades away, the baby bump becomes more prevalent. At the anesthesia residency graduation dinner, baby bellies seem to be the fashion look of the season. I soon begin to have more energy and most of the sickness has faded. Then, as I transition from my second to third trimester, a month in the ICU comes, followed by Hearts and an overloaded call schedule as to not get behind during maternity leave. Ratings for the show start to suffer as the fatigue of the first trimester come back and my activities revolve around eating, working, sleeping, and frequent bathroom breaks. These bathroom breaks prove to be one of the biggest obstacles being a 'resident and pregnant.' Luckily the CRNA coordinators and attendings are pretty understanding, even when it's only a matter of 10 minutes between breaks at times. Also, around this time OB appointments are required every 1-2 weeks. The producers put together a lovely montage of frustrating conversations with the scheduler as I am always explaining how I can only come in on post call days and late appointments.

Although the show is still filming, I have an idea the final episodes will include getting bigger, pestering my husband to get the baby's room ready, baby showers, and playing the waiting game. Realizing my thoughts of becoming a reality star on "Resident and Pregnant" will never happen, I would gladly do without the fame and fortune just to be a star mom.

Over the past two years I've been told time and again that the best time to have children is during residency. I am now beginning my third trimester and feel that it's never a bad time to have children. I love being pregnant. The sickness, exhaustion, stress and pain are all negated by the love for the little one and excitement of becoming a new parent. I would like to thank everyone in the department for their kindness and support, congratulate all of the recent births and those who will soon be parents, and thank Tara Alhberg for throwing all of us preggos a shower. Additionally, Suzanne, I'm sure we all share the same sentiment in saying you will be greatly missed and have been much appreciated.

Dr. Melissa Reed





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CHECK OUT OUR WEBSITE AT:
[HTTP://WWW.MUSC.EDU/ANESTHESIA](http://www.musc.edu/anesthesia)

Future Events

- 8/31- Maternal Physiology "All Residents"
Dr. Amy Cassidy
- 9/1- Obstetric Pharmacology and Fetal Assessment
(Grand Rounds), Dr. Latha Hebbar
- 9/7- Pathophysiology of Complicated Pregnancy "All
Residents" Dr. David Warters
- 9/8- M&M, Dr. Susan Harvey
- 9/9- Journal Club, Drs. Nobles, Reed, and Taylor
- 9/14- OB Anesthetic Techniques "All Residents"
Dr. Cynthia Wong, Northwestern
- 9/15- OB Anesthetic (Grand Rounds)
Dr. Cynthia Wong, Northwestern
- 9/16- Echo Review, Dr. Jake Abernathy
- 9/21- Resuscitation of the Newborn "All Residents"
Dr. Michelle Rovner
- 9/22- M&M, Dr. Susan Harvey
- 9/28- Preeclampsia "All Residents" Dr. Amy Cassidy
- 9/29- Anesthetic Management of Common Pediatric
Emergencies (Grand Rounds), Dr. Cesar Rodriguez-
Diaz

SAVE THE DATES:

- The Department holiday party will be Saturday, December 12, 2009 at the Old Exchange Building
- Next Year's Resident Graduation will be Friday, June 4, 2010



I HUNG THE MOON!

The departmental members below have been recognized by our patients and their peers. This month's drawing winner is **Peter Goodnight!** Peter will receive a gift certificate to Hominy Grill.



Jerrell Brown, Wes Hudson, Peter Goodnight, and Scott Stewart - The kindness and compassion you showed me and my family during my mom's hospitalization.

Larry Field - Excellence in patient (and family) care during mom's hospitalization. You were incredible in not only caring for mom, but in caring for all of us. Thank you for everything.

Tara Ahlberg - Taking initiative to set up all the trauma rooms before leaving for the day. Thanks for being a team player.

Monica Williams - Going above and beyond normal resident duties to help a classmate during difficult times. Way to be a team player and great job!

Jay Motley - Going above and beyond clinical duties to assist a fellow resident during tough times. He displayed excellent leadership skills during a busy call shift.

Standard of the Month...

I will show respect for all employees.



We Would Love to Hear From You!

If you have ideas or would like to contribute to *Sleepy Times*, the deadline for the October edition will be September 21, 2009.

This Month's Contributors:

Scott Reeves, Marc Hassid, GJ Guldan, Tam Psenka
Pat Tobin, and Melissa Reed