



THE POWER OF ADVANCED ANESTHESIA

 College of
Medicine
Anesthesiology

LATE WINTER EDITION
March 1, 2023

A NEWSLETTER FOR THE UK DEPARTMENT OF ANESTHESIOLOGY



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MEET THE NEWSLETTER TEAM

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EDITOR'S COMMENTS

Dr. Eugene Hessel

Here is our second issue of our department's newsletter. We were pleased with the generally favorable reception, but hope to make it better as time goes on. Notably, copies are available on Mobile Wildcat Anesthesia under "Newsletter".

Our featured reports in this issue are Dr. Shell's review of his charity ride in Vietnam and Cambodia late last year and a remembrance of our former colleague Randy Caltrider. We are initiating a new column in this issue, at the suggestion of Dr. Rose, on "The History of Anesthesia and Medicine". See Dr. Rose's commentary on Edmond "Ted" Eger. Everyone is encouraged to submit similar reviews. Also notable are reports on our activities at Pikeville Medical Center, Good Samaritan Hospital, our Interventional Pain Management division, and Diversity, Equity, and Inclusion.

We are still interested in possible different **names for our newsletter** (currently "The Power of Advanced Anesthesia"). Some recent suggestions include: "On the Pulse", "Vital Signs", "Anesthesia Current", "Anesthesia Circulation", and "The Loop". If you have any other suggestions for naming our newsletter, please let us know, and we will then poll our department for their choice.

We are also interested in hearing from any of you about suggestions for content to our newsletter. We would like to hear from our Alumni.

Everyone is invited to submit personal points of view or commentaries about medicine, anesthesia, and/or our departments, or any other topic.

We look forward to publishing Letters to the Editor, and invite your participation.

I would like to express my appreciation to all of the contributors to the first and second editions of our newsletter, the assistance of the associated editors, and especially to Ms. Erin Hall, who "puts it together".



CHAIR'S COMMENTS

Dr. Zaki Hassan

Welcome to the second edition of the Department of Anesthesiology newsletter. I'm grateful to Dr. Hessel and the contributing associate editors for the content of what is an outstanding forum for communication. Our department has experienced exponential growth over the last 18 months and I anticipate this to continue. I'm grateful to all of our colleagues for allowing this growth to be fruitful to the hospital, our department, and to our patients. I would encourage all of you to contribute to this newsletter with new and innovative ideas; for example, Dr. Wambold's initiative using artificial intelligence for patient evaluation. We have also included in this edition a section on the history of anesthesia, an outstanding contribution idea from Dr. Rose. Thank you again for what you do for our patients and our department. I remain hugely optimistic about our future success.



CHARITY BICYCLING IN VIETNAM AND CAMBODIA

Dr. Randy Schell



"Purpose is the place where your deep gladness meets the world's needs."

-Frederick Buechner

It was in 1986 that I discovered a deep gladness, peace, and freedom in bicycling. It all started with short 5-10 mile rides, but soon became much more. Since that time, I have cycled all over the United States and many other places in the world. My son and soon to be daughter-in-law gave me a coffee cup for Christmas 2022 that says, "Psyyclepath" with a written description "a person suffering from a chronic and extreme love of cycling. An unstable individual unable to adjust to society without repeated and lengthy excursions on a bike." I suppose that is me...

In 1999, Tim Evans, a friend of mine since college and pediatric chaplain at Loma Linda University, where I went to medical school, residency, and where I worked for 10 years on faculty, saw a need in grieving families whose children had died and that could not afford burial. The Unforgettables Foundation was formed to support these grieving families, to provide services like pediatric CPR and pool safety training, and more recently, services like education to help prevent suicide in children. When I was turning 40 years old in 2000, I decided to try to make my dream of cycling across the United States a reality. The fledgling Unforgettables Foundation required funding to help it meet its mission, so Tim and I decided to link up, and that is where my deep gladness for cycling began to help meet a need and purpose was discovered. In 2001 over approximately 48 days, I cycled 4100 miles from Anacortes Washington to Bar Harbor Maine with my wife and 7-month-old son supporting me in an RV. Donations per mile were made and the approximately \$30,000 raised helped the Unforgettables Foundation off on the path of helping 8,000 families over the last 20 plus years.



Pictured: Dr. Randy Schell (Professor of Anesthesiology) and Dr. David Moliterno (Professor of Medicine) during their bike ride

CHARITY BICYCLING IN VIETNAM AND CAMBODIA CONT'D

I have said to others that Tim Evans is "the kind of person that can talk anyone into doing anything", and in this case, it was me doing a 20-year anniversary ride in the fall of 2021 of 2400 miles from Canada to Mexico, unsupported, with a tent and sleeping bag. Fortunately, I talked Dr. David Moliterno (Professor of Medicine and previous chair of Internal Medicine at UK) into accompanying me. We raised approximately \$50,000 for this worthy charity. Since I talked David into the Canada to Mexico ride, he then proposed that I accompany him on a month-long Vietnam-Cambodia ride in October/November 2022. Once again, we decided to make the ride more purposeful by combining miles rode with donations to the Unforgettables Foundation.

In the middle of September 2022, we landed in the Northern Vietnam city of Hanoi and began a month-long cycling adventure heading to Southern Vietnam and then east into Cambodia ending in Siem Reap, Cambodia. The people were very friendly, the children seemed stunned at times to see us when riding through their remote villages or jungle location, and the roads were often rutted dirt and broken stone. David and I rode approximately 80 miles per day with the longest day being about 110 miles. We stayed in hotels including some Communist party hotels, one where I sprayed the bed with DEET, sprayed myself with DEET, and then slept on top of the bed because of the multitude of bugs! It took some time to get used to the food, especially the hot soup like broth for breakfast. While in Pnohm Penh, the capital and most populous city of Cambodia, I visited the "Killing Fields" which were a number of sites where collectively more than one million people were killed and buried by the Khmer Rouge regime (1975-1979) led by the prime minister, Pol Pot. It had recently rained and this was especially disturbing when I noticed human clothing and human bones protruding from the ground. The middle of November we completed the 1500-mile ride arriving in Siem Reap and took a day to visit Angkor Wat, a 12th century Buddhist Temple and largest religious monument in the world.



Pictured: maps of Southeast Asia, including Vietnam and Cambodia

CHARITY BICYCLING IN VIETNAM AND CAMBODIA CONT'D

Donations to the Unforgettables Foundation (unforgettables.org) for this 1500 mile exceeded \$30,000. Shortly after we arrived home, WEKU (NPR Kentucky) did an interview with David and I, raising awareness of this charity. The interview link is: <https://www.weku.org/podcast/off-the-beaten-path-with-sam-dick/2022-12-22/lexington-doctors-bike-for-a-cause-thousands-of-miles-away-in-southeast-asia>

January 17, 2023, WKYT interviewed David and I and the story of our trip and the Unforgettables Foundation was on the nightly Lexington news:

<https://www.wkyt.com/2023/01/17/uk-doctors-bike-through-asia-raise-money-charity/>

Our hope is that an Unforgettables chapter might soon be started in Kentucky and begin helping families in our state.

I now better understand what Frederick Buechner said, and when my deep gladness met a need, I found a purpose.



Pictured: map of Cambodia

IN REMEMBRANCE OF RANDY CALTRIDER

Gregory Buckler, Chief CRNA



Our dear colleague and friend, Randall Richard Caltrider, passed away on December 14, 2022 in Costa Rica. He was born in San Antonio, Texas in 1955. Before coming to the University of Kentucky in 1997, Randy was a neonatal nurse who became a Nurse Anesthetist in the U.S. ARMY. He served in the Gulf War, and won several awards and citations including the Expert Field Medical Badge. He retired honorably as a Major after 20 years of service.

In 1997, he came to the University of Kentucky and served as a Nurse Anesthetist as well as Chief CRNA. While at the University, Randy was a great leader and CRNA who was capable of doing the most complex cases with great skill and expertise. He was always a presence at National meetings promoting the profession and supporting his colleagues.

Later in life, Randy was always good to keep you in the loop about upcoming retirement and stories of his kids, Costa Rica, and the VFW. He was a proud life member of the American Legion, and he served as Commander of VFW Post 680. He had 4 children, including Darren Richard Caltrider Chavez, of Costa Rica, and 7 grandchildren.

Everyone that worked with Randy has a story to remember. He was a great CRNA and friend and will be missed, but his stories will live on.

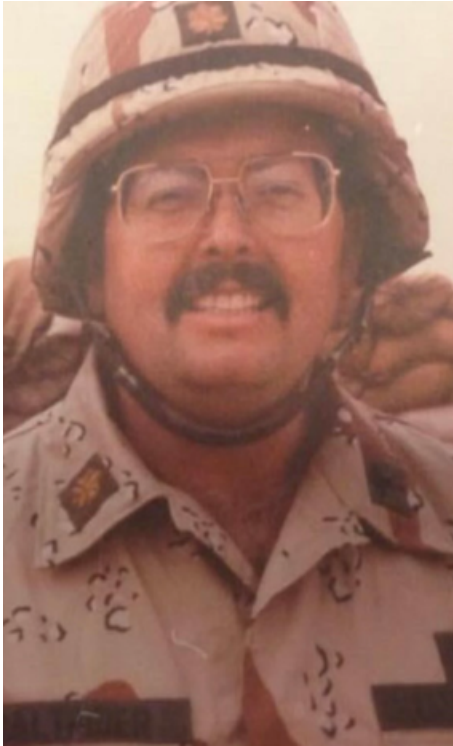


Pictured: Randy with fellow CRNAs at a national meeting



Pictured: Randy Caltrider

IN REMEMBRANCE OF RANDY CALTRIDER CONT'D



Pictured: Major Caltrider, US Army



Pictured: Randy and his son in Costa Rica



Pictured: Randy at his retirement celebration



Pictured: Randy fishing, one of his favorite pastimes

MESSAGE FROM THE RESIDENCY PROGRAM DIRECTOR

Dr. Laura Pinault



Greetings! Our residency program recently completed another successful recruitment cycle for the 2023 Match process. Over 1500 medical students applied to our program initially. We interviewed 187 students for 16 Categorical spots in the coming academic year. It was an incredible amount of work, and I am so grateful for those who helped me during this process, including our interview committee (Dr. Karl Hillenbrand, Dr. Bob Weaver, Dr. Amy DiLorenzo, Dr. Zaki Hassan, Dr. Anne Sloan, myself, and all the resident interviewers). None of this could have been coordinated without the help of our fantastic administrative team: Mr. Damian Pickering, Ms. Tori Bloom, Ms. Hadley Negaard and Mrs. Stacey Sindelar. Many thanks are also extended to our residents who participated in the virtual meet and greets the evenings prior to interviews for generating enthusiasm and portraying our program so positively! We are looking forward to another successful Match!

Our program recently acquired a new resident, PGY-2 Joshua Lopez, in January 2023. Joshua transferred to us from Larkin Community Hospital in Florida, a community-based anesthesiology residency program. That program will be losing accreditation at the end of this academic year. Dr. Lopez's addition to the PGY-2 class makes the class numbers whole again, as Dr. Danielle Wood transferred to an anesthesiology program at the University of Kansas at the end of 2022. Dr. Lopez is settling into our program well.

Drs. Elwood Miller and Nadia Romero completed training in December and January, respectively. Dr. Miller is doing locum tenens work and Dr. Romero is joining private practice at Norton Healthcare in Louisville. We wish them both the best!

Our residents have recently completed their In-Training Examinations as well as mock oral board preparation for our upper-level residents. They are working hard and continuing to achieve!

FROM THE CHIEF RESIDENTS

Dr. Logan Hollman, Ryker Saunders, and Matt Tescula



Hi everyone, this is our first edition of what will become our monthly resident update in the newsletter. February was a busy but exciting month for the residents as everyone took the yearly ITE exam. This is an exam that required a lot of hard work and dedication from all residents, and we look forward to getting the scores back in a few weeks. We want to thank everyone who played a role in helping us prepare for this exam. This includes multiple members of our administrative staff, Damian and Stacey Sindelar just to name a few, as well as all of the attendings who put together ITE prep lectures for us. We were also treated to lunch after every exam date, and for this we want to send our sincere gratitude. Our CA-1 class now shifts their focus to preparing for the Basic Exam which will be in early June. Lectures have started for this and will continue until exam time. Another exciting educational opportunity for the residents is the "Never Seen One, Never Done One" lecture series that starts at the beginning of March. Several attendings will be giving workshops in the morning from 6-0645 on skills that are essential but rare to have the opportunity to practice such as IO lines, cardiac tamponade needle decompression, and transvenous pacemakers.

We also want to recognize the Residents of the Month (ROM) from January and February. Dr. Taylor Ipsen was selected as Resident of the Month for January, and Dr. Wes McGraw was recognized as resident of the month for February. Taylor is the ultimate team player who has helped cover shifts for his co-residents the entire year and January was no exception, picking up a few last minute ICU night shifts. He did this without hesitation, as is always the case with anything he is asked to do or help with. He is excellent clinically and is one of the leaders of the residents in our department. Dr. McGraw was recognized for his exceptional work on several pediatric cases on his weekend call shifts. His attending took the time to write about the job he did placing IVs on infants who were known very difficult sticks in past procedures. In addition, he managed an emergency craniotomy extremely well, even re-intubating the patient emergently mid-procedure. His attending was impressed enough by his performance that he nominated him for February resident of the month. Again, this came as no surprise to us, as Wes always does strong work as anyone who has had the pleasure to work with him knows. We want to thank both of you for being such great representations of our department.

Quality Improvement and Patient Safety

Syed Z Ali, MD, FASA, Department Quality and Safety Program Officer

In each issue of our newsletter we will report on our activities in Quality Improvement and Patient Safety.
If you have questions or comments, please send an e-mail to syed.ali@uky.edu

CONTENTS

1. QUALITY IMPROVEMENT PROJECT IN PACU
2. AN EXAMPLE OF A PATIENT SAFETY EVENT

1. HAND HYGIENE IN PACU QUALITY IMPROVEMENT PROJECT

Quality improvement is the framework used to systematically improve care. Quality improvement seeks to standardize processes and structure to reduce variation, achieve predictable results, and improve outcomes for patients, healthcare systems, and organizations. Structure includes things like technology, culture, leadership, and physical capital; process includes knowledge capital (e.g., standard operating procedures) or human capital (e.g., education and training).

Described below is a recent, successfully completed and implemented, quality improvement project on hand hygiene in PACU

Project: Hand Hygiene QI Project

Location: Post-Anesthesia Care Unit (PACU)

SMART Goal at the beginning:

Increase hand hygiene compliance rate

from 40%

to 90%

by December 15, 2022

Team members:

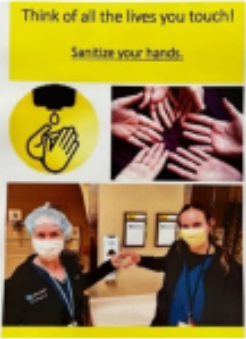




PDSA Ramp Plan

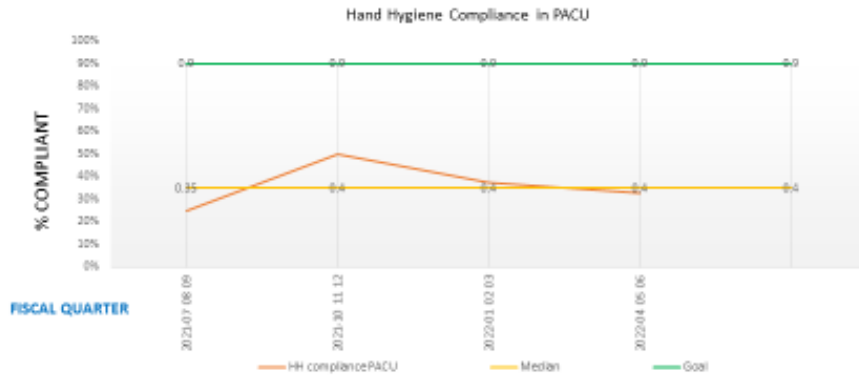


Project Title: Hand Hygiene QI Project

Location of project: PACU

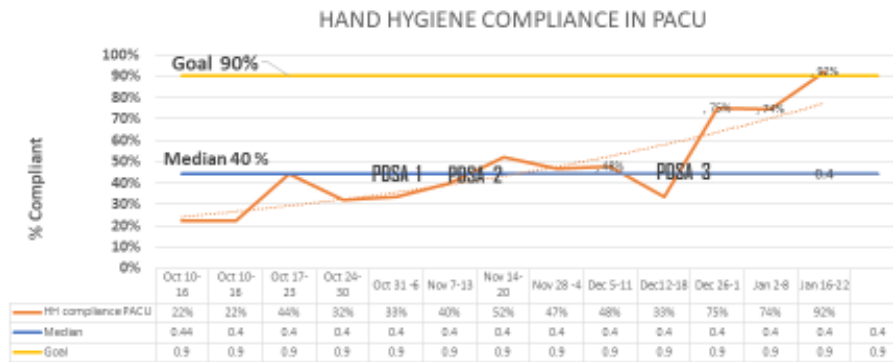
	Sprint # 1	Sprint #2	Sprint #3	Sprint #4
Sprint cycle description, including changes in scale/time	<p>Place laminated visual cues (pictured below) above hand sanitizing dispenser outside <i>three</i> PACU areas</p> 	<p>Visual cue & LED lights (pictured below) on HH dispenser to increase attention in <i>three</i> areas</p> 	<p>visual cue & reflector tape (instead of LED) in <i>three</i> areas</p> 	<p>Follow-up with wide-scale sprint by expanding the project - Implementation of HH QI project in entire PACU</p> <p>Plan to expand into the preoperative holding unit soon</p>

July 2021
– June 2022



Hand Hygiene compliance in PACU (July 2021 to June 2022) = approx. 40%

Oct 2022
– Jan 2023



Observational data: n = 9 9 36 25 15 40 25 49 21 21 8 47 26

PDSA 1: Visual cue with a flyer alone improvement in HH compliance

PDSA 2: Interventions with LED had sustainability issues

PDSA 3: Visual cue flyer along with Reflector Tape was the Simpler Sustainable Solution for a Successful Spread

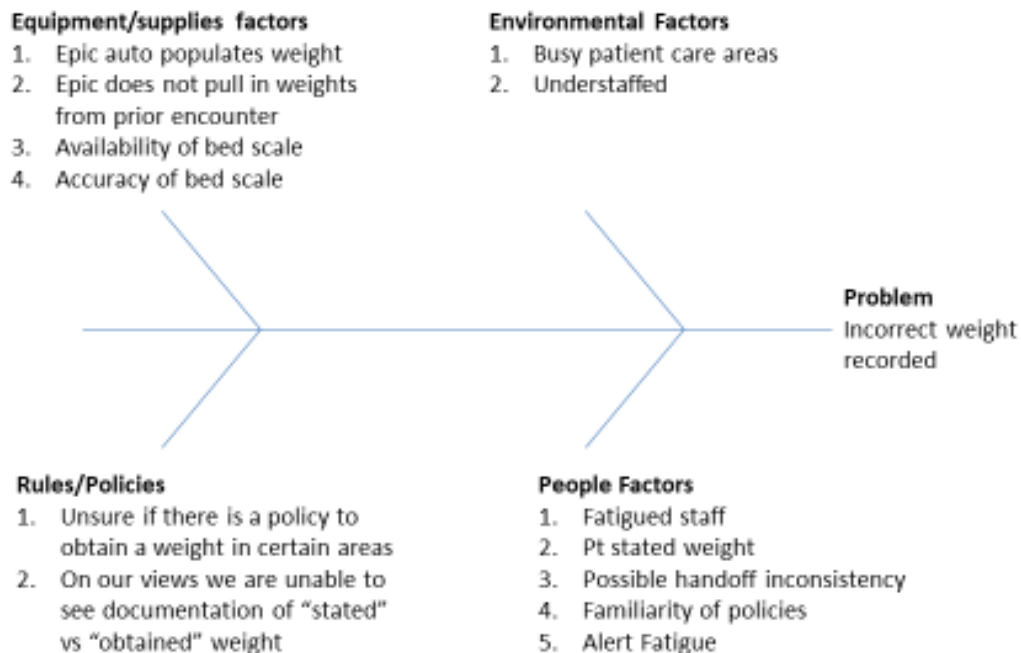
Hand Hygiene compliance in PACU (Oct 2022 to Jan 2023) = approx. 90%

2. PATIENT SAFETY

ROOT CAUSE ANALYSIS EXAMPLE

When errors occur with adverse events or near misses, root cause analysis (RCA) is one of the standard approaches to investigate the “how” and “why” of system vulnerabilities. In 2009 University of Kentucky HealthCare Lexington developed a novel rapid approach to RCAs—colloquially called “SWARMing”—to establish a consistent approach to investigate adverse or other undesirable events. SWARM is a process to conduct root cause analysis when errors or systems problems occur in a respectful, blame-free environment to seek understanding, identify problems, and create solutions.

Described below is an example of Root Cause Analysis for an incorrectly recorded weight in EPIC



DIVISION OF INTERVENTIONAL PAIN MEDICINE

Dr. Michael Harned



The historic division of Chronic Pain is now the Division of Interventional Pain Medicine (IPM) and provides state-of-the-art treatments for acute, chronic, and cancer pain. Our team primarily sees patients at our free-standing, multi-disciplinary clinic located at Kentucky Clinic South and performs surgical procedures at the Lexington Surgery Center. In addition to a very busy clinical service, we have one of the largest and most successful Pain Medicine fellowships in the country.

Envisioned by Dr. William Witt, in the mid-1980s, the beginnings of UK Chronic Pain were humble, working out of the old PACU at Chandler Hospital. All success is owed to the hard work and determination of Dr. William Witt, who as chair fostered the division and in 1993 developed an ACGME approved fellowship. Early key recruitments included Dr. Joseph Holtman and Dr. Paul Sloan, an internationally recognized expert in opioid therapy. The hiring of Dr. Luis Vascello, who subsequently went on to develop a very successful local private practice, expanded the division. Another key Witt recruit was Dr. Mark Etschiedt, one of the first clinical psychologists devoted to the full-time practice of chronic pain in an academic department.

As one of the first pain medicine fellowship programs in the country, led by Dr. Witt and Dr. Holtman, the UK Pain Medicine fellowship rapidly became an early leader in neuromodulation (spinal cord stimulation and intrathecal drug delivery), a distinction that continues to this day. Since then, the division has grown with the efforts of many physicians including previous fellowship director, Dr. Paul Sloan who took the reins after Dr. Joe Holtman left to take an academic role at Loyola Chicago. Subsequently, Dr. Stan Rogozinski and Dr. Jay Grider were hired into the division with Dr. Grider splitting time as the director of the acute pain/regional anesthesia service. When Dr. Witt retired in 2009, the division became destabilized, losing its leadership as well as its primary practice location. The future of the practice was truly in jeopardy. Dr. Grider stepped in to rescue the practice, landing in a new site within Good Samaritan Hospital and creating a stable financial model. He continued to lead both the acute pain & regional anesthesia division along with the chronic pain program for several years until growth in all areas demanded separate leadership. In 2014, for the first time, the Department of Anesthesiology was able to offer a full-time pain faculty position to Dr. Michael Harned. Dr. Harned would assume dual roles as both Division Chief and Fellowship Director. In 2018, Dr. Harned recruited Dr. Justin Craig from the University of Pennsylvania to join his practice. As the practice continued to grow, Dr. Harned recruited our previous resident and fellow, Dr. Chris Mallard to join the team as the associate fellowship program director in 2022.

DIVISION OF INTERVENTIONAL PAIN MEDICINE CONT'D

The Pain Medicine fellowship, now accepting 5 fellows per year, has been on the cutting-edge of educational programs. High clinical volumes give each fellow procedure numbers which are rarely seen at other programs. In addition, external industry grants have allowed the division to both host cadaver labs and purchase simulators to practice highly technical and complicated procedures in a controlled environment. For 3 years, there was an introductory fellowship workshop featuring cadavers, for early exposure to neurostimulation. In 2021, an awarded grant facilitated the purchase of the BioTras simulator. With this simulator, fellows can now routinely practice these advanced procedures over multiple sessions rather than the limited time allowed with a cadaver.

Kickstarting our pain research program, Dr. Witt hired Dr. William Martin in 1990, as mentioned in last quarter's newsletter and his work was instrumental in isolating the different opioid receptors. Dr. Martin's work included the concept that opioid administration not only could lead to tolerance but paradoxically hyperalgesia. Truly a bench to bedside collaboration, Dr. Witt practically applied this new knowledge in the setting of chronic pain and intrathecal drug delivery practice. This work began to build on the concept of opioid tolerance and the potential to reverse tolerance before starting intrathecal opioids for chronic pain. While Dr. Witt was known as an early proponent of this practice, Dr. Grider designed and published the first work of its kind, not only documenting the concept of micro dosing opioids but also creating a dose response curve to IT opioids. To this day, the division is very active in producing original research in spinal cord stimulation and intrathecal drug delivery and works collaboratively with other leading voices in the specialty writing best practice and national practice guideline publications. Beyond clinical research, this division has also been actively involved in improving healthcare equity, with the publication of the recent study, co-authored by the Medical Director of Interventional Pain Medicine, Dr. Michael Harned, and the UK HealthCare Chief Diversity Officer, Dr. Tukea Talbert.

Clinically, our faculty are some of the most advanced in the country. We employ all aspects of neuromodulation to treat a variety of neuropathic conditions. We utilize percutaneous decompression or indirect decompression for the treatment of spinal stenosis. The treatment of sacroiliac pain can now be addressed utilizing a minimal invasive graft. Vertebral compression fractures can be stabilized with balloon kyphoplasty. Intractable discogenic pain can be successfully treated with a basivertebral nerve ablation. All this is done by a group of faculty who recently achieved recognition for being in the top 25% of academic pain medicine programs for patient satisfaction. The division of Interventional Pain Medicine continues to grow, and will be opening a second clinic location at UK Good Samaritan in 2024.

ANESTHESIOLOGY AT GOOD SAMARITAN HOSPITAL

Dr. Justin Wainscott



In February 2022, the University of Kentucky's Department of Anesthesiology expanded to the Good Samaritan Hospital with the goal of improving the quality of and the access to care for that patient population. Our work there has allowed an increased number of patients with increased morbidity to receive around-the-clock care from various surgical subspecialties including orthopedic, endocrine, gynecologic, electroconvulsive therapy, and bariatric procedures. Currently we staff ten operating rooms and two endoscopy suites, with plans for further expansion in the future. Reliance on a core group of faculty has enabled a smooth transition in anesthesia services this year, and our flexible 2:1 – 4:1 staffing has become a blueprint for staffing changes at the Center for Advanced Surgery and the Main Operating Rooms of Chandler Medical Center. Close communication and coordination with perioperative nursing staff, surgical and endoscopic services, and anesthesia tech staff as well as Departmental resources from the Main OR have proven invaluable as we continue to identify and address areas of concern as we move forward. Issues tackled to date include updates to antiquated and poorly maintained equipment, acquisition of adequate office space, and coordination of perioperative regional anesthesia procedures.

The establishment of University anesthesia services at Good Samaritan hospital has also created a unique learning opportunity for rotating residents. Here, they can expand upon their Supervisor and Transition to Practice rotations as they experience a working environment with the feel of a private community hospital and the resources of a university hospital. Residents enjoy tailored one-on-one hands-on learning with close faculty supervision as they experience the role of an attending physician. Whether it's performing a bedside TTE with Dr. Linville, an uncommon regional block with Dr. Baker, an administrative concern with Dr. Wainscott, a difficult airway with Dr. Hardin, an ultrasound-guided PIV with Dr. Ford, or a documentation concern with Dr. Cassis, the residents are fully immersed in all aspects of being an attending anesthesiologist without being tied to any one OR (excepting call cases). It is our hope and expectation that this rotation enables our residents to build upon and solidify all aspects of their training as a prelude to graduation from our program.

UK RESIDENT TRAINING AT PIKEVILLE MEDICAL CENTER

Dr. Curtis Koons



When Drs. Michael Cranney and Curtis Koons completed residency, their first jobs were in private practice at Pikeville Medical Center (PMC). Pikeville is a small rural town in eastern Kentucky, but Pikeville Medical Center is anything but small. Because of its location, it is the referral center for numerous other facilities and has a catchment area of over 400,000 patients in eastern Kentucky and bordering states. PMC is a level 2 designated trauma center with surgical services including trauma, neurosurgery, pediatrics and advanced cardiothoracic procedures (ECMO, TAVR, complex valvular surgeries).

Three years ago, in conjunction with the residency program, Drs. Cranney and Koons developed a "transition to practice" type rotation to expose residents to the private practice sector of healthcare. The rotation provides select CA-3s an opportunity to design a month to fit their unique career goals. Typically, the month consists of the resident functioning as a "junior attending," taking initiative as an anesthesiologist practicing medical direction. This includes performing a high number of peripheral nerve blocks, neuraxial procedures, and vascular access while simultaneously developing anesthetic plans for a high number of complex patients. In addition, the resident spends time learning about enhanced recovery protocols, provides care in high volume pediatric rooms and other experiences depending on their individual needs. While at PMC they are offered the opportunity to participate in cryoablative procedures as part of the enhanced recovery protocol for total knee arthroplasty patients. Over the course of the month they will follow those patients from cryoablation to surgical procedure to discharge in a "perioperative home" type setting.

Residents gain experience and insight into the different models of anesthesia practice including solo, medical direction, and medical supervision at a high volume, fast paced medical center. The PMC rotation is an excellent opportunity to prepare for your first job after graduation; in fact, a great month can turn into a career opportunity. For example, Dr. Chase Johnson was hired on as staff shortly after his month at PMC.

The attending anesthesiologists, CRNAs, and staff at Pikeville Medical Center are always excited to meet the new residents. Having the UK anesthesia residents rotate through has been wonderful for the department and we look forward to having them for years to come.



Pictured: a UK resident learns point-of-care ultrasound (POCUS) examination skills

DIVERSITY, EQUITY & INCLUSION IN THE UK

DEPARTMENT OF ANESTHESIOLOGY

Dr. Regina Fragneto



The Department of Anesthesiology's DEI Committee continues to remain active in providing programming to educate our department members regarding DEI topics. Since the last newsletter update, additional presentations have been made at our General Competencies Conference. Dr. Michael Harned, Chief of Interventional Pain Management, provided a review of his research that was recently published in *Pain Physician*. His article, *Assessment of Patient Diversity & Equity of Care in a Tertiary Referral Interventional Pain Medicine Clinic*, found no disparities based on race, age, or gender in the clinic's screening process. They did find that Hispanic patients were less likely to be offered an appointment for the Pain Clinic. As a result of their research, our Pain Clinic has removed any patient identifiers during the appointment screening process.

Mr. Brian Hamilton, Director of the College of Medicine's Office of Diversity, Equity, and Inclusion, gave an enlightening and educational presentation entitled *Death by a Thousand Cuts: Understanding Bias and Microaggressions*. In recognition of Black History Month in February, Dr. Hessel educated us about the remarkable Dr. Charles R. Drew. He was a surgeon and pioneer in blood banking. His contributions to medicine have been recognized in many ways, including a bridge named after him in Washington, D.C., a U.S. postal stamp, and his home named a National Historic Landmark. Most impressive, the Charles R. Drew University of Medicine and Science was opened in Los Angeles in 1966. It includes a medical school and several other health professions schools.

The department's DEI Committee (of which all department members are welcome to join) held a meeting in February to plan future activities. Most exciting, we will be holding a department-wide Cultural Potluck in July (date to be determined). There should be lots of great food and socializing at this event and will be a wonderful way to welcome our new residents and fellows to our department. Much thanks to Dr. Sarah Hall for volunteering her home for this event. We also discussed future educational activities and would appreciate any input and suggestions from department members.

HISTORY OF ANESTHESIA AND MEDICINE

The MAC Daddy; the Wondrous Story of Edmund Eger

Dr. Gregory Rose



We stand on the shoulders of giants; this famous saying, attributed to Isaac Newton, may seem trite or sentimental now, but nevertheless it is still true. As anesthesia providers, we stand on the shoulders of a great many people, from the pioneers of the specialty to those great researchers and clinicians from more modern times.

Such a person was Edmund I “Ted” Eger II, MD, who in his career became the world's leading expert on anesthetic uptake and distribution. He was the originator of the concept “minimum alveolar concentration”, or “MAC”. He also established the value of MAC for the modern inhalational agents we use today.

Dr. Eger was born in Chicago in 1930. Two very unpleasant experiences of inhalational ether anesthetics as a child would later spur his interest in the specialty of anesthesiology. After graduating from Northwestern Medical School, he had planned a career as an internist. But in his early training he participated in an anesthetic, and that hands-on experience plus his still-haunting episodes of anesthetics from his childhood caused him to choose anesthesiology. He hoped to improve for others, he later stated, his negative encounters with anesthesia as a child.

After a residency in anesthesiology at the University of Iowa, he went to the University of California San Francisco. It was at UCSF where the studies on inhalational anesthetic uptake and distribution were accomplished. It was also at UCSF where Eger, in the 1960s, struck upon the concept of minimum alveolar concentration (MAC). Such a standardization of anesthetic potency had never been established. MAC became the measuring and dosing unit for inhalational anesthetics, and of course we still use the concept today.

He was also the main investigator of newer inhalational anesthetics such as isoflurane, and later desflurane and sevoflurane, and contributed to the study of their uptake, distribution, and MAC values. In his later years he investigated the mechanism of action of inhalational anesthetics.

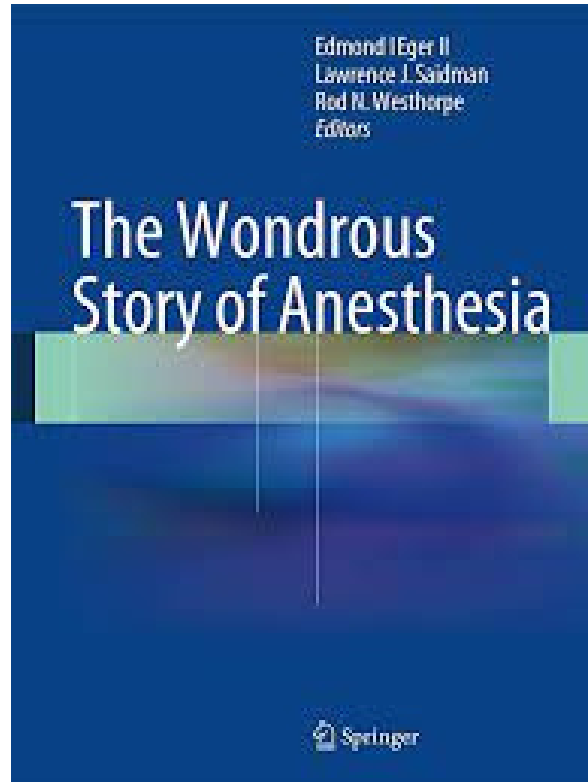


Pictured: Dr. Edmund Eger

HISTORY OF ANESTHESIA AND MEDICINE CONT'D

He was the author of 7 books (including *The Wondrous Story of Anesthesia*) and over 500 scientific papers. Those who trained under him have included editors-in-chief of both *Anesthesiology* and *Anesthesia and Analgesia* and 24 chairs of anesthesiology departments. He died in California in 2017.

Our department had the honor and privilege of hosting Dr. Eger as a visiting professor when he spoke at grand rounds for us in the mid-1990s.



Pictured: *The Wondrous Story of Anesthesia* by Edmond Eger

References

1. <https://anesthesia.ucsf.edu/news/giant-anesthesia-%E2%80%93-ted-eger-%E2%80%93-has-passed-away>; accessed 2/7/23
2. <https://www.nytimes.com/2017/09/20/obituaries/dr-edmond-eger-ii-86-dies-found-way-to-make-anesthesia-safer.html>; accessed 2/6/23
3. <https://www.asahq.org/about-asa/newsroom/asa-in-the-news/2017/09/tim-eger>; accessed 2/7/23
4. *Autobiography of a persistent anesthesiologist*. Edmond I :Ted: Eger, II, MD. Editors. Stevern L Shafer and Lynn E Spitler. Walters Kluwer, 2020
5. Edmond I Eger II, Lawrence J. Saidman, Rod N. Westhorpe. *The Wondrous Story of Anesthesia*. Springer New York, NY. 2013

ANESTHESIA RESIDENTS SELECTED AS UK GME RESIDENT OF THE MONTH THROUGH THE YEARS

Dr. Amy DiLorenzo



The UK Graduate Medical Education Resident of the Month award is given to honor a learner who has displayed exemplary service to patients and/or families, outstanding educational efforts, and/or humanitarian service. Nominators select one of the following categories to recognize the individual: Communication Skills, Care Coordination, Leadership, Professionalism, Medical Knowledge, or Teamwork. In addition, open-ended comments detailing the reasons for the nomination are encouraged. All current residents and fellows are eligible for nomination including those at the main campus in Lexington and satellite campuses in Bowling Green, Hazard, and Morehead.

Nominations are submitted electronically to the UK GME office where they are de-identified (name/Department/Program) and then reviewed and scored by a committee of institutional leaders. One award is given each month and the recipient is recognized during the GMEC meeting, on the homepage of the GME website, on the UK College of Medicine website and social media accounts, and on electronic screens throughout the hospital. The prize for winning this honor has changed several times over the years. Currently, the selected winner each month receives a \$150 UK bookstore voucher, and a \$100 restaurant gift card (provided by the UK Medical Professions Placement Service).

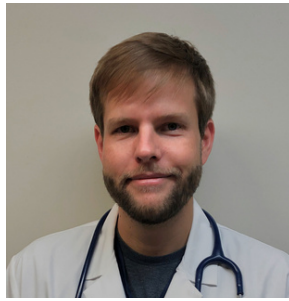
Although they represent only a fraction of the total number of nearly 900 UK learners, many of our anesthesiology residents have been the recipients of this institution-wide honor over the years. The following page presents all UK residents who have been recognized as the UK GME Resident of the Month since 2014.

If you would like to nominate a resident or fellow for this award, the link to submit your nomination is as follows: https://uky.az1.qualtrics.com/jfe/form/SV_74D8QEOQnxHn2zc. This link can also be found at the top of the GME website homepage (<https://medicine.uky.edu/sites/gme>) and on the MedHub homepage.

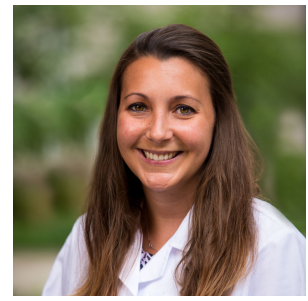
ANESTHESIA RESIDENT SELECTED AS UK GME RESIDENT OF THE MONTH THROUGH THE YEARS CONT'D



Dr. James Bacon - October 2014



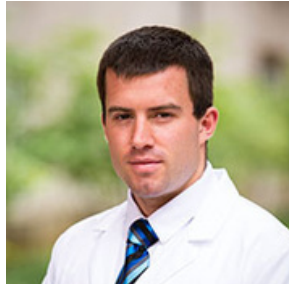
Dr. Robert Weaver - October 2015



Dr. Kristin Hoffman - September 2017



Dr. Amanda Faulkner - March 2018



Dr. Charles Lowery - June 2018



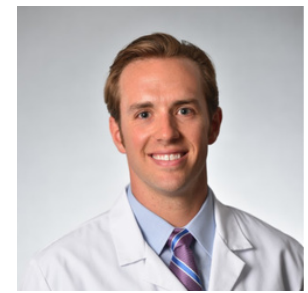
Dr. Yan Pokrovskiy - October 2018



Dr. Sean Milburn - January 2019



Dr. Bradley Withers - September 2019



Dr. Zachary Klinger - March 2020



Dr. Spencer Fogelman - August 2020



Dr. Peter Yarger - January 2021



Dr. Eric Wetherington - November 2022



Dr. Blake Caracci - December 2022

ORTHOPEDIC ANESTHESIA UPDATE

Dr. Allison Zuelzer



Multidisciplinary Orthopedic Trauma Coordination Group

In January 2021 a multidisciplinary Orthopedic Trauma Coordination Group was formed which includes members from Anesthesia, Internal Medicine, Trauma Surgery and Orthopedic Surgery. The team meets monthly to review orthopedic trauma cases, recent delays and identifies areas of improvement for patient care and efficiency.

Our first initiative was to improve communication between the different services covering the orthopedic trauma population. A multidisciplinary group chat called “Ortho Trauma/OR Coordinator” was created on EPIC that allows for members from all departments to receive updates regarding surgical plans and a platform to discuss patient clearance concerns. Those covering 1A, 3A, and 4A are asked to opt into the group to receive updates. This is also a very valuable method of communication on the weekends.

Geriatric Hip Fracture Patients

A special focus has been placed on analyzing and improving patient care for geriatric hip fracture patients. Historically anesthesia has only been involved in the immediate perioperative period. This would often lead to inappropriate optimization and delays for workups of medically complex patients. Evidence supports that delay to surgery greater than 24-48 hours following geriatric hip fracture is associated with increased 30-day and 1-year all-cause mortality. A key part of this care pathway that was identified and has been changed is early anesthesia assessment. Since initiating the care coordination group we have decreased the time to OR for isolated hip fractures from an average of 37 hours in 2021 to 30 hours in 2022. Preliminary data also supports a decreasing mortality rate from 7% to 3.7% in the same time frame.

Isolated Hip Fractures

	2021	2022
Total	379	375
Time to OR from admission	37.1 hours	30.17 hours
% Mortality	7.124	3.733
Average Age	73.32	76.86

ORTHOPEDIC ANESTHESIA UPDATE CONT'D

Pre and Peri Surgical Analgesia—Fascia Iliaca Blocks (FIB)

The literature also continues to support regional anesthesia (Fascia Iliaca blocks) for hip fracture patients as it reliably decreases pain scores before and after surgery, improves early mobilization and limits the need for opioid pain medications. While still effective for postoperative pain, the best time to initiate a fascia iliaca block is immediately following evaluation in the Emergency Department as it is most helpful for fracture pain itself while the patient awaits repair. The University of Kentucky's FIB initiative was started in early 2021 and the Pain Team continues to make a significant effort to offer these patients early analgesia. In just the last year our percent of hip fractures receiving a FIB has increased from 30% to 71% and our time to block has decreased from 21 hours to 7 hours. We are hoping to continue to improve our ability to offer analgesia for these medically complex patients in a timely manner.

	Jan 2022	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC 2022
# HIP FX	22	22	23	17	24	32	15	17	15	24	24	24
Fib %	32	38	57	61	59	42	53	60	65	67	67	71
Mean to FIB (hrs)	21.75	4.43	18.08	20.05	13.09	14.03	16.47	16.85	8.48	13.63	11.5	7.05

Tranexamic Acid

Many geriatric hip fractures are chronically anemic even before injury. This combined with hidden blood loss from the fracture and intraoperative blood loss leads to a high transfusion rate. As such, tranexamic acid use has been adapted into hip fracture surgery based on evidence for its use in routine elective arthroplasty. In early 2022 a University of Kentucky Tranexamic Acid Protocol for geriatric hip fractures was implemented. Note that this dosing protocol is different than what is routinely used for joint arthroplasty at Good Samaritan.

Inclusion Criteria

Hip fracture patients >40 years old with a:

- Femoral neck fracture
- Intertrochanteric fracture
- Peri trochanteric fracture

Dosing regimen:

- Weight <120kg 1000mg IV at incision ONCE
- Weight >120kg 1500mg IV at incision ONCE

Exclusion Criteria:

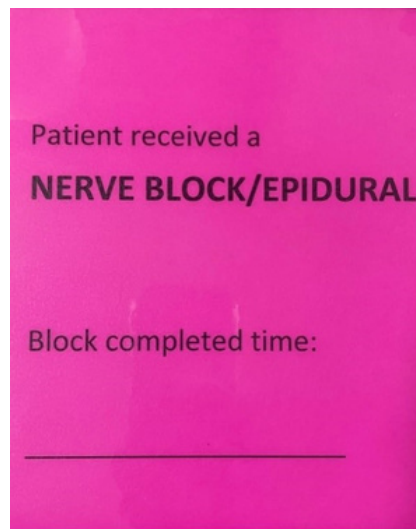
- Hypersensitivity to TXA
- <45 years old
- Recent (<3 months) Stroke, MI, arterial thrombosis, VTE
- Factor V Leiden deficiency

ORTHOPEDIC ANESTHESIA UPDATE CONT'D

Quality Improvement and Safety

As a result of a recent patient safety concern and QA/QI project, we have implemented a new sign that will be placed on the door of the Preop or PACU slot to indicate that the patient has recently received a nerve block or epidural.

After timing out with the Pain Team, the Preop or PACU nurse will be responsible for moving the sign to the front of slot on the door and marking the time of the time out. This will alert those in the monitoring area that a block was recently completed should something unexpected occur.



Pictured: newly implemented nerve block/epidural door sign

PROGRAM EVALUATION COMMITTEE (PEC)

Drs. Amy DiLorenzo and Tom McLarney



The Program Evaluation Committee (PEC) is one of the committees required of all residency and fellowship programs accredited by the Accreditation Council for Graduate Medical Education (ACGME).

Our residency PEC, co-chaired by Dr. Tom McLarney and Dr. Amy Dilorenzo, meets 8 - 10 times per year to discuss multiple facets of the residency education program. Committee membership includes all faculty and staff who are charged with formal educational roles in the residency program (e.g. program director, associate program directors, program coordinator, division directors, rotation directors, education director, didactic and simulation education leaders) as well as resident council members including the elected PGY 1, PGY2, and PGY3 members and the three PGY4 chief residents. In addition to the formal roster, all members of the department are welcome to attend and participate in PEC meetings.

The major role of the PEC as defined by the ACGME is to conduct a comprehensive Annual Program Evaluation (APE). In order to gain as many perspectives as possible, our department has traditionally held the APE as a spring Educational Retreat and all faculty and residents are invited to participate. Prior to the APE, anonymous surveys are administered to the previous year's graduates, the faculty, and the residents. These surveys help to conduct an analysis of the strengths, weaknesses, and opportunities for the residency program. During the APE, the interdepartmental surveys, the formal resident and faculty ACGME surveys, and important information about the current state of the residency program are presented and discussed. The APE culminates in small group breakout sessions in order to create an action plan for the coming academic year. Action plans typically focus on areas identified as opportunities, or areas of need identified on the surveys. Small subgroups of faculty and residents work on achieving the action items throughout the academic year. The PEC writes a comprehensive report of the APE, distributes it to the faculty and residents, and submits it to the UK Designated Institutional Official (Dr. Katherine McKinney) for review.

PROGRAM EVALUATION COMMITTEE (PEC) CONT'D

A few of the recent topics discussed by the PEC include:

- Enhancements and changes to the didactic schedule
- Utilizing EPIC for personal performance data
- Residency recruitment strategies and increasing the diversity of our applicants
- Intraoperative teaching
- POCUS /Instructions
- Resident case logs
- Resident presentations at GCC

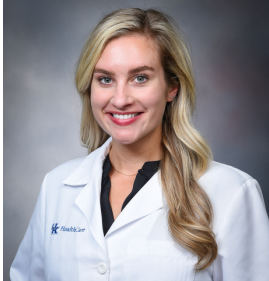
Elements Included in the PEC Assessment of the Residency Program
The program's mission, aims, strengths, areas for improvement, and threats
Curriculum
Outcomes from prior annual program evaluations
ACGME letters of notification, citations, areas for improvement, and comments
Quality and safety of patient care
Aggregate resident and faculty <ul style="list-style-type: none"> • recruitment and retention • workforce diversity • engagement in quality improvement and patient safety • scholarly activity • ACGME resident and faculty surveys • written evaluations of the program
Aggregate resident <ul style="list-style-type: none"> • achievement of the milestones • in training examinations • board pass and certification rates • graduate performance
Aggregate faculty <ul style="list-style-type: none"> • evaluation • professional development

This year's APE will be held on May 23rd, 2023 from 5:00 to 7:00 p.m. If you have questions about the PEC or would like to get involved, please contact either Dr. Tom McLarney or Dr. Amy DiLorenzo.

NEW MEMBERS OF OUR DEPARTMENT

Compiled by Emily Topmiller

CRNAs



Megan Calhoun (new grad)



Tyler Wellman (new grad)



Brennan Fraley (new grad)



Lauren Miller (new grad)



Keesha Watts (to arrive soon)



James Laber (to arrive soon)



Carla Perry (to arrive soon)

Pre-Operative Assessment Clinic APRNs and PAs



Michelle Irvin, APRN



Christina Thompson, APRN



Sarah Bumgardner, PA



Emily Kern, APRN

GME Coordinator & Residency Recruitment



Stacey Sindelar

Critical Care Medicine APRN



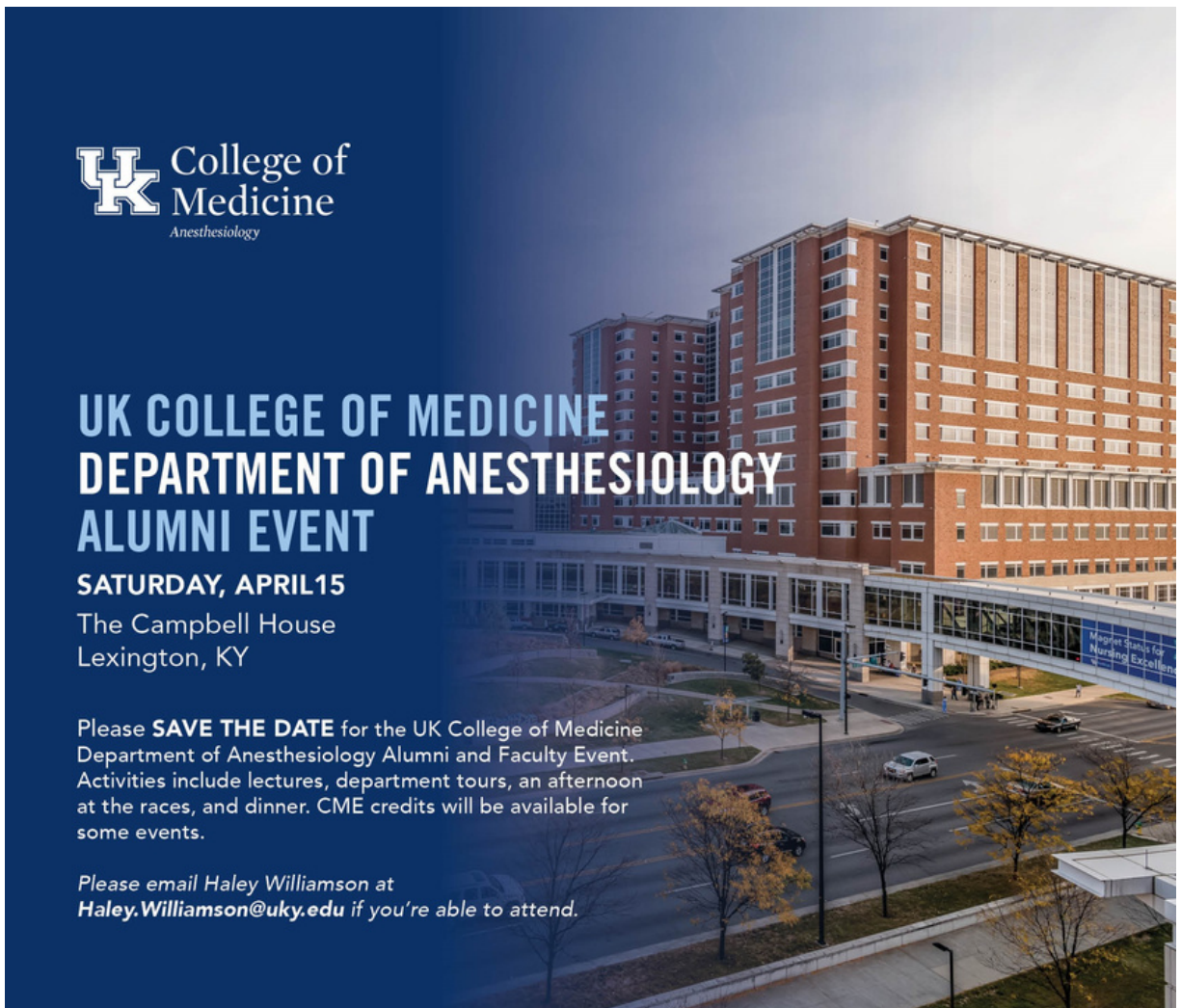
Olivia Brown


UNIVERSITY OF KENTUCKY ALUMNI REUNION

Dr. Gregory Rose

This year on Saturday April 15, 2023, we are proud to partner with College of Medicine Philanthropy to host an Alumni Reunion and Scientific Program. All current faculty members and alumni from our residency and fellowship programs are invited to attend this day of education and collegiality. For returning alumni, a tour of the medical center will be offered Friday afternoon. Saturday morning, we will host an educational conference at the Campbell House on South Broadway in Lexington, featuring speakers Robert Gaiser, Paul Sloan, Eugene Hessel, and Daniel Wambold. Following the conference, faculty and alumni will enjoy an afternoon of horse racing at Keeneland, followed by a dinner at the Campbell House.

The evening will feature the unveiling of the portrait of former Chair, Dr. Robert Gaiser, and special acknowledgements of the upcoming retirements of senior faculty Dr. Eugene Hessel, Pieter Steyn, and Randall Schell, and to honor their remarkable contributions to our department over the years. Further details will be in an upcoming email from the UK College of Medicine. Please RSVP to Haley Williamson at Haley.Williamson@uky.edu.



 College of Medicine
Anesthesiology

**UK COLLEGE OF MEDICINE
DEPARTMENT OF ANESTHESIOLOGY
ALUMNI EVENT**

SATURDAY, APRIL 15
The Campbell House
Lexington, KY

Please **SAVE THE DATE** for the UK College of Medicine Department of Anesthesiology Alumni and Faculty Event. Activities include lectures, department tours, an afternoon at the races, and dinner. CME credits will be available for some events.

Please email Haley Williamson at Haley.Williamson@uky.edu if you're able to attend.

POLAR PLUNGE FOR SPECIAL OLYMPICS

Dr. Melinda Eshelman

The Polar Plunge is the most unique fundraiser around. It's a great way for everyone- individuals, organizations and businesses- to get involved in supporting Special Olympics Kentucky. It's the kind of thrilling event that you really have to experience to understand. Since 1997, over 20,000 Plungers have raised nearly \$5.5 million to support Special Olympics through the Polar Plunge!

Members of our department two out of the last three years and plan to continue participating in future years.

Our team committed to braving the cold and getting the "Chill of a Lifetime" to show our support for the over 13,000 Special Olympics athletes in Kentucky. That's right, we raised money for the chance to jump into ice cold water. Why, you ask? Not only is it the Chill of a Lifetime, it's also for a great cause! All donations to our team went to Special Olympics Kentucky to provide year-round sports training and competition opportunities to children and adults with intellectual disabilities. Through sports, Special Olympics athletes build confidence, self-esteem, and develop skills they can take off the field and into their everyday lives. Every \$25 we raised helped provide a season of athletic competition for one Special Olympics athlete. Your donation helped push us in the frigid water and creates a world in which all people with intellectual disabilities have a chance to be accepted and respected in their communities.

This year it was held outside of Texas Roadhouse on February 18, 2023.

This year's event raised over \$73,000 for Special Olympics Kentucky, and our team raised over \$450. Those interested can still donate via:

http://events.soky.org/site/TR/PolarPlunges/General?team_id=4636&pg=team&fr_id=1370



Pictured: Team Captain Melinda Eshelman, Keaton Dubois, Taylor Ipsen, Matthew Tescula

UPCOMING EVENTS AND IMPORTANT DATES

- March 17 - Residency Match Day
- April 15 - Alumni Reunion Meeting
- May 23 - Annual Program Evaluation (Education Retreat)
- May 24, 25 - APPLIED exam (OSCE) Prep for PGY-4s
- June 4 - Resident Graduation
- June 16-22 - GME Orientation for New residents
- June 26-30 - Anesthesiology Department New Resident Orientation

OTHER RECOGNITION

On January 12, 2023, Dr. Jay Grider, faculty, gave a presentation on "Preparation for Intrathecal therapy" at the North American Neuromodulation Society meeting in Las Vegas, Nevada.

On February 3, 2023, Dr. Regina Fragneto, faculty, gave a presentation on "Obstetrical Hemorrhage" at the Grand Rounds of the Department of Anesthesia at the University of Louisville.

Editor's Comment

We would like to recognize any publications and outside lectures that any members of our department accomplish. Please keep us informed. Thank you.

A FUTURE FEATURE: "OUR FAMILY"

Dr. Eugene Hessel

In future editions of our newsletter we hope to publish notable events, including photographs, in the lives of all members of our department. These might include, among others, notable birthdays, anniversaries, and other celebrations, births, engagements, wedding, trips, etc. This will be voluntary, but we encourage all who are interested, to submit items. If I hear of one, I will contact the person involved to see if they would like to have it mentioned in our newsletter.