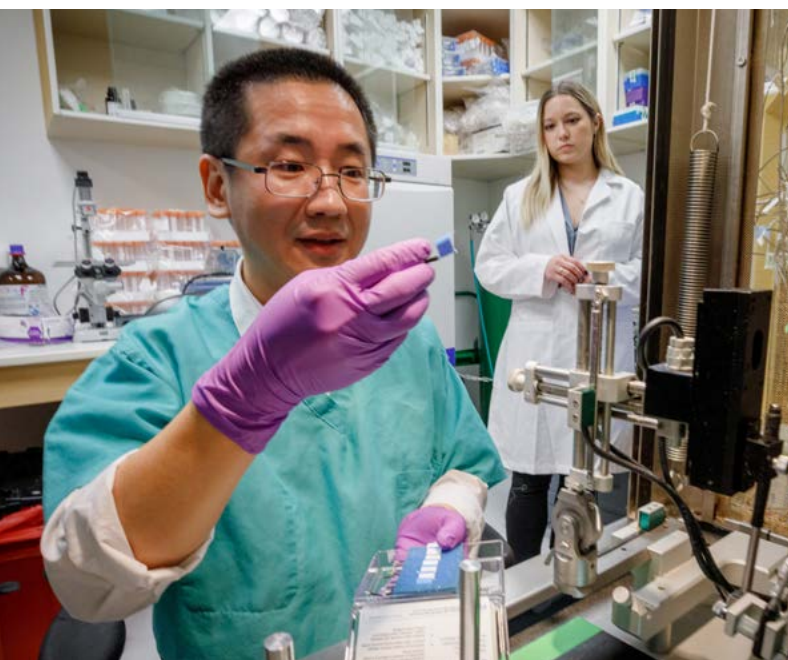


DEPARTMENT OF
ANESTHESIOLOGY
ANNUAL REPORT | 2022-23 ACADEMIC YEAR





Message from the Chair

To say the 2023 academic year has been exciting is an understatement. This year's annual report pays homage to the many accomplishments of the department's amazing faculty, incredible house staff and dedicated nurse anesthetists.

This report highlights multiple new leaders. My congratulations to Dr. Jessica Goeller, who was appointed as the clinical service chief of pediatric anesthesiology and director of perioperative services. Dr. Goeller is an exciting leader who will lead the pediatric anesthesiology division to continued academic and clinical success. Congratulations as well to Dr. Troy Wildes, our inaugural vice chair of perioperative medicine, quality and safety. Dr. Wildes is a recognized national leader with extensive experience in this critical facet of the perioperative continuum. The leadership of the perioperative evaluation and care clinic will be assumed by Dr. Zahid Iqbal, as the new medical director, while Dr. Andrew Maresch will assume the role of director of anesthesiology at our Village Pointe campus. Finally, Nick Stalnaker, CRNA, has been named the associate chief of the nurse anesthesia division working closely with our current chief nurse anesthetist, Tiffany Olson, CRNA. They will be a great team. My sincere congratulations to all.

Our clinical team updates follow next. Please enjoy these yearly updates from our clinical divisions. They celebrate and chronicle much of this year's success, not only in the provision of unmatched patient care, but also the significant contributions to our educational and research missions.

Next, our amazing house staff. 2023 was another terrific year that saw 27 residents and fellows move on to the next facet of their careers. Seven of our 10 residents continued training as fellows beginning July 2023, while three joined the ranks of attending anesthesiologists in Nebraska and Missouri. Three of the graduating fellows joined the department, 12 joined private practice or academic departments across the Midwest, while two continued onward in their fellowship journey for another year. You all make us proud!

The last section of our report is a true point of pride. It includes a summary of research presentations and publications, new research grants, clinical trial success, resident and faculty awards, faculty promotions, recognition of the first Dr. Gail Walling Yanney lecturer and a review of our largest department celebration of research to date. Notable is Dr. Sowmya Yelamanchili's recognition as a UNMC distinguished scientist and Dr. Brad Fremming's recognition as the recipient of the department's first clinical science faculty scholar award.

Finally, let me take a point of personal privilege to recognize and thank all of you for allowing me the opportunity to lead for the past 11-plus years. As many know, Oct. 31, 2023, was my last official day as chair. While I remain a faculty member in this amazing department, my efforts will be focused upon my new UNMC College of Medicine and Nebraska Medicine leadership roles. Words cannot express how thankful I am to have had the honor of serving as chair of this tremendous department.

A handwritten signature in black ink, appearing to be 'S. Lisco'.

Steven J. Lisco, MD

*Myrna Newland, MD, Endowed Professor of Anesthesiology
Chairman, Department of Anesthesiology, University of Nebraska Medical Center*

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Our mission is to deliver high-quality and compassionate medical care, provide premier educational programs and perform innovative research.

Jessica Goeller, DO, appointed as clinical service chief of pediatric anesthesia and director of perioperative services

Jessica Goeller, DO, associate professor in the UNMC Department of Anesthesiology, was appointed clinical service chief of pediatric anesthesiology and director of perioperative services at Children's Nebraska in 2023. In her new role, Dr. Goeller will collaborate with Julia Galvez Delgado, MD, to improve the clinical operation of Children's operating rooms and grow the pediatric anesthesiology services.

"Dr. Goeller's extensive clinical leadership experience and dedication to providing the very best clinical services for children made her the ideal candidate to continue to expand and lead the pediatric anesthesiology services," said Mohanad Shukry, MD, PhD, executive vice chair of the department.

Dr. Goeller said she is excited to serve the community in this new role, leading the growth of the department's excellent pediatric clinical anesthesia operations and partnering with the director of surgical services for perioperative services strategic planning and management at Children's Nebraska.

A native of Australia, Dr. Goeller served in the U.S. Army in finance and accounting before attending medical school. She completed her residency in anesthesiology at Doctors Hospital, Columbus, Ohio. After a fellowship in pediatric anesthesiology at Nationwide Children's Hospital in Columbus, she joined the faculty at the UNMC Department of Anesthesiology.



Photo credit: Children's Nebraska

"The privilege to care for these young patients through necessary procedures and provide excellent pain management couldn't be more fulfilling."

Dr. Goeller said she was first drawn to pediatric anesthesiology because of her deep, abiding love for children and young patients and that anesthesiology aligns with her passion for providing essential patient care in a surgical environment that can be fast-paced and complex. Dr. Goeller said her passion, combined with her background in osteopathic medicine, proved to be formative to her interest in pediatric pain medicine.

"The privilege to care for these young patients through necessary procedures and provide excellent pain management couldn't be more fulfilling," Dr. Goeller said. "It is my true calling."

Dr. Goeller has served locally as chair of the Children's Specialty Physicians Board of Directors and as a senator for the UNMC Faculty Senate. She has served nationally as the chair of the

Professional Education Committee for the American Osteopathic College of Anesthesiology. This past May, she received a Master of Business Administration from the University of Nebraska-Lincoln.

Dr. Goeller's clinical interests include pediatric regional anesthesia and pain management. She is actively involved in research on osteogenesis imperfecta, a genetic disease that causes bones to fracture easily with no apparent cause.

"I became interested in osteogenesis imperfecta research when I came to Omaha and found that we had a center of excellence and an abundance of data to allow us to share our experiences with the world," Dr. Goeller said. "This will help to better the lives of those with fragile bones who therefore may require frequent, painful surgeries to correct fractures and malformation."

"I am confident that Dr. Goeller will succeed in her new position and grow pediatric anesthesiology clinical services," Dr. Shukry said. "As an academic anesthesiologist, she is an outstanding role model and mentor."

Troy Wildes, MD, named vice chair of perioperative medicine, quality and safety

When Troy Wildes, MD, first visited UNMC, he was struck by the sense of purpose and dedication emanating from the people he met.

"I knew that I'd be joining a team that was taking great steps forward in patient care, research and teaching," he said. "A team that I'd be excited to be a part of."

A national leader in perioperative medicine and cardiothoracic anesthesiology, Dr. Wildes is the new vice chair of perioperative medicine, quality and safety and a professor in the UNMC Department of Anesthesiology. He comes to UNMC from Washington University in St. Louis, where he served as division chief of perioperative medicine and was an active perioperative clinical researcher.

He joined the department in late July 2022, with goals of continuing to advance the department's culture of safety and building on its already robust collaborative culture.

Mohanad Shukry, MD, PhD, executive vice chair of the department, noted Dr. Wildes' extensive experience in perioperative clinical care and in developing related clinical programs.

"Optimizing surgical outcomes starts long before the day of surgery," Dr. Shukry said. "We are excited about Dr. Wildes joining our department and our perioperative team. With his role and experience, Dr. Wildes will oversee optimization of patients before surgery, enhancement of intra and postoperative anesthesia and surgical care and the quality of perioperative care."

At Washington University, Dr. Wildes' oversaw the expansion of the perioperative clinic from 25,000 to 50,000 annual visits during his 12-year tenure as a clinical leader, which included serving as medical director of the preoperative clinical program

and division chief of perioperative medicine. Dr. Wildes said culture of teamwork, problem-solving, and standardization were key components to the successful growth. His team also leveraged technology to advance quality improvement and research missions, while streamlining clinician work.

Dr. Wildes' anesthesiology career grew from a medical school interest in cardiac physiology and interest in specialties employing newer monitoring technologies to improve patient care.

"These two interests converged when I got the chance to experience a dedicated cardiac anesthesiology rotation," he said. "I was hooked on the ability to monitor a patient's organ systems dynamically by using tools such as physiologic waveforms and ultrasound, and to favorably modify patients' physiology in real-time."

Dr. Wildes' brings more than 15 years of experience to the department, as well as a strong background in timely detection of perioperative risks, patient optimization and developing IT tools to support clinicians, Dr. Shukry said.

Dr. Wildes said he's passionate about leveraging technology to improve the care experience for clinicians and patients ... making systems work better for patients and clinicians.

"We are learning how to employ novel technologies to continuously assimilate information in order to diagnose and rectify deteriorations patients might experience during surgery and anesthesia," he said. "The amount of data generated by patient care activities is constantly growing as we improve patient monitoring and increase automated data capture. It is important to make sure this data enhances patient care rather than becoming a distraction."

He also will support the continued development and implementation of Nebraska Early Recovery After Surgery (NERAS) with the director, Kyle Ringenberg, MD, medical director of Enhanced Recovery After Surgery (ERAS).



Outside of the office, Dr. Wildes can be found exploring the outdoors with his family.

"As avid travelers and outdoor enthusiasts, we enjoy exploring the surroundings of where we are," he said. "The opportunities for biking, hiking, and everything else we love about the outdoors was one of the draws that brought us to Omaha."

"We are learning how to employ novel technologies to continuously assimilate information in order to diagnose and rectify deteriorations patients might experience during surgery and anesthesia."

Dr. Wildes also attributed UNMC's culture and professional opportunities as reasons for both he and his wife to leave St. Louis to come to Omaha.

His wife, Tanya Wildes, MD, MSCI, also new to UNMC, is as an associate professor in the UNMC Division of Oncology and Hematology, specializing in multiple myeloma and geriatric oncology.

"Dr. Wildes brings a wealth of experience and professionalism to UNMC/Nebraska Medicine," said Steven Lisco, MD, chair of the department. "I am excited to see how his clinical expertise and dedication to patient safety transforms our perioperative education and care."



Zahid Iqbal, MD, named medical director of Perioperative Evaluation and Care Clinic

When Zahid Iqbal, MD, and his family were considering a move to Omaha, he knew he wanted to be at the best medical center in the metro area. He decided the UNMC Department of Anesthesiology was a perfect fit.

"We wanted to move to Omaha because my wife grew up here," Dr. Iqbal said. "I knew this was the institution specifically for me."

Dr. Iqbal joined UNMC from Washington University in St. Louis, where his clinical contributions included multispecialty OR anesthesia, trauma anesthesia, ICU medicine and tele-ICU medicine.

This experience, combined with his background in biomedical engineering, proved to be formative in Dr. Iqbal's interest in utilizing new technologies to optimize patient experiences.

"At some point during my undergraduate training, I decided to attend medical school," Dr. Iqbal said. "Nothing really clicked more than anesthesia. It made sense from a physiological perspective, and the technology involved was exciting to me at the time."

He has a strong interest in continuing the work of applying new optimization strategies, streamlining preoperative care at UNMC, advancing education in

perioperative medicine and contributing to the clinical research program in the preoperative clinic.

As the newly appointed director of PECC, Dr. Iqbal's goals are to continue the excellent care that the clinic already provides, increase availability to patients and create a safe, progressive atmosphere for both patients and staff.

"Coordinating care for these patients can be difficult, especially as we cast a wider net, and some are coming from hours away," Dr. Iqbal said. "Figuring out the best way to coordinate that care is important for the clinic."

Dr. Iqbal plans to use available technology, such as telehealth, to expand the clinic's footprint. With many patients from outside the metro area, telehealth appointments can be used to gather patient history for electronic health records and provide routine pre-op services. The data is used to put together a complete chart for the surgical team.

"Patients can see us without driving two hours to chat about anesthesia, and we are able to provide that same level of care," Dr. Iqbal said. "Things get more advanced as patients age. It's harder for them to keep track of their medications and other therapies online. Telehealth also provides availability to patients by increasing our presence in the community."

Another objective will be to increase focus on advancing care in terms of leveraging newer technologies to optimize patient care.

"My wife says I have a 'tinkering brain.' I want to lean into that," Dr. Iqbal said. "There are different routes for getting things done and increasing efficiency, but the goal is to do it safely."

For example, Dr. Iqbal said the current methods of evaluating perioperative risks are relatively antiquated and subjective. He eventually plans to explore newer technology, such as machine learning algorithms and artificial intelligence to increase efficiency, which will positively impact patients and care providers.

"These are all things that are not too far away, as evidenced by what's going on right now," Dr. Iqbal said. "Simply put, we don't want to cancel patients' surgeries, and anything we can do to optimize patient care is very relatable."

Another focus area will be advancing education in perioperative medicine, including adding a lecture series. Residents can spend valuable one-on-one time with the attending physician evaluating patients. Providing lecture opportunities for interested nurse practitioners and physician assistants on staff will further professional growth and development.

"Telehealth also provides availability to patients by increasing our presence in the community."

"Our residents come to the clinic and pretty much get free rein," Dr. Iqbal said. "The way it's set up now is nice in that they get to spend valuable time in the clinic with the attending. They get to see a wider variety of patients, as opposed to just their six patients if they were assigned to a group of patients."

Dr. Iqbal said he loves to share his love of "tinkering" with his three children. In addition to trips to the zoo, hanging out as a family and visiting with Nana and Papa, they enjoy cooking as a family.

"I'm a big nerd. So, we like to do science experiments on the weekends and things like that," Dr. Iqbal said. "They spend every minute outside just, you know, being a kid and doing whatever kinds of experiments they come up with, for better or worse."

"The PECC program achieved many substantive improvements under the leadership of Dr. Sayre," said Troy Wildes, MD, vice chair of perioperative medicine, quality and safety. "We are excited about the future growth of the PECC program, both in size and scope, under the leadership of Dr. Iqbal."

Andrew Maresch, MD, selected as director of anesthesiology at Village Pointe Health Center

Andrew Maresch, MD, a faculty member in the UNMC Department of Anesthesiology, was appointed in March 2023 as director of anesthesiology at Village Pointe.

Dr. Maresch is excited to serve the community in this new role, only the latest in his long association with UNMC. In addition to being a UNMC medical school graduate, Dr. Maresch also completed an internship and residency here before pursuing a cardiac anesthesiology fellowship.

Dr. Maresch said he was first drawn to cardiac anesthesiology because of his interest in physiology and anatomy.

"Cardiac anesthesiology hits the maximal point, combining my favorite aspects of anatomy and anesthesiology," Dr. Maresch said. "Working with pulmonary physiology, you're changing many human dynamics and parameters within the patient's body, rerouting blood flows, bypassing the heart or stopping the heart. So, it appealed to me, and the cases were also quite interesting."

Dr. Maresch has been part of the anesthesiology faculty for approximately five years, first as part of the cardiac anesthesiology team and then joining the acute pain service team in March 2022. He further developed his leadership skills working at the Fritch Surgery Center at Lauritzen Outpatient Center, helping to manage the facility's day-to-day operations.

"I really enjoyed working over at Fritch, and so when this role came up, I thought it was a great opportunity because I enjoy the outpatient setting," Dr. Maresch said. "It's just a different environment overall."

In addition to managing Village Pointe Health Center's day-to-day operations, Dr. Maresch will create new policies and fine-tune existing ones, primarily focused on anesthesiology services.

"We've recently added a fourth room and are consistently filling that time," Dr. Maresch said. "Village Pointe is growing and requires more specific anesthetic services, such as regional, nerve blocks and other services for orthopedics, which was one of the reasons I was interested in the position."

Dr. Maresch said the center's staff also was a big draw. The team includes one anesthesiologist supported by surgical nurses. Dr. Maresch aims to increase staffing as services expand, with the possibility of rotations for residents.

"It's a great place to work, and the people there really enjoy it. It's a great group of people," Dr. Maresch said. "I enjoyed the group of people and friendships at Fritch, and I look forward to meeting everybody and working with all the great people at Village Pointe."

In addition to improving service lines and creating growth, Dr. Maresch plans to focus on increasing and maintaining efficiency and providing professional development to create a well-run program that flourishes.

"As the regional services expand, we're going to be starting some programs to train and provide initial and maintenance training within our regional program," Dr. Maresch said. "We have started building a one-day training course on blocks and other frequently performed services so everyone can get comfortable doing those types of procedures."

Having grown up in Omaha, Dr. Maresch and his wife agree that it is a great place to raise their two boys, and they take full advantage of all the fun family activities the area has to offer.

"There are lots of family-friendly things to do. We love anything outdoors, going to the park, going for walks and hikes together," Dr. Maresch said. "We also



enjoy visiting the zoo, the Children's Museum, and all the wonderful seasonal attractions."

Dr. Maresch and his wife are avid trail riders and participate in approximately four or five Spartan Races annually. This is a great way, he said, to travel and explore different areas of the country as a family. The most memorable trips include Monterey, California, and Seattle, Washington.

"My wife and I do Spartan Races every year. She does it competitively, and I do it just for fun," Dr. Maresch said. "We spend a lot of time working toward

"Village Pointe is growing and requires more specific anesthetic services, such as regional, nerve blocks and other services for orthopedics, which was one of the reasons I was interested in the position."

those, and we've traveled to more states in the past two years than we have our whole lives."

Medical Director of Ambulatory Anesthesiology Allyson Hascall, MD, congratulated Dr. Maresch on his new role.

"Dr. Maresch's strong leadership abilities and regional anesthesia background will make him an asset to the Village Pointe team as we expand and grow our services," Dr. Hascall said.



*Nicholas Markin, MD,
and Chantal Mercier
Laporte, MD*

Cardiothoracic anesthesiology division update

The Cardiothoracic Anesthesiology Division reached a milestone of performing more than 1,500 transthoracic and transesophageal echocardiograms perioperatively in the 2022-23 fiscal year, the highest volume to date.

Echocardiography studies are performed by the perioperative echo service pre-operatively, intraoperatively (in both cardiac and noncardiac cases), postoperatively and in the intensive care unit. The team provides advanced patient care while educating the physicians of tomorrow with an echocardiography rotation.

The division continues to provide state-of-the-art clinical care both in the cardiac suites and in the heart catheterization lab. Nebraska Medicine has experienced an increase in the volume and complexity of cardiac surgical cases resulting in growth of the team and collaboration with surgical and cardiology colleagues.

Leadership

Rebecca Aron, MD, director, cardiothoracic anesthesiology fellowship

Jeff Songster MD, associate director, cardiothoracic anesthesiology fellowship

Division members made significant contributions to the advancement of cardiothoracic anesthesiology on a national level, most notably at the Society of Cardiovascular Anesthesiologists' Annual Meeting in Portland, Oregon, in May 2023.

Vice Chair of Strategy and Innovation Sasha Shillcutt, MD, and Tara Brakke, MD, cardiothoracic division chief, are members of the SCA's board of directors. Dr. Brakke also coordinated workshops and problem-based learning discussions. Megan Chacon, MD, served as the course director of the Point of Care Ultrasound Course. Among other faculty members in attendance were Austin Adams, MD, Walker Thomas, Nicholas Markin, MD, and Jeffrey Songster, MD.

“We truly are advancing the field and inspiring our peers to reach new levels, while gaining education to grow ourselves.”

“These physicians did a tremendous job representing our department on a national stage,” Dr. Brakke said. “We truly are advancing the field and inspiring our peers to reach new levels, while gaining education to grow ourselves.”

The following residents, fellows, and research assistants presented abstracts at the SCA Annual Meeting:

Chika Akwani
Sagar Bansal, MBBS
Bradley Eichhorn, MD
Christopher Kelsheimer, MD
Natalie Rea, MD
Megan Rolfzen, MD
Emely Sanchez
Elizabeth Ternet-Rech, DO
Valerie Verdun, MD
Patrick Ward, DO
Bailey Williams

Other notable leadership appointments and awards this year included:

Cardiothoracic Anesthesiology Teacher of the Year – Troy Wildes, MD

Rebecca Aron, MD, chair of the ABA Adult Cardiac Anesthesiology, MOCA division

Thomas Schulte, MD, Association of Anesthesia Clinical Directors member

Andrew Maresch, MD, appointed director of anesthesiology at Village Pointe

Megan Chacon, MD, appointed clinical director

Nick Markin, MD, editorial board member, Journal of Cardiothoracic and Vascular Anesthesia

Amy Duhachek-Stapleman, MD, American Board of Anesthesiology examiner

Sasha Shillcutt, MD, American Board of Anesthesiology examiner; National Board of Echocardiography Advanced Exam writer

Thomas Schulte, MD, National Board of Echocardiography Basic Exam writer

Notable Research

Division research highlights in the past year include:

Megan Chacon, MD, “Perioperative and Anesthetic Database of Orthotopic Heart Transplantation Normothermic Regional Perfusion *in situ* Heart Reanimation and Preservation in Donation after Cardiac Death Large Animal Model”

Nicholas Markin MD, Megan Chacon MD, Anthony Castleberry MD, Lance Fristoe CCP, Brian Lowes MD, PhD, John Um, MD, Marian Urban MD, PhD (2022). “Cardiac Function Unchanged Following Reanimation with Normothermic Regional Perfusion in Donation after Circulatory Death”

Nicholas Markin, MD, Nathan Goergen, MD, Armijo, Priscilla Rodrigues Armijo, MD, PhD, Alicia Schiller, PhD. “Creation of a High-Fidelity, Low-Cost, Intraosseous Line Placement Task Trainer via 3D Printing”

Cardiothoracic faculty

Tara Brakke, MD, division chief

Cardiothoracic Anesthesiology faculty

Austin Adams, MD
Rebecca Aron, MD
Karsten Bartels, MD, PhD
Stephen Brannan, MD
Megan Chacon, MD
Lucas Deschenes, MD
Amy Duhachek-Stapelman, MD
Katie Goergen, MD
Kristi Lorenzen, MD
Andrew Maresch, MD
Nicholas Markin, MD
Ellen Roberts, MD
Thomas Schulte, MD
Sasha Shillcutt, MD
Jeffrey Songster, MD
Dennis Thiele, MD
Troy Wildes, MD

Senior cardio sonography technologist

Walter Thomas
Steven Weiss

Critical Care division update

The Critical Care Division continues to make a difference in patient care through educational, research and clinical initiatives at UNMC and the national level. The division continued its clinical mission of providing state-of-the-art care for complex cardiology, cardiothoracic, vascular, surgical oncology, obstetric and ENT patients in the ICU, while significantly expanding its presence at multiple OR sites to provide anesthetic care.

In 2022-23, the division enjoyed tremendous stability in its clinical workforce of faculty physicians and nurse practitioners. Refocusing on the original missions of clinical excellence, education and research after the tumult of 2020 and 2021 was a welcome change.

Achievements

Critical Care Anesthesiology Fellow Peter Pellegrino, MD, PhD, was recognized as House Officer of the Year by UNMC for his steadfast commitment to excellence in patient care, education and collegiality.

Division members served as leaders at the Society of Critical Care Medicine, with Shaun Thompson, MD, being appointed chair of the SCCM Graduate Medical Education Committee and Daniel Johnson, MD, finishing his term as chair of the SCCM Ultrasound Committee.



*Daniel Johnson, MD, chief,
critical care anesthesiology division*

Notable Appointments

Zahid Iqbal, MD, was named medical director of the Perioperative Evaluation and Care Clinic, and James Sullivan, MD, was named medical director of the Acute Care Emergency Response Committee for Nebraska Medicine. Amanda Arnzen, MD, was appointed to the Subcommittee for Critical Care Education at the American Society of Anesthesiologists.

Notable Research

Karsten Bartels, MD, PhD, the department of anesthesiology's vice chair for research, published 11 manuscripts in highly impactful journals, covering topics such as cardiovascular surgical outcomes, opioid overuse and optimal reversal

of neuromuscular blockade. He continues to mentor faculty, house officers and students in conducting high-quality research projects that have an impact on patient care.

Dr. Thompson co-authored several manuscripts arising from his multicenter research on hospitalized COVID patients, with an emphasis of the utilization of extra-corporeal life support and other life-sustaining measures.

Dr. Pellegrino continued to conduct bench research on the impact of selective denervation and its role in modulating the sympathetic nervous system, which will likely lead to groundbreaking clinical applications in heart failure, hypertension and kidney disease.



From left, John Riley III, MD, Shaun Thompson, MD



Society of Critical Care Medicine Annual Congress attendees from left - Alec Seei, DO, Shaun Thompson, MD, Amanda Arnzen, MD, James Sullivan, MD

Education

The division continues to provide high-quality education and mentorship for residents and critical care fellows. All fellows published and/or presented academic work on a regional or national level, including book chapters, review articles and presentations at prestigious conferences such as the Society of Critical Care Medicine Annual Congress, the Society of Cardiovascular Anesthesiologists and the Society of Critical Care Anesthesiologists meetings.

Despite a national shortage of applicants for anesthesiology

subspecialty fellowship positions, Dr. Thompson was able to recruit stellar physicians to fill all critical care fellowship positions in 2022. Division chief Dr. Johnson called this a testament to the multispecialty, multidisciplinary clinical education provided by UNMC faculty and the supportive environment of the entire campus.

Multiple faculty members, current fellows and former fellows passed the National Board of Echocardiography Examination of Special Competence in Critical Care Echocardiography (CCEeXAM) in 2022, with more on-track to pass in 2023.

Critical Care faculty

Daniel Johnson, MD,
division chief

Amanda Arnzen, MD
Karsten Bartels, MD, PhD
Joseph Baus, MD
Stephen Brannan, MD
Lucas Deschenes, MD
Erin Etoll-Jones, MD
Zahid Iqbal, MD
Michelle-Anne Iverson, MD
Steven Lisco, MD
Joseph Pawlowski, MD
Sean Rajnic, MD
James Sullivan, MD
Dennis Thiel, MD
Shaun Thompson, MD
Levi Zehr, MD

Advanced Practice Providers

Miguel Artzner, APRN
Vickie Lambert, APRN
Lyndie Farr, APRN
Gina Hall, APRN
Kerry Mancusco, APRN
Jed Sanders, APRN

CRNA division update

The UNMC Division of Nurse Anesthesia is a group of exceptionally skilled and resilient certified registered nurse anesthetists who demonstrate unwavering dedication to patient care.

With more than 60 CRNAs in the division, this clinically excellent group is part of a cohesive team care model working together to ensure coverage across all Nebraska Medicine campuses.

In addition to the new leadership role of associate division chief Nicolas Stalnaker, CRNA, in the department, Melissa Smith, CRNA, was appointed as the CRNA assistant director at Fritch Surgery Center at Lauritzen Outpatient Center. Smith also serves as chair of the SRNA education committee.

Megan Freml, CRNA, was elected chair of the newly formed Early Career CRNA Committee. The committee's purpose is to add a new perspective to department decision making and adequately represent those early in their CRNA careers. CRNAs Elaina Lacy, Sara Park, Amy Mitchell, Allison Russell, Laura Fraynd, Caressa Kiichler, John Maru, Cayce McMains, Sarah McMillin and Leslie Bonnet serve as committee members. CRNAs Jacque Kroenke and Kris Rohde serve as resource leaders for this committee due to their years of experience as CRNAs within the department.

The division continues to grow along with the expansion of the department, with the addition of 10 CRNAs during the 2022-2023 academic year. The division anticipates continued growth as active recruitment of the best CRNAs will bolster its thriving team of professionals.

Tiffany Olson, CRNA



In addition to clinical practice, the division's CRNAs are committed to the education of trainees in the field. As clinical instructors, they mentor student registered nurse anesthetists from Bryan College of Health Sciences and Clarkson College. Through these partnerships, the division welcomed the following graduates to the department: CRNAs David Bebee, Ellen Brightweiser, Devon Florance, Candace Glasgow, Shay Prochaska and Eli Rodriguez.

As EPIC champion, CRNA Emily Glaser is responsible for notifying clinicians of changes and upgrades to the EPIC charting system and providing training links with the aim of improving clinical care and patient experience. Additionally, Glaser champions projects to make improvements to EPIC to customize the charting platform to our specific clinical needs improving efficiency, safety, communication and reimbursement.

Achievements

The American Association of Nurse Anesthesiology (AANA) honored Kris Rohde, CRNA, with the 2023 Daniel D. Vigness Federal Political Director Award during the AANA Mid-Year Assembly, held April 29-May 3, 2023, in Washington, D.C. This award is presented to an individual who has made a significant contribution to the advancement of the national healthcare agenda of CRNAs by coordinating grassroots CRNA involvement in their state and in the federal political process.

CRNAs Jamie Kobs and Melissa Smith participated in a medical mission trip to Guatemala, where they provided AV fistulas for pediatric patients who require dialysis due to renal failure. The two were part of a Bridge of Life team that completed 23 surgeries in four days for underserved patients in Guatemala City.



CRNAs from main campus, Fritch Surgery Center, Bellevue Medical Center and Village Pointe Health Center.

Stalnaker named associate chief of Nurse Anesthesia Program

Nick Stalnaker, CRNA, has been named associate chief of the Nurse Anesthesia Program for the UNMC Department of Anesthesiology.

In this role, Stalnaker will work closely with his predecessor and current director of the Nurse Anesthesia Program, Tiffany Olson, CRNA, providing leadership, workforce management and strategic planning for the program. Stalnaker will also support CRNA recruitment, retention and clinical operations.

"Nick is a passionate leader, educator and skillful clinician," said Mohanad Shukry, MD, executive vice chair of the UNMC Department of Anesthesiology. "We are excited to work with him in his new role. His dedication to the department is evident in his commitment to his colleagues and to mentoring the next generation of nurse leaders here at UNMC."

Throughout his UNMC nursing career, Stalnaker has continuously sought to improve the already high level of care for a diverse patient population and quality education for students and colleagues.

He received the "2021 Extraordinary Nurse" honor for his role in the inception of a CRNA simulation program at the Davis Global Center and for his leadership and mentorship efforts throughout the pandemic, especially at the beginning.

Stalnaker was the first CRNA to provide care in the ICU during the initial phases of the COVID-19 pandemic and then shared protocols with his colleagues which helped ease the transition into a new workflow.



Nick Stalnaker, CRNA

Multispecialty division update

The UNMC Division of Multispecialty Anesthesiology is committed to excellence in patient care, innovation in education and advancing the science and safety of anesthesia. The faculty are dedicated clinicians, passionate educators and emerging leaders in the field of anesthesiology.

The division had several successful faculty recruitments in 2023, including Chantal Mercier Laporte, MD, who joined as an assistant professor; David Baxter, MD, who received an appointment as an assistant professor; and Platt Niebur, MD, who rejoined the group as an assistant professor.

Two faculty also earned academic promotion during 2022-2023. Nicholas Heiser, MD, the current fellowship director of the Regional Anesthesiology and Acute Pain Medicine Fellowship and director of anesthesiology at Lauritzen Outpatient Center/Fritch Surgery Center, was awarded promotion to associate professor. Multispecialty Anesthesiology Division Chief Robert Lobato, MD, was awarded promotion to professor.

The division demonstrated strong leadership in national and international medical societies, with faculty serving as committee members, session moderators, journal reviewers, board members, delegates and panelists at meetings of the American Society of Anesthesiologists, the Society of Obstetric Anesthesia and Perinatology, the Nebraska Department of Health and Human Services, the American Association of Clinical Directors, Society for the Advancement of Transplant Anesthesia and the American Society of Regional Anesthesia and Pain Medicine.

Faculty from the division also mentored several resident presentations and moderated presentations at the 2023 Midwest



Elizabeth Ternent-Rech, DO

Anesthesia Residents Conference. This meeting highlights the division's commitment to clinical excellence, mentorship and collaborative academic advancement for anesthesiology residents across the region.

The division aims to continue its growth in 2024 and will welcome Taylor Meyer, MD, and Rafael Lombardi, MD, to the faculty early in the next academic year.

Clinical initiatives

Nitrous oxide was introduced to the labor and delivery unit as a safe alternative for pain and anxiety relief during labor and delivery. Benefits include:

- Non-invasive (delivered by inhalation)
- Safety profile only requires minimal vital sign monitoring during use

- Effects are short-lived and resolve within a minute when inhalation is stopped
- No negative effects reported for newborns

There are contraindications to use, but the list is short and does not apply to the vast majority of laboring patients. Charles Walcutt, MD, section head of obstetric anesthesiology, said many patients desire a non-invasive pain control option with the added benefit of patient control (the nitrous oxide is self-administered by the patient inhaling through a mask while being monitored by a nurse).

"We recently added patients undergoing hydrotherapy (water birth) as eligible patients due to the limited vital sign monitoring required when using nitrous," Dr. Walcutt said. "A mixer system delivers a

50% nitrous oxide and 50% oxygen mixture to patients in labor, a level that is both safe and effective for self-administration with nurse monitoring.”

“When compared to epidural analgesia for labor, nitrous oxide has the benefits of being less invasive, requires less monitoring and is cheaper,” Dr. Walcutt said. Nitrous oxide also is an option for patients with bleeding disorders who are not eligible for epidural placement. However, nitrous oxide only provides mild to moderate analgesia compared to the significant or complete relief of contraction pain that an epidural can provide. Epidurals can be used for surgical anesthesia if a C-section becomes necessary, whereas nitrous oxide would not be adequate.

“Compared to opioids, nitrous oxide does not cause respiratory depression. The effects of nitrous oxide also wear off much faster for both the mother and baby,” he said. Due to the respiratory depressant effects, opioids cannot be administered with nitrous in labor and delivery.

“Six percent of patients who delivered at UNMC have used nitrous oxide in 2023,” Dr. Walcutt said. “While that is not a huge percentage, it is great to be able to offer this alternative for more individualized care.”

Education

The multispecialty division continues to maintain a balance between clinical service and educational programs. Faculty members actively participate in training residents and fellows, from formal lectures to mentorship and participation in national conferences. Physicians from the multispecialty division are consistently awarded Teacher of the Year, with this year’s honor going to Kristin Wakin, MD, for CA1 Teacher of the Year. This is the third time Dr. Wakin has been selected to receive a Teacher of the Year Award. The award is especially meaningful because residents nominate and vote for the most impactful educators.

Dr. Wakin also was recognized for meritorious teaching, mentoring and service with the Faculty Senate Outstanding Faculty Award. Dr. Wakin said the greatest rewards of teaching are getting to know anesthesiology residents and watching them grow into outstanding clinicians.

“Working closely with residents in the clinical setting has allowed me to get to know them on a personal level and cater my approach toward teaching in a way that suits their individual learning style,” Dr. Wakin said.

Richard Holcomb, MD marks 50 years of board certification

In November 2022, anesthesiologist Richard Holcomb, MD, celebrated 50 years of board certification. Fifty years ago, he became a diplomate of the American Board of Anesthesiology, which makes him the longest-serving anesthesiologist at Nebraska Medicine.

“Dr. Holcomb is the epitome of a lifelong learner,” said Steven Lisco, MD, chair of the UNMC Department of Anesthesiology and Nebraska Medicine chief academic officer. “Please join me in celebrating Rich’s accomplishment of 50 years of continuous board certification and his contributions to the department of anesthesiology, UNMC and Nebraska Medicine; a truly outstanding accomplishment.”

Dr. Holcomb, an assistant professor in the UNMC Department of Anesthesiology, attended medical school at Creighton University School of Medicine, graduating in 1967. Following graduation, he completed his internship at Creighton University Medical Center prior to heading to Seattle, Washington, and the University of Washington for his residency and pain management fellowship, which he completed in 1971.

Multispecialty faculty

Robert Lobato, MD, division chief
Brittany Brown, MD
Kathryn Crane, MD
Sheila Ellis, MD
Bradley Fremming, MD, PharmD
Allyson Hascall, MD
Scott Hofmann, MD
Richard Holcomb, MD
Michelle-Ann Iverson, DO
Cale Kassel, MD
Dina Kogan, MD
Maria Michaelis, MD
John Ohnoutka, MD
Huiling Pang, MD
Kyle Ringenberg, MD
Nancy Rogic, MD
Jean Simonson, MD
Jennifer Uggen, DO
Kristin Wakin, MD
Charles Walcutt, MD
Trevor Wilke, MD
Corey Zetterman, MD

Section heads

Cale Kassel, MD, abdominal organ transplantation anesthesiology

Kristi Lorenzen, MD, thoracic and vascular anesthesiology

Joseph Pawlowski, MD, neuroanesthesiology

Charles Walcutt, MD, obstetric anesthesiology

Pain Medicine division update

Madhuri Are, MD, division chief of the UNMC Department of Anesthesiology's pain medicine division, said patient feedback has been positive over the past year.

Acute Pain Service

The UNMC Department of Anesthesiology's Acute Pain Service team, led by Nicholas Heiser, MD, predominantly is responsible for performing perioperative pain management. The pain pharmacy teams provide routine medical pain management, effectively acting as first responders. This workflow allows the APS to focus efforts on performing regional blocks and managing catheters. The service still is available for in-patient consultative recommendations, which has led to a better experience for patients and team members.

The APS provides comprehensive pain management for patients undergoing major surgical procedures, employing multimodal medication management and reducing the need for narcotics. Regional blocks continue to play an important role in decreasing reliance on opioids post-op, contributing to better patient experiences.

Chronic Pain Service

The Chronic Pain Service team provides patients with many tailored avenues of relief and guidance in managing their chronic pain. This safe, multimodal approach uses procedures varying from minimally invasive to complex, non-narcotic prescription medication management, physical therapy, pain management therapy and more.

The team has an ongoing commitment to innovative procedures, such as cement

augmentation, dorsal root ganglion dorsal column stimulation and minimally invasive lumbar decompression (MILD), as well as tactics that enhance the patient experience.

Clinical spaces at Village Pointe were completed in 2022-23, allowing the chronic pain section to grow and serve more patients in the region.

"Our goal is to provide the best possible care for patients by minimizing opioid use and maximizing pain control in the safest way possible," Dr. Are said. "The additional space and increased faculty have allowed us to employ a very robust 'fast-track' service and manage an opioid tapering clinic."

This has significantly improved collaboration with spine surgeons and has directly resulted in expeditious requested procedures for patients referred by spine surgeons, Dr. Are said, adding that many patients have complimented the clinic for decreased wait times and the quality of care provided. This path of care has contributed to a significant increase in volume of outpatient elective procedures.

Fellowship programs

Regional Anesthesia and Acute Pain Medicine Fellowship (RAAMP)

Dr. Heiser has served as the RAAMP fellowship program director since 2019.

"He has shown significant passion from an education standpoint and continues to work with medical students, residents and trainees as well as being actively involved in simulation and cadaver workshops for the betterment of student and trainee education," Dr. Are said.

Pain Medicine Fellowship Program

Michael Lankhorst, MD was appointed as director of the Pain Medicine Fellowship Program in 2022. Kimberley Haynes-Henson, MD, who served in this role for seven years, is now the associate program director for the fellowship. With faculty guidance and mentorship, the chronic pain fellows are able to excel clinically and in the fields of education and research.

Faculty Update

The division welcomed many new faculty members during the academic year. New faces included:

David Baxter, MD
Zahid Iqbal, MD

Each member provides valuable service to the team.

Research

Acute Pain Service

Rafael Arsky Lombardi, MD, is collaborating with Massachusetts General Hospital studying spinal blocks with dexmedetomidine versus no dexmedetomidine.

Drs. Heiser and Lombardi have collaborated with Alexander Sawatzke, MD, from UNMC's Department of Orthopedic Surgery & Rehabilitation, on an IRB-approved study that will be recruiting patients soon. The study will examine the association between the effectiveness and complications of ankle blocks versus popliteal fossa blocks in foot and ankle procedures.



*Pain Medicine fellow Peter Pellegrino, MD, PhD,
and division chief Madhuri Are, MD*

Dr. Lombardi is working on a meta-analysis of a pericapsular nerve group block vs. periarticular infiltration for hip replacements. This ongoing study will be submitted as an abstract to the American Society of Regional Anesthesia and Pain Medicine with subsequent publication.

Dr. Heiser and residents are analyzing the effectiveness of truncal blocks for patients undergoing sternotomy.

Chronic Pain Service

Drs. Are and Pellegrino published a manuscript recently titled "Pain management in cancer surgery: Global inequities and strategies to address them."

Dr. Muelleman presented a case report at the American Society of Regional Anesthesia and Pain Medicine annual meeting regarding an incidence of brachioradial pruritis with associated cervical stenosis.

Dr. Boyter completed a chart review for outpatient opioid tapering of patients who were started on opioids while inpatient. This may be presented in a future meeting.

Dr. Pellegrino is studying novel measures of sympathetic outflow. He performed the first non-invasive clinical measurements of sympathetic vasomotion in patients with chronic pain undergoing lumbar sympathetic blocks.

Dr. Lombardi is working on a network meta-analysis in collaboration with the regional anesthesiology division at Duke University about the use of oxytocin vs. methergine vs. hemabate vs. misoprostol for obstetric hemorrhage prophylaxis.

Division members are performing an observational study about the use of bilateral vs. unilateral transversus abdominis plane (TAP) blocks for kidney transplants.

Pain Division faculty

Acute pain service

Nick Heiser, MD
medical director

Austin Adams, MD
David Baxter, MD
Andrew Ingemansen, MD
Zahid Iqbal, MD
Cale Kassel, MD
Kyle Johnson, MD
Andrew Maresch, MD
Platt Niebur, MD
Kyle Ringenberg, MD

Chronic pain

Madhuri Are, MD, division chief
Redgy Fuller, DO
Kim Haynes-Henson, MD
Marshall Ladd, DO
Michael Lankhorst, MD
Angie Rakes, MD

Physician assistants

Holly Doerneman, PA
Christa Nelson, PA
Lea Sommer, PA

Pediatric division update

Pediatric Division faculty

Julia Galvez Delgado, MD,
vice chair and division chief

Amy Beethe, MD
Brittany Brown, MD
Greta Duncan Wiebe, MD
Andrea Dutoit, MD
Marcellene Franzen, MD
Kerri George, MD
Jessica Goeller, DO
Ryan Hamlin, MD
David Hoy, MD
Mackenzie Laurila, DO
Michelle LeRiger, MD
Thomas Lockhart, MD
Thomas Manning, MD
Lena Mayes, MD
Maria Michaelis, MD
Maireen Miravite, MD
Kaitlyn Pellegrino, MD
Ahsan Qadeer, MD
Erin Renze, DO
Nancy Ann Rogic, MD
Stephanie Shin, DO
Mohanad Shukry, MD, PhD
Rachel Spitznagel, MD
Katherine Stiles, MD Kunal
Sualy, MD
David Tingley, MD Timothy
Welch, MD
Guy Williams, DO
Jasper Williams, MD

Faculty in the UNMC Division of Pediatric Anesthesiology are invested in education, clinical excellence and research. Throughout 2022, the division was involved in national level conferences and continued to deliver quality educational experiences for residents and fellows.

Notable Achievements

T.J. Lockhart, MD, associate professor and director of simulation, was presented the Collaborative/IPE Award at the third annual iEXCEL Innovation Awards ceremony.

The awards recognize faculty, students and health care professionals who have elevated their medical simulation work in neurosurgery, emergency medicine, perfusion, anesthesiology and vertigo cases.

Dr. Lockhart oversees interprofessional mock codes for medicine, pharmacy and nursing students and has revamped the course setup, curriculum and simulations where students run mock code scenarios.

Leadership Appointments

Jessica Goeller, DO, was named director of perioperative services at Children's Nebraska.

Maria Michaelis, MD, was named president of the Metro Omaha Medical Society.

Research

Dr. Lockhart is at the forefront of a groundbreaking multicenter pediatric simulation project, serving as the site principal investigator. Leveraging cutting-edge augmented reality technology, the project revolutionizes pediatric code response training. Through specially designed augmented reality glasses, instructors and students are immersed in a dynamic learning environment, in which holographic representations of patients

and hospital beds enhance the realism and effectiveness of their training sessions.

Kaitlyn Pellegrino, MD, serves as UNMC's representative to the Perioperative Investigative Collaboration for Neonates, Infants and Children, fostering valuable connections with esteemed institutions such as the Children's Hospital of Philadelphia and Boston Children's Hospital. At Children's Nebraska, Dr. Pellegrino has played a leading role in facilitating participation in critical multicenter studies. Her efforts include involvement in the pediatric difficult-airway registry and spearheading efforts in a multicenter health literacy survey, contributing significantly to advancements in pediatric perioperative care and research.

Jessica Goeller, DO, is the principal investigator on multiple projects centered on opioid stewardship within pediatric perioperative medicine. Her expertise and dedication have not only advanced research in this critical area but also paved the way for several UNMC students, who have benefitted from her mentorship and are now poised to embark on careers in anesthesiology.

Looking Ahead

In 2024 and beyond, the primary focus of the UNMC Division of Pediatric Anesthesiology remains fostering active engagement in the pursuit of clinical excellence. The division is dedicated to incorporating advanced technologies, such as point-of-care ultrasonography in perioperative medicine, ensuring precise guidance for clinical management and procedures. Moreover, the division remains committed to expanding its clinical services to address the evolving needs of the community, providing accessible and high-quality care. Additionally, it will continue to prioritize excellence in education, spanning from undergraduate to graduate medical programs, aiming to



Standing at the nurses' station are Jessica Goeller, DO, left, and Amy Beethe, MD

nurture the next generation of health care professionals with the knowledge and skills necessary to uphold the highest standards of patient care. This forward-looking approach reaffirms the division's unwavering dedication to advancing both the practice and education of anesthesiology.

Clinical initiatives

The pediatric point of care ultrasonography initiative at Children's Nebraska focuses on education for regional providers, credentialing pediatric anesthesiologists and implementing an electronic health record solution for image management. This comprehensive approach ensures efficient and proficient use of ultrasonography, ultimately enhancing pediatric patient care across perioperative medicine.

Expansion

The expansion of the pediatric anesthesia program has seen significant growth in specialized areas, notably pediatric neurosurgery, pediatric cardiothoracic anesthesiology and point-of-care ultrasonography.

This strategic development reflects a commitment to providing exceptional care to pediatric patients with complex medical needs. Through targeted initiatives and investment in advanced training, the team has not only enhanced its expertise in these critical subspecialties, but it also is positioned as leaders in the field, ensuring the highest standard of care for young patients undergoing intricate surgical procedures.

Education

The Pediatric Cardiac Anesthesiology Fellowship develops and nurtures future leaders in academic congenital cardiac anesthesiology. During the hybrid one-year program, fellows spend four months as an attending in general pediatric anesthesiology, followed by eight months of formal training experience in cardiac anesthesia. ACGME accreditation for this specialty received inaugural approval in 2021.

Erin Renze, DO, a distinguished alumna of the UNMC Anesthesiology Class of 2022, currently is undergoing

specialized training in pediatric cardiac anesthesiology. UNMC Division of Pediatric Anesthesiology Chief Julia Galvez Delgado, MD, commended her dedication to advancing her expertise in this critical field speaks to her unwavering commitment to providing the highest level of care to pediatric patients.

"Dr. Renze's long-term aspiration to continue her service at Children's Nebraska as a pediatric cardiac anesthesiologist is a testament to her passion for clinical excellence and her invaluable contribution to the well-being of patients and their caregivers in our region," said Dr. Galvez Delgado. "Her exemplary commitment is truly inspiring."

The inaugural pediatric point-of-care ultrasonography workshop was launched in Oct. 2022. The event was organized by Dr. Galvez Delgado and Marcellene Franzen, MD, in collaboration with visiting professor Elaina Lin, MD, from The Children's Hospital of Philadelphia.

Society for Pediatric Anesthesia Annual Meeting

Eleven faculty, two fellows, two residents and three CRNAs attended the Society for Pediatric Anesthesia Meeting held in Austin, Texas, serving as moderators, presenters and educators.

Kaitlyn Pellegrino, MD, served as faculty for the difficult airway workshop held on March 31. Dr. Pellegrino's expertise and guidance were invaluable to the participants in the workshop.

Dr. Julia Galvez Delgado served as the moderator for the "Lightning Abstracts" presentation, showcasing the latest research in pediatric anesthesia. Dr. Galvez Delgado delivered a comprehensive presentation highlighting significant advancements in pediatric anesthesiology as published in the *Anesthesiology* journal. Dr. Galvez Delgado and Andrea Dutoit, MD, also served as faculty for the Advanced Techniques for Peripheral Vascular Access Workshop.

Mackenzie Laurila, DO, and Logan Harrold, MD, presented the management of a complex patient undergoing resection of a thoracic cyst abutting the aorta and trachea during a problem-based learning discussion session. Kunal Sualy, MD, and Mary Cate Raynor, CRNA, moderated a PBLD highlighting challenges encountered with intraoperative management of diabetes insipidus.

Dr. Pellegrino and Ann Veys, CRNA, presented on "Disclosure of adverse events and help! Support and recovery in second victim syndrome." Shannon Hoy, CRNA, served as the moderator for the Advanced Practice Provider Symposium Session II, which featured presentations on sugammadex, an agent to reverse neuromuscular blockade routinely used for surgery, and pediatric regional anesthesia including spinal anesthesia and truncal nerve blocks.

In addition to the above presentations, there were several posters on display showcasing research and quality

improvement initiatives. Notable posters included:

"Brain-Eating Amoeba: A Case Demonstrating the Expansion of *Naegleria fowleri* Infections in Geographic Range and Into the Perioperative Arena," by Adam Zobel, DO, Kunal Sualy, MD, and Thomas Manning, MD.

"Rectus Sheath Peripheral Nerve Catheters for Post-Operative Pain Control in Pediatric Kidney Transplants," by Blaine Schlawin, DO, Cale Kassel, MD, Stephanie Shin, DO, and Kunal Sualy, MD.

"Quality Improvement: Ultrasound for Peripheral Intravenous Access," by Stephanie Shin, DO, Gabriel Gallegos, MD, Rachel Spitznagel, MD, and Julia Galvez Delgado, MD.

"Our team truly shone and demonstrated Children's and UNMC as institutions that value inclusion and are advancing the field of pediatric anesthesiology," Dr. Galvez Delgado said.



From left, Julia Gálvez Delgado, MD, Shannon Hoy, CRNA, Blaine Schlawin, DO, Logan Harrold, MD, Adam Zobel, DO, Michelle LeRiger, MD



Jeremy Payne, MD

Dr. Payne inducted into Gold Humanism Honor Society

Jeremy Payne, MD, was one of six residents inducted into the UNMC Gold Humanism Honor Society (GHHS) chapter on Jan. 28, 2023.

"At the ceremony, I heard from some of the accomplished faculty, residents and students who are involved in GHHS who have gone above and beyond as educators and patient advocates," Dr. Payne said. "It is humbling to be inducted into a society alongside them."

Ryan Mullane, DO, assistant professor in the nephrology division in the UNMC Department of Internal Medicine, and Nick Yeutter, MD, resident in the UNMC Department of Internal Medicine, both GHHS members, spoke at the event.

According to the UNMC GHHS Chapter, the mission of the GHHS is to recognize individuals who are exemplars of humanistic patient care and who will serve as role models,

mentors and leaders in medicine. Members must model, support and advocate for compassionate, patient-centered care.

Inductees are selected by their peers and the faculty, said Allison Ashford, MD, program director for med-peds and co-advisor for the honor society.

"Being able to recognize these new inductees for the compassionate and humanistic care that they provide our patients is truly an honor," Dr. Ashford said. "It's incredibly humbling and inspiring to work amongst a community of students, residents and fellow staff who are being nominated and recognized by their peers to be inducted into GHHS."

Dr. Payne represents the compassionate and patient-centered care at UNMC, as described in the following excerpt from his nomination statement:

"Inside the hospital, Dr. Payne advocates for his patients and their well-being. For example, one

of his patients was experiencing homelessness and, when admitted to the hospital, lost one of his shoes. Dr. Payne made it his duty to find this patient's shoe because it was the only pair he owned."

"I am extremely honored that I left a positive impression on the students who nominated me, and I hope to do the same with the patients I care for on a daily basis," Dr. Payne said.

The GHHS has 160 medical school chapters around the nation with more than 35,000 members in training and practice. UNMC's chapter was established in 2014.

Other resident inductees included:

Jana Binkley, MD (general surgery)

Joshua Lallman, MD (internal medicine – pediatrics)

James Fagerland, MD (internal medicine)

Debra Wekesa, MD (internal medicine)

PREMIER EDUCATIONAL PROGRAMS



From left, Michael Blaha, MD, John Riley III, MD, Michael Dancer, MD, Jocelyn Mulkey, MD, Jae Cauble, MD, Blaine Schlwain, DO, Apollo Stack, MD, Kevin Rance, MD, Jeremy Payne, MD, Megan Rolfzen, MD

Educational update

The UNMC Department of Anesthesiology education program aims to recruit and train physicians in the specialty of anesthesiology and to support them through the process of becoming successful, knowledgeable and confident consultants of anesthesiology who deliver exceptional anesthetic care for their communities in the future.

The successful 2022-23 recruitment season yielded residents from diverse programs including UNMC, Creighton University, University of Colorado, Indiana University, Washington State University, University of Missouri Columbia, St. Louis University, University of Rochester, Rocky Vista University, Kansas City University and Texas A&M Health Science Center. The division also expanded its first clinical anesthesia year back to 12 positions by matching two positions to join the class of 2026.

The fellowship program has continued to grow with the expansion of programs offered, from none in 2012 to five ACGME-accredited fellowships and three non-ACGME fellowships in 2023.

Notable Research

Andrea Dutoit, MD, is the principal investigator of a national study of anesthesiology residency programs and the effect of program signaling and geographic signaling on the interview process and residency match outcomes specifically in anesthesiology residency programs.

Dr. Dutoit and Karsten Bartels, MD, PhD, also are involved in a study evaluating scholarly projects and standardized testing in anesthesiology training performance.

The UNMC anesthesiology education team, including T.J. Lockhart, MD, Faye Haggar, EdD, and Dr. Dutoit, partnered with the UNMC Department of

Otolaryngology to evaluate and share the training methods and processes for the clinical base-year resident ENT rotation, publishing "Development and evaluation of an interdisciplinary rotation for anesthesia residents in laryngology" in collaboration with Cole Homer, Kristy Carlson, PhD, Christopher Bingcang, MD, Evan Ryan MD, and Jayme Dowdall, MD, of the otolaryngology department, in 2023.

Notable Achievement

Faye Haggar, EdD, was appointed president of the Northern Rocky Mountain Educational Research Association, a regional affiliate of the American Educational Research Association. The organization's mission, to "advance knowledge about education, to encourage scholarly inquiry related to education and to promote the use of research to improve education and serve the public good," corresponds with the interests of Dr. Haggar, who said she was honored by the appointment.



The department celebrated educational achievements throughout the year.

Teacher of the Year Awards

CBY Teacher of the Year – Christopher Bingchang, MD, and Jayme Dowdall, MD

CA1 Teacher of the Year – Kristin Wakin, MD

CA2 Teacher of the Year – Stephen Brannan, MD

CA3 Teacher of the Year – Sean Karre, MD

Cardiothoracic Anesthesiology Fellowship Teacher of the Year – Troy Wildes, MD

Critical Care Anesthesiology Fellowship Teacher of the Year – Thomas Perry, DO

Pediatric Anesthesiology Fellowship Teacher of the Year – Stephanie Shin, MD

Pediatric Congenital Cardiac Anesthesiology Fellowship Teacher of the Year – Kerri George, MD

Certificates of Academic Excellence (75th percentile or greater on ABA in-training exam):

Alec Seei, DO

Jeremy Payne, MD

Zachary (Zach) Schell, MD

Elizabeth Ternent-Rech, DO

Kevin Rance, MD

Megan (Meg) Rolfzen, MD

Michael Blaha, MD

Jae Cauble, DO

Michael Dancer, MD

Jocelyn Mulkey, MD

John Riley III, MD

Blaine Schlawin, DO (pediatric anesthesiology fellow)

Apollo Stack, MD (pain medicine fellow)

Brad Paulson Award for an Outstanding Medical Student in Anesthesiology

Anthony Stephenson, MD

Looking Ahead

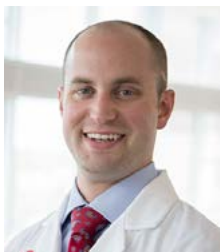
Future goals for the education team include growing the residency programs, continuing to improve and enhance programs and continuing to offer premiere educational programs in the field of anesthesiology.



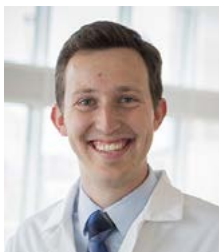
Graduating residents



Michael Blaha, MD
Associated
Anesthesiologists,
Lincoln, Neb.



Jae Cauble, DO
Ozark Anesthesia
Associates, Springfield, Mo.



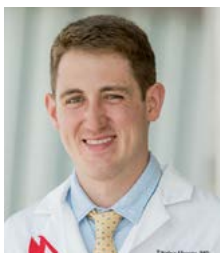
Michael Dancer, MD
Cardiothoracic
Anesthesiology Fellowship,
UNMC, Omaha, Neb.



Bradley Eichhorn, MD
Cardiothoracic
Anesthesiology Fellowship,
UNMC, Omaha, Neb.



Julie Beth Gillespie, MD
Critical Care Fellowship,
University of Chicago,
Chicago, Ill.



Taylor Meyer, MD
Faculty, UNMC Department
of Anesthesiology,
Omaha, Neb.



**Robert Muelleman,
MD**
Pain Medicine Fellowship,
UNMC, Omaha, Neb.



Jocelyn Mulkey, MD
Pediatric Anesthesiology
Fellowship at Children's
Hospital of Colorado, Aurora,
Colo.



John Reilley III, MD
Pediatric Anesthesiology
Fellowship at Oregon State
Health Science University,
Portland, Ore.



Cole Sievers, MD
Pediatric Anesthesiology
Fellowship at University of
Texas-Southwestern,
Dallas, Texas

Graduating fellows

Adult Cardiothoracic Anesthesiology



Sagar Bansal, MBBS

Faculty, department of anesthesiology, University of Missouri-Columbia, Columbia, Mo.



Christopher Kelsheimer, MD

Private practice, St. Louis, Mo.



Natalie Rea, MD

Private practice, Minneapolis, Minn.



Valerie Verdun, MD

Private practice, Minneapolis, Minn.



Patrick Ward, DO

Faculty, University Hospital, Cardiac and Critical Care, University of Missouri-Columbia, Columbia, Mo.

Critical Care



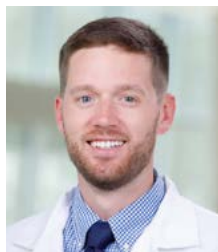
Kyle Gronbeck, MD

Faculty, Sanford Health – Fargo, Critical Care/ Emergency Medicine Departments, Fargo, N.D.



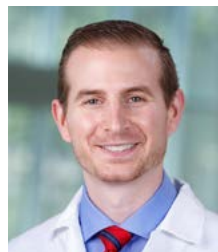
Molly Johnson, MD

Private practice, Lake Regional Health System, Osage Beach, Mo.



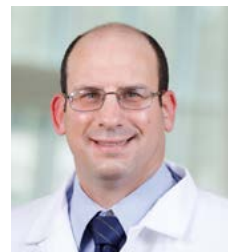
Kevin McKillion, DO

Cardiothoracic Anesthesiology Fellowship, UNMC, Omaha, Neb.



Peter Pellegrino, MD, PhD

Pain Medicine Fellowship, UNMC, Omaha, Neb.



Daniel Raboin, MD

Walter Reed National Military Medical Center, Bethesda, Md.

Pain Medicine



Katie Berky, MD

OrthoNebraska, Omaha, Neb.



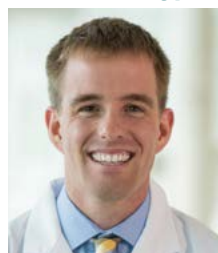
Apollo Stack, MD

OrthoNebraska, Omaha, Neb.



Melanie Wood, MD

Plans still in progress.



Blaine Schlawin, DO

PC at UnityPoint Health, Des Moines, Iowa



Rafael Lombardi, MD

Assistant professor, UNMC Department of Anesthesiology, Omaha, Neb.

Pediatric Anesthesiology

Regional Anes. and Acute Pain Medicine

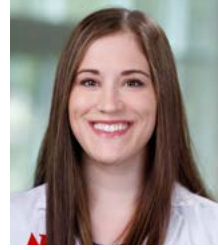
Congenital Cardiac Anesthesiology



Erin Renze, DO

Pediatric cardiac anesthesiologist, Children's Hospital and Medical Center, Omaha, Neb.

Liver Transplant Anesthesiology

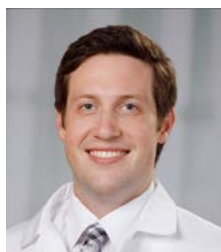


Rachel Quandahl, MD

Assistant professor, UNMC Department of Anesthesiology, Omaha, Neb.

Incoming residents

Class of 2027



Tyler Austin, MD
University of Missouri-
Columbia School of
Medicine



Matthew Becar, MD
Creighton University
School of Medicine



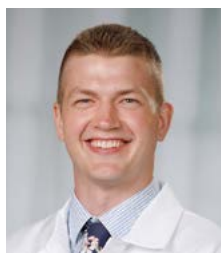
**Hailey Buckingham,
MD**
University of Colorado
School of Medicine



Brittany Clifton, MD
University of Nebraska
College of Medicine



Ifunanya Ejikeme, DO
Kansas City University
College of Osteopathic
Medicine



**Christopher
Keenan, MD**
University of Rochester
School of Medicine and
Dentistry



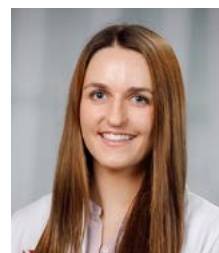
**Shadashalin
Pierce, MD**
Indiana University
School of Medicine



**Kalkena Sivanesam,
MD, PhD**
Washington State University
Elson S. Floyd College of
Medicine



Ian South, MD
Saint Louis University
School of Medicine



**Abigail
Tesnohldek, MD**
University of Washington
School of Medicine

Advanced starting July 2024 (Class of 2027)



Paul Doran, MD
University of Nebraska
College of Medicine



Jacob Glowacki, DO
Kansas City University
College of Osteopathic
Medicine



**Robert
Guidangen, MD**
Texas A&M Health Science
Center College of Medicine

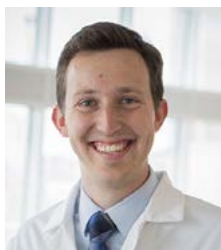


**Sara
Linza-Moscatti, MD**
Rocky Vista University
College of Osteopathic
Medicine

Joining Class of 2026 as CA1

Incoming fellows

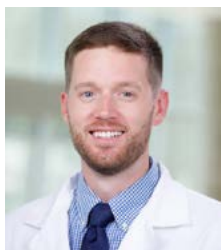
Adult Cardiothoracic Anesthesiology



Michael Dancer, MD
University of North Dakota



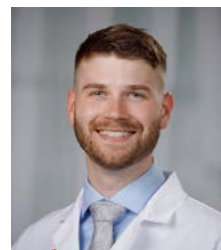
Bradley Eichhorn, MD
University of South Dakota



Kevin McKillion, DO
Philadelphia College

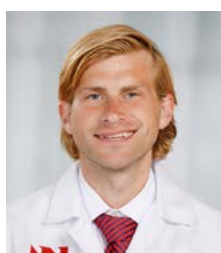


Eric Sweeney, MD
University of Iowa



Sean Tomes, MD
*University of Nebraska
Medical Center*

Critical Care



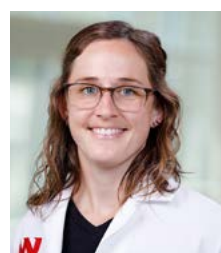
Scott Breeden, DO
Marian University



**Terry (Chris)
Brown, DO**
Alabama College



Mark Cheney, MD
*Uniformed Services
University*

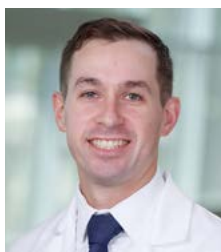


Justinn Lahaye, MD
University of Washington



Timothy McNamara, DO
*Edward Via College of
Osteopathic Medicine,
Carolinas Campus*

Critical Care



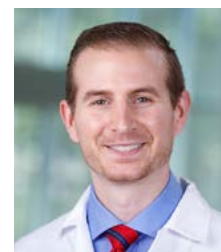
**Benjamin
Reinhart, DO**
Des Moines University



Graeme Boyter, DO
A.T. Still University Kirksville



**Robert Muelleman,
MD**
*University of Nebraska
Medical Center*



**Peter Ricci Pellegrino,
MD, PhD**
*University of Nebraska
Medical Center*

Pain Medicine

Pediatric Anesthesiology



**Patrick Dubugras
Barone, MD**
*Universidade Federal do Rio
de Janeiro (UFRJ) Faculdade
de Medicina, Brazil*



Jasmeen Kaur, MBBS
*Seth G.S. Medical College &
K.E.M. Hospital, India*

Regional Anes. and Acute Pain Medicine



*Hayden Brodersen, MD,
recipient of first-place
award at MARC 2023*

Two first-place award recipients at MARC

The annual Midwest Anesthesia Residents Conference in April 2023 was a great success. Residents, fellows, faculty and students from 35 different institutions throughout the Midwest gathered in Milwaukee, Wisconsin, to present their unique and medically challenging cases and describe novel research and quality improvement projects.

The UNMC department of anesthesia was well represented, with six presentations and two first-place award recipients.

Hayden Brodersen, MD, won first place for his case report titled, "Acute postoperative hepatic torsion around the inferior vena cava following right partial hepatectomy." Dr. Brodersen's project highlighted the difficulties of diagnosing hemophagocytic lymphohistiocytosis, commonly called HLH, in the intensive care unit.

This life-threatening hematologic disease causes inflammation and multiorgan failure and can perfectly masquerade as sepsis, making it difficult to diagnose. The case report illustrated the illusiveness of this diagnosis, emphasized the need for further diagnostic clarity and highlighted the importance of multidisciplinary teams with hematology experts that can guide diagnosis and treatment.

"Ultimately, I hope it serves as a reminder to keep HLH on the differential diagnosis in ICU patients," Dr. Brodersen said.

Dr. Brodersen said the project was a great learning opportunity as a resident and looks forward to presenting his project at the GME research symposium on May 3.

"I'm very fortunate to be working with great mentors and within a department that supports residents who want to present at conferences like MARC, which greatly adds to the learning that takes place during residency," Dr. Brodersen said.

Program director of the critical care fellowship Shaun Thompson, MD, served as a mentor for the project and expressed his excitement about bringing back a first-place award.

"This was an extraordinarily difficult case with very difficult pathology to understand and treat, and Dr. Brodersen did a wonderful job," Dr. Thompson said. "Taking all those things into consideration, along with Dr.

Brodersen's outstanding presentation, I am not at all shocked that he won a first-place award. Congratulations on a job well done!"

The second first-place award winner was Zachary Schell, MD, for his case report titled "Intraoperative management of a liver transplantation in the setting of acute liver failure from acetaminophen overdose." Dr. Schell's report described the difficulty of managing acute liver failure patients during a liver transplant because of their high rates of brain swelling, dysfunctional blood clotting factors, metabolic disturbances and other variables.

Dr. Schell said he hopes performing this case report allows other medical providers to gain insight into potential treatment strategies for patients in a similar situation, possibly introducing an idea or treatment decision that otherwise might be missed.

"I would like to believe this case report will help educate and prepare care providers who might encounter a similar scenario," Dr. Schell said.

"It might also motivate a provider to improve our current treatment decisions to further improve outcomes. Regardless, the ultimate goal is to improve patient care."

Dr. Schell said presenting at the conference was an incredibly rewarding experience, and he is grateful to have received the award.

"The conference is filled with incredible individuals presenting on amazing cases and topics. To even be considered for an award makes me feel grateful," Dr. Schell said.

"The overall process was also quite educational and motivated me to gain a greater understanding of acute liver failure and liver transplants."

Assistant professor Rachel Quandahl, MD, served as mentor on the project and offered her congratulations to Dr. Schell on his achievement.

"Congratulations to Dr. Schell on his well-deserved award at MARC," Dr. Quandahl said. "Zach is an incredible resident and did a fantastic job helping us manage this challenging case."

UNMC among hosts of 2024 Midwest Anesthesia Resident Conference in Omaha

The University of Nebraska Medical Center, the University of Kansas-Kansas City, the University of Kansas-Wichita, the University of Missouri, Kansas City, and the Association of Midwest Academic Anesthesia Chairs, Inc. will host the Midwest Anesthesia Resident Conference on April 5-7, 2024, in Omaha, Nebraska.

The conference will be held in downtown Omaha at the Hilton Omaha and the CHI Convention Center. It will welcome residents, fellows, faculty and students from 37 different anesthesia departments throughout the Midwest. Participants will present their unique and medically challenging cases and describe their novel research and quality improvement projects.

The annual meeting, which began in 1961, has grown into the largest anesthesia resident's conference in North America and the world with attendance topping 600 individuals per year.

Organizers say the MARC is an opportunity to gather, share ideas, educate colleagues, compete, network and socialize in a friendly, educational atmosphere.

Other presentations included:

Jae Cauble, DO | Brittany Brown, MD

Acute postoperative hepatic torsion around the inferior vena cava following right partial hepatectomy

Paul Harding | Cale Kassel, MD

Pecto-intercostal fascial plan catheters for management of traumatic sternal fracture pain: a case report

Nathaniel Pester | Cale Kassel, MD

Transplant outcomes and mortality in geriatric patients 65 and older compared to younger recipients

Elizabeth Temet-Rech, DO | Tara Brakke, MD

Incidental finding of an atrial septal defect in a trauma patient, creating separate anesthetic challenges



Maya Hastie, MD, and Sasha Shillcutt, MD

Inspiring presentation at the inaugural Dr. Gail Walling Yanney Lectureship

The UNMC Department of Anesthesiology hosted Maya Hastie, MD, at the inaugural Dr. Gail Walling Yanney Lectureship on May 17, 2023.

Dr. Hastie, professor of anesthesiology and cardiac anesthesiologist at Columbia University Irving Medical Center, gave what attendees called an insightful and thought-provoking presentation, titled "Breaking Barriers: Inspiration from Trailblazers." The presentation drew heavily from her experience, survey data and the success stories of women who have paved a path forward.

Sasha Shillcutt, MD, vice chair of strategy and innovation in the anesthesiology department, was awarded the Dr. Gail Walling Yanney Endowed Professorship in Anesthesiology in 2021 and established the Dr. Gail Yanney Lectureship to honor the legacy of Dr. Walling Yanney.

The focus of the lectureship series is faculty development, particularly developing women as leaders, and diversity, equity and inclusion efforts.

"Dr. Walling Yanney has been an amazing supporter of the department and health care system," Dr. Shillcutt said. "She was a trailblazer for women in anesthesiology, and this was an excellent delivery on a difficult topic."

During her presentation, Dr. Hastie led an insightful discussion about gender equity, diversity and the barriers in academic anesthesiology and then concluded with some inspirational ideas on how to move forward.

Dr. Hastie referenced the Associate of American Medical Colleges gender equity charts, which include detailed data on the status of women in

“Dr. Walling Yanney was a trailblazer for women in anesthesiology, and this was an excellent delivery on a difficult topic.”

– Sasha Shillcutt, MD

academic anesthesiology. According to the report, 37% of faculty and only 23% of professors are women.

“If we look at higher leadership, approximately 15% of our current chairs are women,” Dr. Hastie said. “If we continue at this rate, it’s going to take another 20 years to reach equity.”

Dr. Hastie said some of the barriers that face women on a day-to-day basis include structural and environmental barriers, gender bias or harassment and imposter syndrome. She referenced a National Academies of Science survey that reported two out of three women have experienced a form of sexual harassment at some point in their career.

“The most common form of sexual harassment is gender harassment,” Dr. Hastie said. “What that looks like is verbal and non-verbal behaviors that convey hostility, are derogatory or question people’s abilities.”

Another barrier women face is gender stereotypes, Dr. Hastie said, adding that stereotypes are not inherently bad but are problematic when they are not confluent.

“We have expectations for what a woman should act like, and we have stereotypes for what leaders should act like, and when those clash, we

have a problem,” Dr. Hastie said. “What’s the difference between being assertive and being aggressive? It’s your gender.”

Dr. Hastie said these forms of gender biases should not be ignored because policies and practices are built upon them, leading to gender equity issues, including pay gap and disparities in promotion and leadership roles.

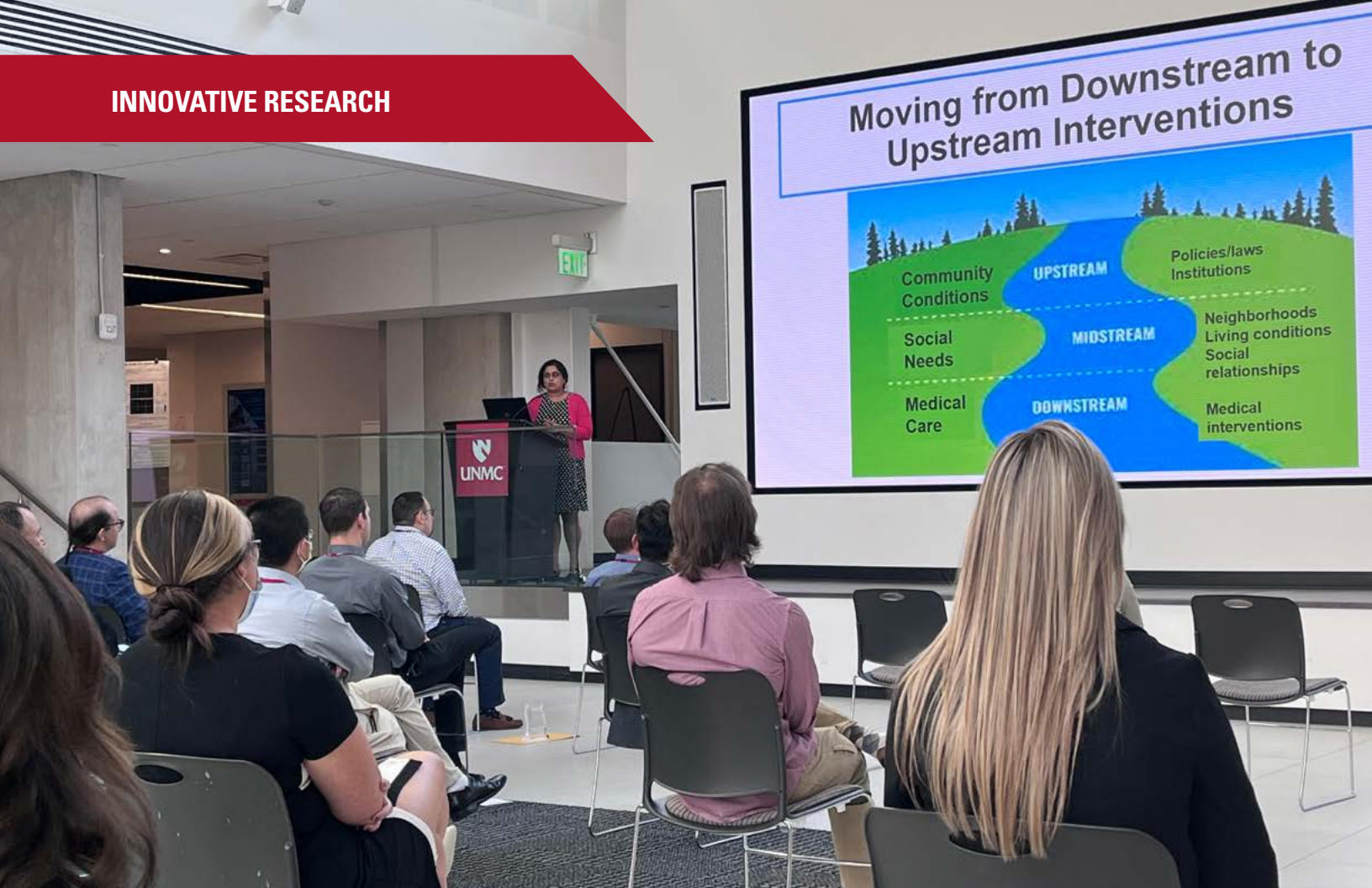
In addition to imposter syndrome, Dr. Hastie discussed self-efficacy issues women face, including the “second shift” and non-promotable tasks.

“It is estimated that women spend approximately 200 more hours per year on non-promotable tasks than their male counterparts,” Dr. Hastie said. “Non-promotable tasks are not instrumental to advancing the organization’s mission, don’t require special skills and won’t get you promoted.” The examples she provided included notetaking at meetings, organizing social events and building slides or drafting emails on behalf of a leader.

Dr. Hastie said the “second shift” is the host of domestic responsibilities that most women shoulder in addition to their careers. She said on average, women tend to spend eight to nine hours per week on domestic chores, including household care and childcare.

Dr. Hastie concluded the lecture with the following key ideas from the book “Sisters in Law: How Sandra Day O’Connor and Ruth Bader Ginsburg Went to the Supreme Court and Changed the World,” by Linda Hirshman. The biography details how these trailblazing women influenced modern gender equity in the workplace.

- Remember it’s not you, it’s the system – Have confidence in your abilities and know the systematic barriers hindering your success.
- Have friends in high places – Feedback from mentors or sponsors who help build your career is crucial in eliminating a false sense of lack of achievement and inspiring you to continue to advance.
- The grass is greener past the gatekeepers – Have difficult conversations or negotiations with those who influence your career but who doubt your abilities.
- Treat everyone as your equal – Don’t be intimidated by hierarchical roles, and engage in conversations and discussions with those above and below you.
- Don’t jump to conclusions – Take the time to diagnose the problem and find a solution.
- Own your failures and don’t make excuses – Don’t blame mistakes on external circumstances.
- Know your triggers, pick your battles – Don’t let emotions control responses and respond strategically, instead of being reactionary.
- Fight the system from within – Be a voice of influence and work towards the change you want to see.



Moving from Downstream to Upstream Interventions



Celebration of Research

Monica Vivilala, MD, keynote lecture at Celebration of Research

A record 23 abstract presentations, an award ceremony and a keynote address on the impact of research on the field of anesthesiology highlighted the 2022 UNMC Department of Anesthesiology Celebration of Research in September 2022.

Faculty, residents, and fellows took part in the event, which was created to recognize the work of the department's innovative investigators, including the department's six active R01 awards, two of which were newly funded.

"The UNMC Department of Anesthesiology attracts high-school, undergraduate and graduate students, medical students, residents, fellows and faculty to engage in exciting

research along the entire translational continuum," said Karsten Bartels, MD, PhD, vice chair of research for the department. "This broad-based engagement of a diverse group has enabled our research department to compete more successfully for federal funding."

Keynote speaker Monica Vivilala, MD, director of Harborview Injury Prevention & Research Center at the University of Washington in Seattle, challenged the department to "think about anesthesiology contributions differently" during her address on research advances in treating pediatric traumatic brain injury. She also spoke about her life as a researcher, educator and leader in the field of anesthesiology.

Dr. Bartels praised event's abstracts, which were presented during an informal poster session.

"These presentations showcased our research division's impressive growth," he said.

The evening concluded with the award ceremony, highlighted by the presentation of Lieberman Research Awards to fund new research projects.

Lieberman awardees included:

Subhash Chand, PhD, for the abstract "Impact of HIV and Polysubstance Use Disorder on Cardiovascular Function."

Nate Goergen, MD, PhD, along with mentors Nicholas Markin, MD, Kyle Ringenberg, MD, and Robert Lobato, MD, for their abstract "An Internet of Things (IoT) Cold-Based

Implementation of the 'Anesthesia STAT' Activation Network."

Nicholas Markin, MD, and Tom Liu, MD, for the abstract "Regional Anesthesia for Cardiac Surgery."

Hanjun Wang, MD, for the abstract "Building a Cardiac Electrical Mapping System."

Other awardees included:

Best Abstract Clinical Science Research

Bailey Williams, "A Mixed-Method Analysis and Evaluation of Chronic Pain Content on TikTok by a Chronic Pain Patient Cohort"

Karmen DeLancey, "Perioperative Alcohol Use Screening: A Retrospective Cohort Study"

Best Abstract Basic Science Research

Zhiqi Xia, MD, PhD, "Synergistic or Antagonistic Effect When Cardiac and Pulmonary Spinal Afferents Are Simultaneously Stimulated?"

Kajal Kamra, "The Role of the Superior Cervical Ganglion in the Chronic Sensitization of Carotid Bodies Post-Acute Lung Injury"

Austin Gowen, "In Utero Induced Vulnerability to Later Life Mild Traumatic Brain Injury"

Best Abstract Case Report

Anthony Stephenson, "Incidental Thrombus Straddling Patent Foramen Ovale Found on Intraoperative Transesophageal Echocardiogram in Patient with a Ventricular Assistive Device"

Best Abstract Educational Research

Cole Homer, "Development and Evaluation of an Interdisciplinary Rotation for Anesthesia Residents in Laryngology"



Austin Gowen presents research during the Celebration of Research poster session.



Poster session participants at Celebration of Research



Peter Ricci Pellegrino, MD, PhD, presents research during the Celebration of Research poster session.

NIH grant allows researcher to explore opioid use, bullying link

Gurudutt Pendyala, PhD, Robert Lieberman Professor in the UNMC Department of Anesthesiology, received a two-year grant in 2022 from the National Institutes of Health to study the mechanisms underlying prescription opioid use post social-defeat (bullying) in HIV-positive (HIV+) adolescents.

From a developmental milestone, adolescence is a critical phase with changes occurring on different tiers – physical, cognitive, emotional, social and behavioral. Dr. Pendyala said the risk of contracting HIV increases at this time. There also is a high risk of passing the virus to others when left untreated or if individuals do not know they are infected.

Due to the social stigma in some communities, being HIV+ leads to high rates of depression, anxiety, low self-esteem and less adherence to medications, impacting behavior and increased drug dependency and abuse in these individuals.

“Any negative experiences during this critical developmental period can significantly impact the outcomes, with serious ramifications that could persist into adulthood,” Dr. Pendyala said. “This problem is further aggravated in HIV+ adolescents due to the associated stigma, negative attitudes and prejudice in society.”

“Any negative experiences during this critical developmental period can significantly impact the outcomes, with serious ramifications that could persist into adulthood.”

– Gurudutt Pendyala, PhD

Dr. Pendyala said previous studies had found a correlation between social stress and increased stress-related psychiatric and addictive disorders, but molecular mechanisms contributing to these outcomes remain unclear.

These molecular mechanisms will be explored in the study using adolescent rats expressing key genes of the HIV genome – an advantage because of the high amount of genome overlap with human adolescents, which

mimics the pathophysiology in many diseases. Dr. Pendyala said the study would shed some light on the impact of social defeat, or bullying, during adolescence and the corresponding risk of becoming dependent on opioids.

“The two key aspects to this study are to compare how bullying impacts behavioral outcomes in the rats during adolescence and to identify novel plasma and brain-specific biomarkers which will be key for future testing in clinical trials in humans,” he said.

“Preliminary studies have shown alterations in brain-derived extracellular vesicles (BDEV) sizes with HIV infection,” Dr. Pendyala said. “Based on this premise, our hypothesis is that social defeat further exacerbates BDEV dynamics that aggravate synaptic injury and precipitates prescription opioid use.”

Dr. Pendyala said the results would fuel future studies and eventually help develop strategies to treat and improve neurological outcomes in this vulnerable population.

Left, Gurudutt Pendyala, PhD, and Saleheh (Sally) Asghari, MD

Opposite page: Dr. Pendyala and members of his lab.





Clinical research highlights

The research team attended the Cardiovascular Outcomes Research in Perioperative Medicine during the Society of Cardiovascular Anesthesiologists annual meeting in Portland, Oregon. Research assistants Chika Akwani and Emely Sanchez were among the 11 residents, fellows and research assistants presenting abstracts at the SCA annual meeting.

This year, the UNMC Department of Anesthesiology research team welcomed research nurse coordinator Rachel Harper. Harper assists the clinical research manager, Julie Hoffman, with implementing and maintaining all research studies in the department, including coordinating collaborations between national and international partners.

Hoffman and Harper facilitated several clinical research studies for the Nebraska Outcomes Research Laboratory in the 2022-2023 academic year:

0655-21-EP - The Society for the Advancement of Transplant Anesthesia-Liver Transplant Anesthesia Quality Improvement Database

Principal investigator:
Cale Kassel, MD

This is a multi-center prospective medical records study focused on collecting data specific to anesthesia care during liver transplantation. The data will be used to gain insight into preoperative patient conditions, intraoperative surgical, and anesthetic treatment practice, anesthetic outcomes and complications, and patient outcomes in the care of liver transplant recipients.



Julie Hoffman, left, and Rachel Harper

R01 HS027795-01A1 - Efficiency and quality in post-surgical pain therapy after discharge - EQUIPPED

Principal investigator:
Karsten Bartels, MD, PhD

The five-year study is funded by a \$2 million R01 grant from the Agency for Healthcare Research and Quality. The EQUIPPED study will test a patient-facing phone application. Before discharge from the hospital, patients who meet inclusion criteria and agree to informed consent are randomized into the intervention arm (consumer app with educational information regarding opioid use) or the control arm (provision of the app with only data collection). Participants are sent one survey each week for a month post-discharge. The study's primary outcome will measure the cumulative weekly opioid intake after discharge.

401-21-FB - Tight perioperative blood pressure management to reduce serious cardiovascular, renal, and cognitive complications: The GUARDIAN trial

Principal Investigator:
Karsten Bartels, MD, PhD

A multi-center randomized factorial trial with Cleveland Clinic The GUARDIAN Trial evaluates clinically meaningful outcomes that might be improved by tight perioperative pressure management, defined as intraoperative blood pressure control (norepinephrine

or phenylephrine infusion to maintain intraoperative MAP >85 mmHg) combined with postoperative hypotension prevention (delayed restart of chronic antihypertensive medications and a target systolic pressure >110 mmHg) in moderate-to-high-risk surgical patients.

Re-evaluating the inhibition of stress erosions (REVISE)

Principal investigator:
Daniel Johnson, MD

A multi-center trial with McMaster University, Hamilton, Ontario, Canada. The goal of this international study is to determine if in critically ill patients using breathing machines, the use of pantoprazole is effective in preventing bleeding from stomach ulcers or whether it causes more problems such as lung and bowel infections, or whether pantoprazole has no effect at all. An economic analysis will determine whether the harm is worth the benefits and whether the benefits are worth the costs to inform patients, families, clinicians and health care systems globally.

Multicenter perioperative outcomes group (MPOG) and anesthesiology performance improvement and reporting exchange (ASPIRE).

IRB approved. Receiving regulatory approval to join the MPOG Outcomes Group is one of the steps to becoming an active site.



Stephen J. Lisco, MD, left, presents the Clinical Science Faculty Award to Brad Fremming, MD.

Clinical Science Faculty Scholar Awards

The UNMC Department of Anesthesiology honored three faculty members with the Clinical Science Faculty Scholar Award in February 2023.

The award recognizes early and mid-career faculty who have made academic contributions above and beyond what would be expected from an individual carrying a heavy clinical workload.

Marcellene Franzen, MD, assistant professor in the UNMC Department of Anesthesiology, was nominated for the award for her contributions to advancing care through the pediatric neurosurgical anesthesia program. Dr. Franzen also organized the point-of-care ultrasonography workshop and participated in various academic

projects ranging from pediatric pain management to innovation in perioperative medicine.

Julia Galvez Delgado, MD, chief of pediatric anesthesiology at UNMC Department of Anesthesiology, praised Dr. Franzen for her achievements.

“Dr. Franzen is an expert clinician and a superb charge anesthesiologist,” Dr. Galvez Delgado said. “The award is very well deserved.”

Brad Fremming, MD, serves as clinical director, co-director of quality assurance, and is a member of the liver transplant team. In recent years, Dr. Fremming has published two to three manuscripts annually. His academic contributions include first-authoring an innovative paper in one of the highest-impact anesthesiology journals, the *Journal of Clinical Anesthesia*, on a

real-world experience at UNMC about leveraging perioperative pandemic protocols during a cyber-attack.

Shaun Thompson, MD, serves as program director for the Adult Critical Care Fellowship and the Extracorporeal Life Support Program at Nebraska Medicine. In the last two years, Dr. Thompson has published 13 manuscripts, including seminal contributions to the extracorporeal membrane oxygenation literature that were published in high-impact journals such as *The Lancet*.

“Their innovative and impactful work sets us apart and is at the core of what defines an academic anesthesiology department,” said Karsten Bartels, MD, PhD, vice chair of research at the UNMC Department of Anesthesiology.



UNMC College of Medicine Dean Bradley Britigan, MD, the UNMC Department of Anesthesiology's Sowmya Yelamanchili, PhD, and UNMC Chancellor Jeffrey P. Gold, MD, celebrate her award.

Dr. Yelamanchili receives UNMC research honor

Sowmya Yelamanchili, PhD, associate professor in the UNMC Department of Anesthesiology, was honored as one of the 2022 recipients of the Distinguished Scientist Award.

The Distinguished Scientist Award, sponsored by the chancellor, recognizes researchers who have been among the most productive scientists at UNMC during the past five years.

"Dr. Yelamanchili's contributions as an innovative research scientist are instrumental to the department's ongoing commitment to conducting groundbreaking research," said Steven

J. Lisco, MD, former chair of the UNMC Department of Anesthesiology. "We congratulate her for this well-deserved recognition."

Dr. Yelamanchili was honored, along with 18 other researchers named UNMC Distinguished Scientist, Research Leadership and New Investigator Award winners for 2022, in a hybrid virtual and in-person awards ceremony in March 2023.

Promotions

Congratulations to the following faculty members who were promoted in academic rank on July 1, 2023:

Professor with Tenure
Karsten Bartels, MD, PhD

Professor
Robert Lobato, MD
Daniel Johnson, MD

Associate Professor
Nicholas Heiser, MD
Marcellene Franzen, MD
Jeffrey Songster, MD
Shaun Thompson, MD



Karsten Bartels, MD, PhD

New staff

The UNMC Department of Anesthesiology proudly welcomed the following team members in the 2022-23 academic year:

David Baxter, MD
David Bebee, CRNA
Carolle Dogbevi
Lucas Deschenes, MD
Candace Glasgow, CRNA
Michelle-Anne Iverson, DO
Zahid Iqbal, MD
Redgy Fuller, DO

Nichole Klepper
Mary McCoy, CRNA
Chantal Mercier Laporte, MD
Maireen Miravite, MD
Kelsey Nieto, CRNA
Rachel Quandahl, MD
Platt Niebur, MD
Shay Prochaska, CRNA

Erin Renze, DO
Elias Rodriguez, CRNA
Nikki Snortum, CRNA
Nathan Teague, MD
Jessica Ware
Troy Wildes, MD
Levi Zehr, MD



Publications

HelenMari Merritt-Genore, DO, **Austin Adams, MD**, Ryan Zavala, MPS, **Tara Brakke, MD**. Interprofessional Simulation in Cardiothoracic Surgery Improves Team Confidence. *J Extra Corpor Technol*. 2022 Sep;54(3):250-254. doi: 10.1182/ject-250-254. PMID: 36742219; PMCID: PMC9891484.

Austin Adams, MD, Jeffrey Songster, MD, Jason Harig, MD, **Nicholas Markin, MD**. Perioperative gastric ultrasound: utility and limitations. *Int Anesthesiol Clin*. 2022 Jul 1;60(3):45-54. doi: 10.1097/AIA.0000000000000365. Epub 2022 May 3. PMID: 35499911.



Rebecca Aron, MD

Ryan Downey, MD, **Rebecca Aron, MD**. Thoracic and Thoracoabdominal Aneurysms: Etiology, Epidemiology, and Natural History. *Anesthesiol Clin*. 2022 Dec;40(4):671-683. doi: 10.1016/j.anclin.2022.08.011. Epub 2022 Oct 8. PMID: 36328622.

Karsten Bartels, MD, PhD, Amanda Fox, MD. Modulating the Cardiac Autonomic Nervous System: Stay Close to My Heart or Keep Your Distance? *Anesthesiology*. 2023 Apr 1;138(4):348-350. doi:

10.1097/ALN.00000000000004529. PMID: 36880787; PMCID: PMC10012329.

Hannah Wesslund, MD, **Jeremy Payne, MD**, Jared Baxter, MD, Danielle Westmark, MLIS, **Karsten Bartels, MD, PhD**,

Kristina Bailey, MD, Dustin Krutsinger, MD. Personal Financial Wellness Curricula for Medical Trainees: A Systematic Review. *Acad Med*. 2023 May 1;98(5):636-643. doi: 10.1097/ACM.00000000000005136. Epub 2023 Jan 3. PMID: 36608351.

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Committee memberships and leadership positions

AACPD – Association of Anesthesiology Core Program Directors

AAPAE – Association of Anesthesiology Program Administrators and Educators

ABA – American Board of Anesthesiology

ASA – American Society of Anesthesiologists

NSA - Nebraska Society of Anesthesiologists

SAAAPM – Society of Academic Associations of Anesthesiology & Perioperative Medicine

SAMBA – Society for Ambulatory Anesthesia

SCA – Society of Cardiovascular Anesthesiologists

SCCM – Society of Critical Care Medicine

SPA – Society for Pediatric Anesthesia

Austin Adams, MD

SCA Adult Congenital Heart Disease Special Interest Group

Madhuri Are, MD

National Comprehensive Cancer Network
National Comprehensive Cancer Network, National Guidelines Committee

Amanda Amzen, MD

ASA Educational Track Subcommittee on Critical Care

Rebecca Aron, MD

ABA Maintenance of Certification – Board exam editor or author

ABA Adult Cardiothoracic Anesthesiology Exam – Board exam editor or author

Society of Cardiac Anesthesiology Nominating Committee

Rafael Arsky Lombardi, MD

American Society of Regional Anesthesia and Pain Medicine Educational Committee

Karsten Bartels, MD, PhD

ABA Advanced Examination – Board exam editor

ASA Abstract Review Subcommittee on Critical Care

ASA Abstract Review Subcommittee on Outcomes and Database Research

ASA Committee on Academic Anesthesiology

ASA Committee on Critical Care

ASA Committee on Excellence in Research

ASA Committee on Research

SCA Cardiovascular Outcomes Research in Perioperative Medicine

SCA Neuroprotection Committee

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ABA OSCE Committee – Board exam question author

ABA Applied Examination – Board examiner

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Organization of Program Directors Association, AACPD representative

SAAAPM Executive Council, member

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ABA – Board exam question author

ABA Applied Structured Oral Exam – Exam question author and editor

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Critical Care Anesthesiology – Board Exam Editor or Author

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AAPAE/SAAPM – president

Northern Rocky Mountain Educational Research Association – president

Andrew Ingemansen, MD

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SCCM Annual Meeting, Ultrasound Course – Director

SCCM Echocardiography Board Review Committee

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ASA, Political Action Committee - Board member

NSA Annual Meeting, Chair

NSA President, Board of directors

ASA, Committee on Rural Access to Anesthesia Care

Society of the Advancement of Transplant Anesthesia: Abdominal Transplant Education Committee

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ASA Committee on Cardiothoracic and Vascular Anesthesia

ASA Committee on Performance and Outcomes Measurement

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ASA Abstract Review Subcommittee on Outcomes and Database Research

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SPA Pediatric Anesthesia Program Directors Association, member

Nicholas Markin, MD

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National Board of Echocardiography, National Guidelines Committee – Writer

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Malignant Hyperthermia Association of the U.S. – Quality Assurance Committee

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Society of Obstetric Anesthesia and Perinatology International Outreach Committee

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Charles Walcutt, MD

Nebraska Department of Health and Human Services: Maternal Mortality Review Committee

Anesthesiology Facts & Figures 2022-23

Clinical



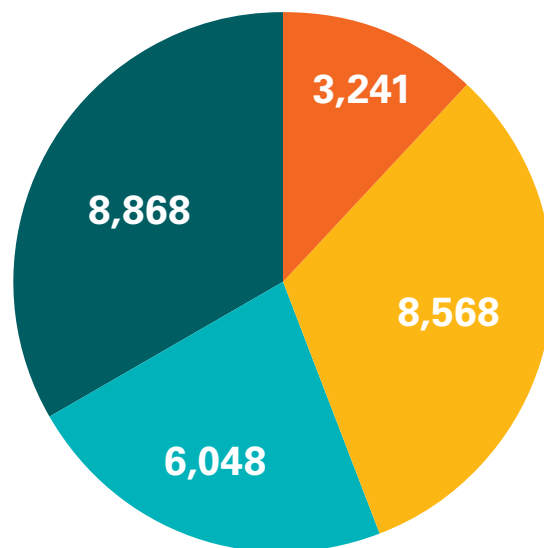
Anesthetic cases by site



Nebraska Medical Center	33,900
Bellevue Medical Center	6,772
Village Pointe	5,372
Children's Nebraska	17,346

Patient Encounters

- Acute Pain Service (inpatient)
- Pain Management (outpatient)
- Preoperative Evaluation and Care Clinic
- Critical Care



Wellness Activities



Monthly birthday lunches ♦ Supported CRNA week with food and gifts ♦ Department holiday party ♦ Fall curling event ♦ Top Golf summer event ♦ Pizza party for Perioperative Nurses Week ♦ Supported Women in Medicine Month ♦ Supported Respiratory Therapist Week

Education

1,469 residents/fellows applications

243 residents/fellows interviewed

28 residents/fellows matched



More than

500 hours
of didactics provided

8 visiting professors

Research

28 department members who participated in national meetings

44 grants applications **13** grants funded

\$2,471,595 funding total

\$1,772,069 direct, \$699,526 indirect

Individuals with grants:

7 faculty **1** student



44 publications



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