Anesthesia *News*

Fall 2024

Inside this issue:

As we transition the calendar from summer to fall, it seems like many of us find ourselves asking "where did the year go?!" This is true at home and in the department…. I can't believe we are already well into pumpkin-spice-everything season and that this is the last newsletter of 2024! It is a good time to reflect on what we have done and where we hope to aim as we set our sites on a plan for 2025. This past year we determined that our "One Thing" would be Quality, which is not terribly specific but a good compass star to direct our efforts. From decreased rates of hypotension to the beginning steps of Provencare Geriatric Anesthesia, we have seen some wins. The removal of Desflurane bolstered our Green Initiative and we made finance happy by reducing our expenditure on sugammadex. Much work remains, but we have some momentum.

So, as we took stock of 2024 and considered what we need to focus on for 2025, we held a meeting with leaders from throughout the system and asked that very question. Many excellent ideas were proposed, but the concept of focusing on our teams felt the most natural. So, our One Thing for 2025 will be "Team." I know- pretty vague, right? However in our work life, we can't escape teams! We practice as anesthesiologist/anesthetist teams; we have charge teams; we have leadership teams; we team up with students; we team up with surgeons…. In our line of work, we are pretty much always in a team, so it makes sense to find ways to improve how these teams work and our role in these teams.

We can also extend the concept of Team inward and ask how can we take better care of our most important resource- each other. We remain committed to offering support and education on substance abuse in our specialty and will continue to do so. It is also well known that burnout in medicine is at an all-time high, so we need to find ways to prevent and mitigate the impact of burnout in our professional and personal lives. Recruitment and retention go hand in hand with those efforts, as appropriate staffing with high quality clinicians makes it easier to control burnout and improve patent care.

Lastly, we will need to make new connections and create teams where they may not currently exist. Geisinger has entered into a partnership with an AI company called OpMed in an effort to use advanced analytics in the surgical suite to help us better schedule and staff our rooms. For this to be successful, anesthesia will need to lead so we will be essential members of this new team as we synthesize the data we get from this project. We are also the lead of the newly created Surgical Services Institute, creating a partnership with OR nursing which will immediately create opportunities for efficiency projects like improved turnaround times. Like with OpMed, this is a new team that we will be asked to help lead at the system and local levels- a challenge we are ready and looking forward to.

So, please enjoy the wonderful fall in our area and as much pumpkin-spiced lattes as you can stomach! Thank you for all the excellent quality work we have done this year and we look forward to maybe the most impactful "One Thing" to date as we focus on our many teams. -

Dr. Matthew Desciak

Departmental Highlights

We are excited to introduce Katie Messinger as the new Chief CRNA for the central region. Katie will collaborate with various teams to support operations at multiple facilities and work with system leadership to ensure high-quality patient care, aligning with our strategic priorities: Team, Talent & Family, Clinical Excellence, Innovation, and Financial Stewardship.

Following Christopher Torres's transition to system Chief, our leadership team ensured a smooth handover. Katie's focus on staff retention and strategic workforce management, along with her ability to drive process improvements, makes her an excellent fit for this role.

Dr. Akanksha Sharma has been invited to join the pre-med advisory board at Misericordia University.

Dr. Joseph Kovatch, one of our CA-2 residents, scored among the top 10% on his ABA exam.

Kevin Chernesky, CRNA has been nominated for the Sue Robel Caring award.

Drug Diversion

We recently had a speaker, Dr. Charles Burns, who provided an insightful grand rounds' presentation on addiction, specifically tailored for healthcare professionals. Dr. Burns is a medical director for the Pennsylvania Physicians' Health Program, he is an addiction medicine specialist who was a Urologist and former Geisinger employee.

The Geisinger Anesthesia Department is committed to supporting efforts to eliminate the stigma associated with addiction within the medical community. Each year, we organize grand rounds focused on this critical issue, led by clinicians for clinicians. We believe fostering open discussions will not only enhance our understanding but also contribute to the overall wellness of the staff.

For those seeing confidential consultation, we have provided contact information for the Physicians Health Program, which supports Nursing, Advanced Practitioners and Physicians. If you or someone you know is struggling, please do not hesitate to reach out.

400 Winding Creek Boulevard

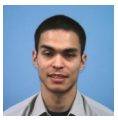
Mechanicsburg, Pa 17050

866-747-2255 or 717-558-7819

New Staff:

GMC:

Jonathan Cardinale, CRNA



Dr. Matthew Dowhower

Jennifer Dudeck, CRNA

Derek Duttry, CRNA

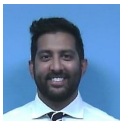
Kathleen Fink, CRNA

Anthony Forman, CRNA

Lisa Fuller, CRNA

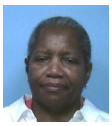
Dr. Joanna Gbobrial

Dr. Farees Hyatali



Dr. Anish Patel

Michael Seldomridge, CRNA



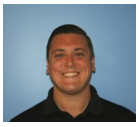
Dr. Yvette Walker

Dr. Andrew Yurkonis

GCMC:

Dr. Taylor George

Dr. Vincent Martello



Peter Seliga, CRNA

GWV:

Omar Wijahat, CRNA

Christopher Evans, CRNA

Dr. Alfred Martello

Community Generosity in Action: CRNAs Lead Hurricane Helene Relief Effort

We are thrilled to share a few pictures of the generous donations collected by our Central Region CRNAs for Hurricane Helene Relief. These donations will be transported to North Carolina by the Norman W Fritz Trucking Company, a local business that has been supporting our community for 65 years. A special thank you to Kristan McGhee, CRNA, and her wife Jodi for their dedication in transporting all these donations.

Small deeds can have a huge impact on lives. We are incredibly thankful for this amazing team!

GEISINGER ANESTHESIA SPOTLIGHTS

Geisinger Community Medical Center

About Geisinger Community Medical Center:

The Anesthesia Department at Geisinger Community Medical Center is comprised of 13 anesthesiologists, 32 CRNAs, 6 anesthesia technicians, an APS nurse, an operations manager, and an administrative assistant. Each member of the team is vital to the department's success and reputation. Serving all of the communities in Lackawanna County and beyond, our 270-bed hospital is extremely busy. Our team focuses on providing exceptional care for our patients. We've spearheaded several projects that later became system-wide initiatives. We're passionate about multi-modal analgesia and perform roughly 200 peripheral nerve blocks each month, continually adding new techniques to our repertoire. Most recently we added ESP blocks for our patients with rib fractures or those having breast or thoracic surgery. Unique to the Scranton campus is our close proximity to both Geisinger Commonwealth School of Medicine and the University of Scranton's CRNA program. We are committed to teaching and mentoring students

Kevin Chernesky CRNA, recipient of the 2025 Golden Laryngoscope Award.

HIGH PERFORMING

From left to right, Dr. Sheypuk, Dr. Gillette, Lori Podunajec, Dr. Farrell. Dr. Tomaszewski, Dr. Miller, Dr. Voytek, Maureen Maloney, Dr. Horsley, and Dr. Mercuri

We recently held our Summer picnic which included a race between the surgical service departments. Although Anesthesia lost to General Surgery, it was so entertaining that it will become an annual event.

At GCMC, the Anesthesia Department and Surgical Services Department are considered a family. Each day, the anesthesia, OR, and perioperative teams work diligently to ensure that every patient receives the best care possible. It is a department built on mutual respect and camaraderie that comes from the shared understanding of how vital our work is. Our department draws its strength from a dedicated chief, Dr Kristy Voytek, and lead CRNAS, Maria McGraw and Gary Sebastianelli, and hundreds of years of collective experience from the anesthesia staff. The staff at GCMC not only care about their patients but also about each other. We hold various events throughout the year to encourage fellowship and team bonding.

Geriatric Anesthesia

Background:

- Postoperative delirium is a geriatric syndrome that manifests as changes in cognition, attention, and levels of consciousness after surgery. It occurs in up to 50% of patients after major surgery and is associated with adverse outcomes, including increased hospital length of stay, higher cost of care, higher rates of institutionalization after discharge, and higher rates of readmission.
- Furthermore, it is associated with functional decline and cognitive impairments after surgery. As the age and medical complexity of our surgical population increases, practitioners need the skills to identify and prevent delirium in this high-risk population. Because delirium is a common and consequential postoperative complication, there has been an abundance of recent research focused on delirium, conducted by clinicians from a variety of specialties.

What does research say?

- Avoidance in High-Risk Patients: The ASA, in line with the American Geriatrics Society Beers Criteria, recommends avoiding benzodiazepines and anticholinergics in high-risk geriatric patients due to their association with postoperative delirium and other cognitive impairments.
- Potential for Delirium: Both benzodiazepines and anticholinergics have been linked to an increased risk of delirium, especially in older adults. This makes them less ideal for managing perioperative care in this population.
- Alternative Approaches: The ASA suggests using multimodal analgesia and other non-pharmacological interventions to manage pain and anxiety in geriatric patients, minimizing the need for these potentially harmful medications.

Best Practices for Postoperative Brain Health

Table 3. Medications Commonly Given by Anesthesiologists That Should Be Avoided or Used With Caution in Patients Over 65 Years of Age[33]

Medication or Class of Medication	Examples	Rationale for Avoiding
First-generation antihistamines	Diphenhydramine	Central anticholinergic effects
Phenothiazine-type antiemetics	Prochlorperazine, promethazine	Central anticholinergic effects
Antispasmodics/anticholinergics	Atropine, scopolamine	Central anticholinergic effects
Antipsychotics (first and second generation)	Haloperidol	Risk of cognitive impairment, delirium, neuroleptic malignant syndrome, tardive dyskinesia
Benzodiazepines	Midazolam, diazepam	Risk of cognitive impairment, delirium
Corticosteroids	Hydrocortisone, methylprednisolone	Risk of cognitive impairment, delirium, psychosis
H -receptor antagonists	Ranitidine	Risk of cognitive impairment, delirium
Metoclopramide		Extrapyramidal effects
Meperidine		Neurotoxic effects
Skeletal muscle relaxants	Cyclobenzaprine	Anticholinergic effects

Where do we go from here?

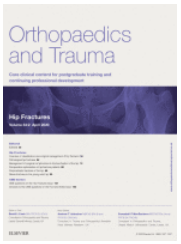
In the hospitalized older high-risk patient, both the number of medications and their psychoactive effects are associated with the development of delirium. For this reason, we recommend minimization of both number and dosage of high-risk medications. Specific medications that have been identified are listed in Table 3 (above).

Additional Reading:

Best Practices for Postoperative Brain Health : Recommendations From the Fifth International Perioperative Neurotoxicity Working Group

American Society for Enhanced Recovery and Perioperative Quality Initiative Joint Consensus Statement on Postoperative Delirium Prevention

Journal Club



Title: Perioperative Optimization of Hip Fracture Patients

Journal: Orthopaedics and Trauma, Volume 34, Issue 2, April 2020, Pages 80-88

Authors: Steven Parke, Christiane Eaves, Sarah Dimond, Claire Bainbridge, Jodie Bellwood, and David Mattinson

Why this paper: Geisinger Medical Center has been treating hundreds of hip fracture patients every year. Typically, the patients have high prevalence of co-morbidities, including cognitive and sensory impairment, cardiorespiratory disease, stroke, diabetes, Parkinson's disease, and conditions resulting in muscle weakness and poor balance. Many patients also suffer from frailty. This group of patients need careful preoperative assessment and preparation by multidisciplinary teams. To optimize literally means to make perfect as much as possible. Unfortunately, if the preoperative optimization for hip surgeries takes too much time, worsened outcomes is serious. Clearly, anesthesia providers and others are looking for , not most optimized, but reasonably optimized preoperative management.

Key points:

Surgery: Ideally should be done 36 hours after admission.

Analgesia: Pain control is critical. Poor pain control predisposes patients to delirium and its associated complications, whereas effective analgesia has been shown to improve outcomes, particularly aiding early postoperative mobilization and reducing length of stay. Among other options, fascia-iliaca blocks may be the block of choice. It can be performed in the emergency rooms.

Cardiovascular optimization: Serious concerns include arrhythmia and heart failure. One of the most common arrhythmias is atrial fibrillation. Rapid ventricular responses should be treated promptly. "Providing the ventricular rate is less than 120 beats/minute, it should be possible to proceed to theatre". Aortic stenosis (AS) is another common cardiovascular disease in this group of patients. In general, it is believed that hip surgeries should not be delayed by an echocardiography addressing the concern of AS. Preoperative echocardiography is warranted if there are signs or symptoms suggesting acute coronary events or heart failure.

Volume resuscitation and use of blood products: "Intravenous fluid resuscitation is generally always indicated in the preoperative period, although this must be guided by regular clinical assessment of fluid status". "...0.9% sodium chloride should be avoided, particularly in large volumes, as it can cause hyperchloremic acidosis. This has been shown to adversely affect patient outcomes in surgical and critically unwell patients, being associated with increased rates of both renal impairment and mortality."

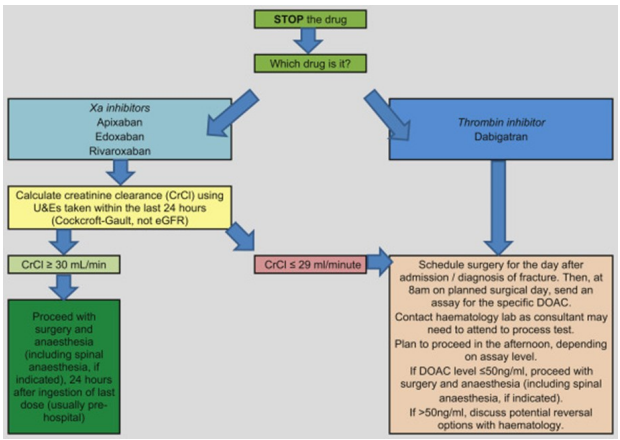
Anemia: 50% have anemia. Transfusion should not delay surgery. The optimal transfusion threshold is unclear. However, hemoglobin<100 g/liter is associated with increased wound infection rates in both vascular and total joint replacement surgery.

Thrombocytopenia: 50 to 80 /liter: this will usually exclude a spinal; < 50 /liter: A platelet transfusion will often be required before surgery.

Diabetes: "A hip fracture operation should not be delayed in patients with hyperglycemia unless they are extremely unwell or dehydrated, for example, in the context of diabetic ketoacidosis (DKA). For those with hyperglycemia on admission (but no evidence of DKA), surgery can generally proceed if the glucose level is < 20 mmol/L and on downward trend."

Antiplatelet and anticoagulation medication: Antiplatelet monotherapy usually is not withheld; Dual therapy should be switched to single agent if bleeding risks are particularly concerning. Warfarin Fresh frozen plasma or prothrombin complex concentrate may also be administered if vitamin K is ineffective, or if there is significant bleeding and more rapid anticoagulation reversal is required.

- Dr. Xianren Wu



The authors' hospital protocol for direct oral anticoagulants.

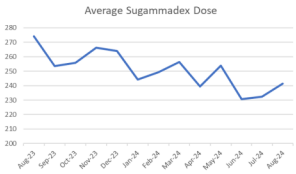
Financial Stewardship

OR/Anesthesia Access Initiative:

The OR/Anesthesia access initiative at GMC's EP lab, which began increasing block time on August 5th, is projected to handle an additional 6 cases per week, resulting in an estimated $2.2 million in incremental revenue by the end of the year.

Sugammadex Update:

The pharmacy is continuing to compound manufactured 5ml vials of sugammadex into 2ml syringes for GMC has yielded $64k in savings in Q1 2024. Starting September 7th, an additional 50 syringes will be compounded weekly, with an average dosage reduction of 15%.

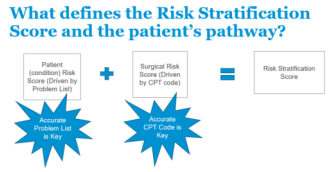


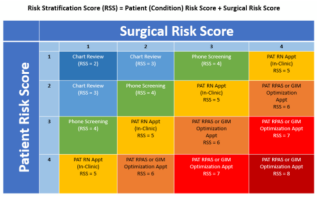
Surgical Optimization Updates:

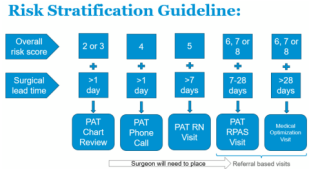
- Live with all surgical specialties as of August 19th!
- Four service desk incidents – all resolved
- Implemented 17 updates
- Enhancement list growing
- Core group will begin prioritizing in coming weeks
- First draft of outcomes dashboard available
- Drafting request for incremental PAT FTEs to support volumes and improve lead time

RPAS Overview:

The Rapid Preparation for Anesthesia and Surgery (RPAS) initiative is a critical component of our surgical optimization efforts, aimed at enhancing the care of high-risk surgical patients scheduled for surgery within 28 days. Patients are directed to Pre-Admission Testing (PAT) through the Procedure Pass system, which assigns a Risk Stratification Score to determine the appropriate PAT level of service. This includes options such as Nursing Chart Review, Nursing Telephone Interview, and Nursing Clinic Appointment, with high-risk patients being referred to RPAS Clinic Appointments or the GIM Medical Optimization Clinic.







RPAS appointments, conducted by nurse practitioners, involve a comprehensive medical review and surgical optimization. These 60-minute, in-person sessions include pre-surgical medication instructions, pre-operative education, patient history collection, and the completion of evaluation forms. Additionally, necessary lab and EKG studies are collected, and orders for further studies or consults are placed as needed. Currently, RPAS services are available at multiple pre-surgery clinic locations, with plans to expand to a fourth site and introduce remote telemedicine appointments.

RPAS Overview Continued....

The RPAS visit covers detailed evaluations across various systems, including cardiac, pulmonary, hematologic, endocrine, renal, and gastrointestinal. For instance, cardiac evaluations assess ischemic risk, functional status, and arrhythmias, while pulmonary evaluations focus on COPD, asthma, and OSA risk. Hematologic evaluations address anemia and oncology recommendations, endocrine evaluations cover diabetes and thyroid disease, renal evaluations manage CKD and electrolyte imbalances, and gastrointestinal evaluations review conditions like GERD and liver disease.

This initiative aims to ensure thorough preparation and risk assessment for surgery, ultimately improving patient outcomes through targeted, timely pre-surgical care.

Innovation

Artificial Intelligence — Opmed.ai Updates:

Opmed.ai utilizes artificial intelligence and machine learning to improve operational efficiencies in the Surgical Suite.

Opmed.ai Timeline: