Department of Anesthesia And Perioperative Medicine

Sleepy Times

Volume 9, Issue 8 August 2015

Inside this issue:

Message from the Chairman:

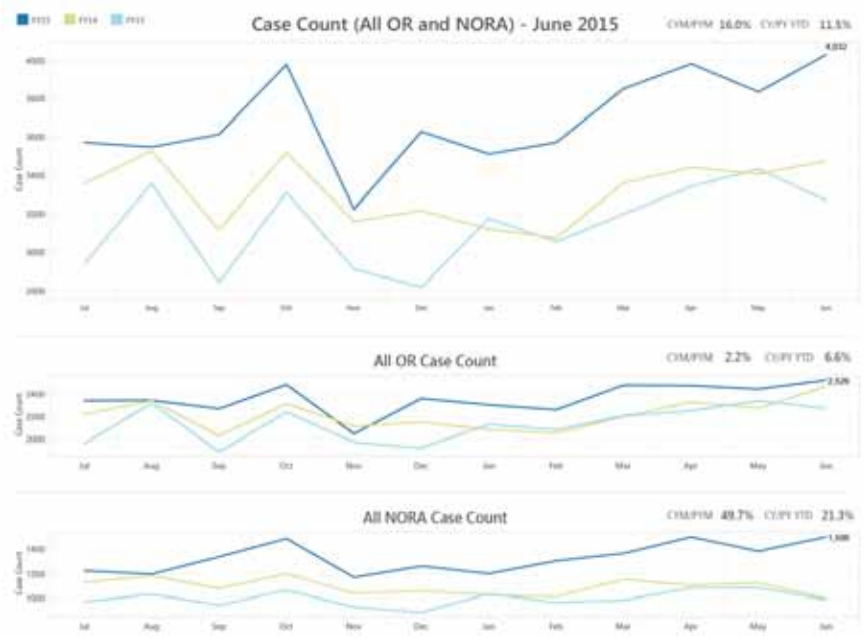
-Scott T. Reeves, MD, MBA

Welcome to FY 6 and The State of the Department

I cannot believe that July is already over. Our new interns are getting adjusted to life on the floors and our CA1's have completed their second month with us in the operating rooms. LIFE IS GOOD!

We also had a very nice department get together at Blackbaud Stadium. This year the weather was perfect.

Each July, I present a State of the Department address and this year we have a lot to be thankful for. In particular, we have a new MUSC president, Dr. David Cole, who has a vision to unite all of us on campus. This is being played out in MUSC's new strategic plan development. The clinical enterprise is seeing significant growth as outlined in the figure below which shows a 6.6% increase in operating rooms and 21.3% increase in NORA sites volumes. This translates into an 11.5% growth rate for anesthesia services last year.



We also have a lot to look forward to as we reach our milestones to begin construction on our Children's Hospital and Women's Pavilion building in early 2016. There were also significant personal achievements as well that are too numerous to mention. Please take a moment to review my presentation if you were unable to attend. Click Here

As we start FY16, it is a personal honor and blessing to be your chairman.

MUHA FY15 FINAL SCORECARD

MUHA ended the year doing well in the people and finance areas. The people pillar demonstrated significant improvement in employee engagement, physician satisfaction and overall teamwork. In finance, the hospital's total cash on hand at the end of FY15 exceeded their goal to be able to go to HUD to request funding for the new Children's Hospital and Women's Pavilion.

ANESTHESIA GRAND ROUNDS: *RACIAL AND ETHNIC DISPARITIES IN ANALGESIC MANAGEMENT* BY GUEST SPEAKER: PALOMA TOLEDO, MD, MPH, NORTHWESTERN UNIVERSITY FEINBERG SCHOOL OF MEDICINE

On July 7, 2015, the department heard an excellent lecture on racial and ethnic disparities in Analgesic management. If you missed the lecture I would encourage you to listen to it on tegrity HERE

MUHA FY16 LEM GOALS

Each year the department is given a set of goals from the hospital in which to improve upon. This year we continue to work on two from the past (patient satisfaction and anesthesia in room start times). Please note that we only have two patient satisfaction questions on the survey:

1. Anesthesia Provider showed concern and sensitivity to my needs, and
2. Anesthesia provider explained my anesthesia in a way I could understand.

The in room time goal has been facilitated this year by allowing us the ability to document delays directly into EPIC. See how to do it elsewhere in *Sleepy Times*. In addition, starting in August we will be able to enter the operating rooms earlier. Our two new goals involve developing a quality assurance reporting database in REDCAPs. I want to thank Dr. Susan Harvey for the significant amount of work she has put into this project. I hope to roll it out in a couple of months. Finally, the Faculty will be asked to increase our participation in the Culture of Safety survey.

FY16 GOALS

	SERVICE	QUALITY	QUALITY	FINANCE
Weight	**25%**	**25%**	**25%**	**25%**
Target:	**Patient Satisfaction**	**QA**	**Culture of Safety**	**Anesthesia In-Room 1st Case Start Times**
Goal:	Maintain or improve the mean patient satisfaction score for the 2 survey factors in which Anesthesia has significant control or influence 1. Anesthesia Provider showed concern and sensitivity to my needs 2. Anesthesia provider explained my anesthesia in a way I could understand	Develop and Implement a Quality Assurance Database in RedCaps	Increase anesthesiology physician faculty participation in the culture of safety survey (% participation)	Achieve an average of 85% compliance with 1st case start times for Anesthesia faculty

TRAVEL + LEISURE NAMES CHARLESTON BEST CITY IN U.S. AND CANADA THIRD TIME IN A ROW! CHARLESTON WAS NAMED #2 BEST CITY IN THE WORLD AS WELL

[Click Here To View Article]

MEET MICHAEL DENHAM: MUHA ADMINISTRATOR FOR PERIOPERATIVE SERVICES

J. Michael Denham is the Administrator for Perioperative Services. He has more than 30 years of in-depth perioperative experience, 21 of those years in military/health care executive management positions.

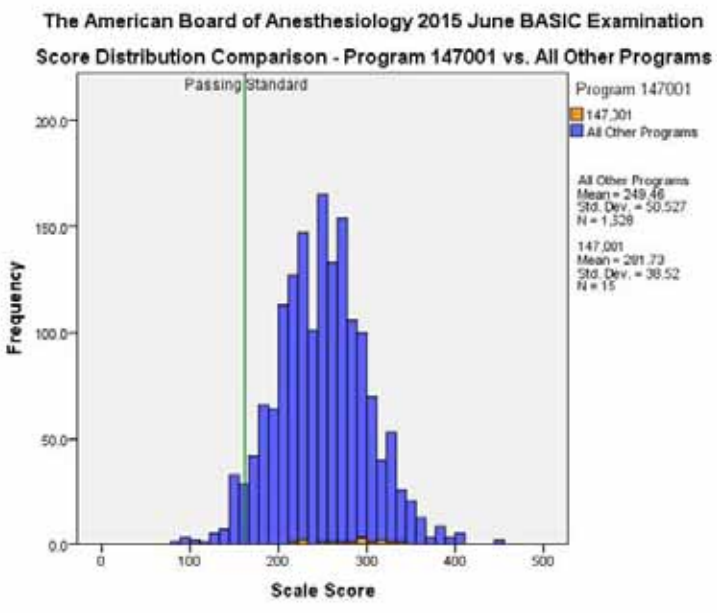
Michael is also a retired U.S. Naval officer with more than 20 years active duty service. A native of Tennessee, he graduated from St. Mary's School of Nursing in Knoxville, Tennessee in 1982. He earned a Bachelor's Degree in Nursing in 1990 from Medical University of South Carolina and a Master's Degree in Nursing and Business from the University of Tennessee, Knoxville. He is also a 2008 graduate of the American College of Healthcare Executives Senior Administration Program. From 2005-2015 he served as Administrator for Surgical Services/Chief Operating Officer for North Mississippi Medical Center in Tupelo, MS. There he was responsible for all aspects of strategic, operational and fiscal control regarding surgical services for NMMC and its affiliate hospitals.

CA1 RESIDENTS EXCEL IN ANESTHESIOLOGY BOARDS PART I

BY: GJ GULDAN, MD

Dear Department,

I am pleased to announce that all 15 of our current CA2's passed the second annual ABA Basic Exam. To the right you will find the score histogram to see how our residents did nationally. Our residents as a whole did well above the median, and no one was in the bottom 20% of those who passed. The ABA does not give out individual scores for the Basic exam—just a pass fail as it is now part 1 of the ABA's 3 Part certification exam system. The current CA3's were the first class to begin this new process which will include the Part 2 Advanced exam and Part 3 Oral Boards/OSCE taken after graduation. The premise behind this is it should not be used for fellowship applications, etc., just to ensure residents have the knowledge necessary to move on in their training . Great job to our Residents and a sincere Thank You to all who take part in our educational series!



CONGRATULATIONS TOM EPPERSON, MD, NAMED UNIVERSITY HOSPITAL MEDICAL DIRECTOR

I would like to thank everyone for the support and encouragement that I have received since my decision to take on the role of UH Medical Director. For those that don't know me, I moved here from Virginia with my family in 2008 upon completion of residency at the Virginia Commonwealth University. I live in Mt Pleasant with my wife Kimberly and our two sons Tyler and Baylor. My clinical interests are in regional, neuroanesthesia, and ambulatory surgery. I became the Medical Director in Rutledge Tower ambulatory surgery center in 2012 after Dr. Charlie Wallace and had the unique privilege to learn from his valuable years of experience until his retirement. I look forward to the challenges that await and the opportunity to work with great team leaders Dr. Carlee Clark and Mike Denham, and a wonderful group of people in the main hospital. I also want to thank everyone for the past three great years as director in Rutledge Tower that helped me grow professionally.

Sincerely, Tom Epperson

CONGRATULATIONS CARLEE CLARK, MD IN RECEIVING THE MEDICAL DIRECTOR OF THE QUARTER AWARD

Dr. Dan Handel and Dr. Carlee Clark

MUSC HEALTHCARE SIMULATION CENTER REACCREDITATION

We are pleased to report that the MUSC Healthcare Simulation Center was recently awarded reaccreditation as a Comprehensive Education Institute by the American College of Surgeons. Please join us in congratulating Dr. John Schaefer and his team for this wonderful accomplishment. More information about the Simulation Center can be found Here.

CONGRATULATIONS TO LISA CRUSENBERRY, ROB INGRAHAM, AND MACY UEBELHOER-BELT FOR BECOMING CERTIFIED ANESTHESIA TECHS THROUGH ASATT

Lisa Crusenberry

Rob Ingraham

Macy Uebelhoer-Belt

RESEARCH CORNER

ELSEVIER

Journal of Cardiothoracic and Vascular Anesthesia

Available online 9 January 2015

In Press, Corrected Proof — Note to users

Original Article

Management of LVAD Patients for Noncardiac Surgery: A Single-Institution Study

Eric W. Nelson, DO, Timothy Heinke, MD, Alan Finley, MD, G.J. Guldan, MD, Parker Gaddy, MD, J. Matthew Toole, MD, Ryan Mims, J.H. Abernathy III, MD

Dr. Nelson

Dr. Heinke

Dr. Finley

Dr. Guldan

Dr. Abernathy

Ryan Mims

Dr. Gaddy

Dr. Whitener

Intraoperative Evaluation of Paravalvular Regurgitation by Transesophageal Echocardiography

Konoske, Ryan MD; Whitener, George MD; Nicoara, Alina MD, FASE

ECHO DIDACTICS

Intraoperative Evaluation of Paravalvular Regurgitation by Transesophageal Echocardiography

Ryan Konoske, MD, George Whitener, MD, and Alina Nicoara, MD, FASE

A 67-year-old man is undergoing mitral valve replacement for rheumatic mitral stenosis with a mechanical prosthetic valve. After separation from cardiopulmonary bypass (CPB), an eccentric mitral regurgitation jet was noted, originating from outside the prosthetic sewing ring. Further evaluation was pursued.

Paravalvular regurgitation or leak (PVL) is a complication associated with the implantation of a prosthetic heart valve. PVL represents pathologic regurgitation originating

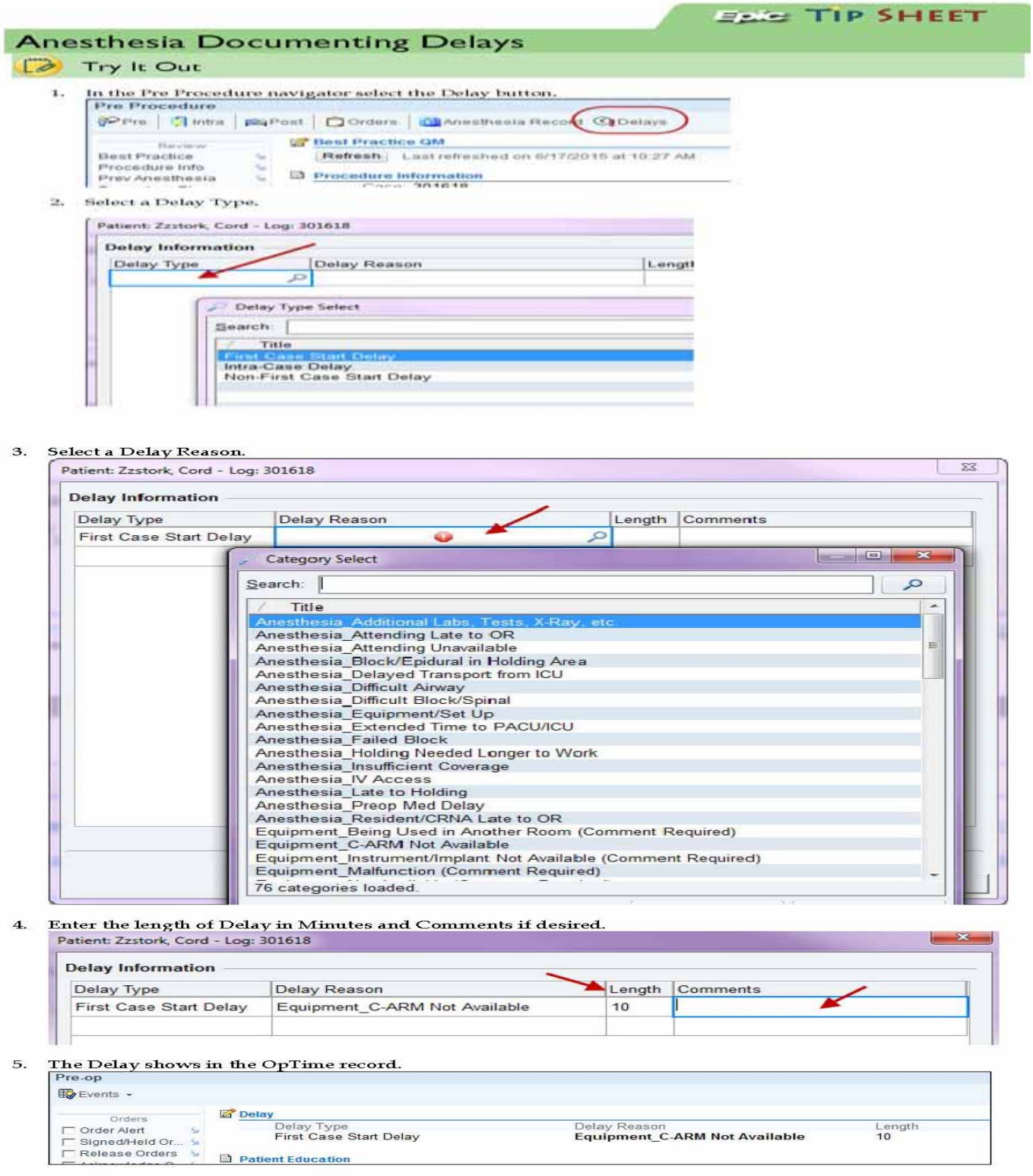
Definitive evaluation for the presence and severity of PVL should be performed after separation from CPB, under adequate hemodynamic conditions. However, "screening" for a PVL is feasible once the aortic cross clamp is removed and during periods of partial CPB. After establishing the presence of regurgitation, the next step is to differentiate the PVL from normal "functional" intravalvular regurgitation. Intravalvular regurgitation originates from within the sewing ring, which can be identified on TEE as an echo-dense structure encircling

DEPARTMENT CELEBRATION AND RESIDENT WELCOME PARTY BLACKBAUD STADIUM, SOCCER GAME, JULY 18, 2015

The new residents were welcomed to the department on July 18 with a soccer game at Blackbaud Stadium. Many from the department came to celebrate and enjoyed Sticky Fingers barbeque with a great view of the game from behind the soccer goal.

IN-ROOM DELAY REPORTING

We now have the ability to document delays in Epic through the process outlined below. It is easy to do, so please be sure to document reasons for all delays.



Medical University Hospital Ranked #1 in South Carolina Post & Courier, by: Lauren Sausser

Medical University Hospital is back on top, according to the new U.S. News & World Report hospital rankings.

The academic medical center in Charleston, which slipped to No. 2 on last year's list of best South Carolina hospitals, regained its No. 1 position this year. Meanwhile, last year's first place winner, Spartanburg Regional Medical Center, dropped to second place. More than 50 hospitals operate in South Carolina. Only seven made the cut for the U.S. News & World Report statewide rankings.

"I am proud to hear that (U.S. News & World Report) has ranked MUSC as the No. 1 hospital in South Carolina," Dr. Pat Cawley, Medical University Hospital's executive director, said in a prepared statement. "This award reflects the excellence the MUSC teams pursue every day to deliver the highest level of quality and safe care for every MUSC patient."

None of South Carolina's hospitals made the national "honor roll," although one department at the Medical University of South Carolina — ear, nose and throat — earned a No. 32 ranking among all ear, nose and throat programs in the country. It was the only specialty at any South Carolina hospital that earned a spot on one of 16 national specialty lists.

The rankings are based on a variety of factors including reputation, mortality rates and nurse-to-patient ratios. Patients making health care decisions shouldn't consider the lists in isolation, U.S. News warned in a press release.

"Patients still have to do their own research and talk with their doctors," the media company explained. "We also know that families have to consider the stress and expense of traveling to another city, as well as the willingness of an insurer to pay for care at a hospital outside its network."

URM Visiting Student Scholar, Willy Gama

It is a great honor to be gifted the Underrepresented in Medicine Visiting Student Scholarship. I would like to thank the Department of Anesthesia and Perioperative Medicine, the MUSC College of Medicine Deans Office, and the Office of Diversity for making my time at MUSC possible.

-Will Gama, Indiana University

WELCOME TREFFLE BEAUPRE AS A NEW ANESTHESIA TECH IN THE UNIVERSITY HOSPITAL

Treffle Beaupre is from Missouri (GO MIZZOU) and has been at MUSC for two years. He originally started as an Anesthesia Technician at ART, and after short a hiatus has now joined us at University Hospital. Treffle has eight years of experience in patient care ranging from ICUs to general medicine services as a Patient Care Tech, and several years as an Anesthesia Technician at the University of Missouri Hospital and University of Missouri Women's & Children's Hospital. Treffle is also a dedicated student not only in the classroom, but in his work environment as well. He is looking forward to contributing to the anesthesia team anyway possible and is grateful for the opportunity to be a part of the team. Outside of work, Treffle's interests include hunting, fishing, and sports.

NEW BABIES IN THE DEPARTMENT

Congrats Dawn Leberknight
Program Coordinator
London Avery Leberknight
Born July 14, 2015
5lbs, 10oz

Congrats Sarah White, CRNA
Elizabeth Clementine
Born May 29, 2015
8lbs, 3oz

Congrats Elizabeth Hirsch, CRNA
McKenzie Elizabeth Hirsch
Born May 14, 2015
6lbs, 2oz

HISTORY OF ANESTHESIOLOGY AND MEDICINE: A BRIEF COLLECTION OF *RECOLLECTIONS* FROM DR. LAURIE BROWN

We continue our monthly series of Recollections learning about the introduction of needles and intravenous administration.

NEEDLES

To the best of my knowledge, all needles which were in use in the late 1940's and early 1950s were made of stainless steel. These needles were kept sharp by grinding them and sharpening them after they were cleaned and before sterilizing. This was done in the central service area. Some of us kept a little whetstone close at hand so that we could sharpen any dull needle which we found in the operating room. Needles were sizes 15, 18, 20, 23, 22, and 25 gauge.

Needles were sterilized most often by steam autoclave. They were rinsed in sterile water, flushed with diethyl-ether, dried and placed into a small test tube like glass container, a small wad of cotton was put into either end of the container and the top was wrapped with a small piece of brown paper and secured with either suture material or a rubber band. Also, a certain number of needles were kept in a container in the operating rooms, soaking in a dilute formaldehyde solution. They were rinsed or flushed with sterile water prior to use on patients. It was awfully difficult to keep needles in condition with a sharp cutting point, and it was almost a specialty in itself to sharpen needles properly.

In 1954, when Dr. John Doerr arrived in Charleston as an anesthesiologist to work at Roper Hospital, he brought with him what was known as "Rochester" needles. These were the first plastic needles which were used in Charleston, as far as I am aware. Dr. Doerr had trained in Rochester, Minnesota, under Drs. John Lundy and Albert Falcouner, in the department of Dr. Ralph Waters. These needles had been developed at Rochester for their own use. Soon they were on the market and we were able to obtain them and they were a real advance in intravenous theory, remaining secure in a vein for as long as necessary. The cost of the plastic canula was 50 cents, so the patient had an additional item of $1.00 placed on his or her operating room fee and hospital bill. These canulese had a metal hub, and occasionally the plastic would get warm enough that the hub would become detached and, if the plastic were not taped well, it might well go into the patient's circulatory system and on into the heart. For a long time this was a problem with "Rochester" needles (later, "jelco" needles) and was a hazard. Soon, another type of needle came on the market and this was a disposable aluminum or alloy needle. These were for use one time only and were very sharp and had excellent cutting points on them. For patient comfort and in the prevention of transmission of hepatitis and other disease, this was one of the great advances in medical equipment. As to the use of these needles on infants and children, the difference was almost unbelievable. Previously, no matter how sharp a needle would be, it often had a barb on the tip or it had been sharpended at an incorrect angle and insertion was very painful.

Many of the newer disposable needles had plastic hubs on them, and occasionally the hub split when force was used to connect the intravenous tubing to the needle. At one point, a company developed a needle with a plastic hub and in the majority of cases when the alcohol sponge touched the needle hub, it would immediately split. This was discovered by Dr. Kenneth J. Boniface and the company, after testing this theory for awhile, realized it was true and the plastic hub was redesigned. Until this day, severe problems still persist with all types of plastic tubing, endotracheal tubes, etc.

I personally feel that the development of extremely sharp disposable needles was one of the great advances in medicine, preventing an untold amount of pain for many millions of patients. And the use of "plastic needles" has prevented uncountable millions of telephone calls to "restart the IV – the needle came out."

HISTORY OF ANESTHESIOLOGY AND MEDICINE: A BRIEF COLLECTION OF *RECOLLECTIONS* FROM DR. LAURIE BROWN CONTINUED . . .

INTRAVENOUS ADMINISTRATION

Solutions with which I was familiar when beginning my residence training consisted of 5% glucose in water and "normal" saline. These were made by the nurses and personnel in the central service supply and put into bottles and sterilized in a steam autoclave. Solutions were put into a one liter or two liter container which had a rubber cap placed on it, the cap having a hole in the center for the intravenous administration set. These caps were covered with brown paper which had a heavy rubber band or string tied around the top to keep the paper in place.

The intravenous administration set itself was a gum rubber tubing, with a glass connector placed in order to determine the rate of drip of the solution. Then there was a smaller tubing placed at the end of the set with a glass tip which would accommodate a needle which was used for the venipuncture.

All rubber catheters were sterilized by boiling in a pan which was heated over a hot plate. The student nurses were usually charged with sterilizing the catheters and they were the ones who got the blame when the catheters were not ready or when they were "overdone". It was not unusual, particularly in Old Roper to smell burned rubber throughout a ward or often throughout the hospital. This was because of the water boiling out of the catheters and the catheters being cooked thoroughly to a crisp. We always spoke of "cooking catheters."

Although the administration sets were assumed to be sterile, at times there was a "pyrogenic" reaction when fluid was administered intravenously. This reaction was believed to have been caused by the products of bacterial contamination, the bacteria being killed in the sterilization process, but by the end products of their destruction remaining in the tubing or solution. This reaction consisted of high fever, chills, and often delirium. I can recall many such reactions, one being on the prominent Professor of Surgery who was Department Chairman, following a back operation. The reaction was treated mostly by the use of aspirin administered orally or rectally. At times a barbiturate had to be administered to calm the patient during one of these reactions.

Somewhere along about this time came the "Ringers" solution and the beginning of disposable plastic IV administration sets. Then we began getting fluids in glass containers, in different sizes from 1000 cc down to 100 cc containers for use in pediatrics. A great advance.

The administration of fluids to pediatric patients was difficult, and with infants and very small children, the scalp veins were used most often. Also, fluids were administered to children by "clysis" called "hypodermoclysis" in which a Y tubing was connected to the intravenous solution and a needle placed into each side of the abdominal wall. Fluid was administered fairly efficiently in this manner. Patients receiving this therapy were those who were really dehydrated and had very little venous access available. Sometimes the clysis was administered subcutaneously between the scapulae of infants and small children. Burn patients were likely to receive the fluids in this manner also. The use of commercially prepared intravenous fluids, and the use of plastic disposable administration sets were a great advance in fluid administration in Roper Hospital.

Grand Rounds for the month of August

"Malignant Hyperthermia: A Disease We Manage in Our Perioperative Surgical Home"
August 4, 2015
Marilyn Larach, MD, FAAP
Director Emeritus
The North American Malignant Hyperthermia Registry of MHAUS

"Affordable Care Act: The Path to Health Equity & Diversity in Medicine"
August 11, 2015
Anton Gunn
Executive Director of Community Health Innovation
Chief Diversity Officer
Medical University of South Carolina

"Clinical Utility of Patient Blood Management Programs"
August 18, 2015
Charles Greenberg, MD
Professor, Hematology/Oncology
Medical University of South Carolina

"Morbidity & Mortality Conference"
August 25, 2015
Drs. Guldan/Gunselman
Assistant Professors, Anesthesia
Medical University of South Carolina

MUSC
MEDICAL UNIVERSITY of SOUTH CAROLINA

DEPARTMENT OF ANESTHESIA AND PERIOPERATIVE MEDICINE

Medical University of South Carolina

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CHECK OUT OUR WEBSITE AT:
HTTP://WWW.MUSC.EDU/ANESTHESIA

Future Events/Lectures

Intern Lecture Series

13/Aug—Pain, Dr. Nobles
27/Aug—Dysrhythmias, Dr. Nelson

CA 1 Lecture Series

5/Aug—Physics of Vaporizer and Inhalational Anesthesia, Drs. Hand/Guldan
12/Aug—Anesthesia Machine, Drs. Hand/Guldan
26/Aug—Lab Tests and Instruments, Drs. Hand/Guldan

CA 2/3 Lecture Series

3/Aug—Malignant Hyperthermia: The Essentials, Dr. Larach (MHAUS)
10/Aug—Nutritional Diseases and Inborn Errors of Metabolism, Dr. Hassid (moodle)
17/Aug—Skin and Musculoskeletal Disease, Dr. Nobles (moodle)
24/Aug—Perioperative Cardiac Workup for Noncardiac Surgery, Dr. Guldan (moodle)

Grand Rounds

4/Aug—Malignant Hyperthermia: A Disease We Manage in Our Perioperative Surgical Home, Dr. Larach (MHAUS)
11/Aug—Affordable Care Act: The Path to Health Equity & Diversity in Medicine, Anton Gunn (MUSC)
18/Aug—Clinical Utility of Patient Blood Management Programs, Dr. Greenberg (MUSC)
25/Aug—Morbidity & Mortality Conference, Drs. Guldan/Gunselman

I HUNG THE MOON

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 Kim Crisp. Thanks so much!!

Kim Kirby, CRNA: Thank you for helping set up for a NORA add on when it was time for you to go home.

Larry Banks, Anesthesia Tech: Thank you for helping with an anesthesia machine on a busy NORA day/evening!

Department Holiday Party: December 4, 2015, Carolina Yacht Club

We Would Love to Hear From You!

If you have ideas or would like to contribute to *Sleepy Times,* the deadline for the September edition will be August 24, 2015.