

Department of Anesthesia, Pain Management & Perioperative Medicine

Dalhousie University Faculty of Medicine/
Nova Scotia Health Central Zone/ IWK Health

Annual Report

2023-2024



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In this report, clinical information covers the period of April 1, 2023 to March 31, 2024, whereas research and education information primarily covers the academic year, July 1, 2023 to June 30, 2024.

“

We acknowledge...

Dalhousie University operates in the unceded territories of the Mi'kmaw, Wolastoqey, and Peskotomuhkati Peoples. These sovereign nations hold inherent rights as the original peoples of these lands, and we each carry collective obligations under the Peace and Friendship Treaties. Section 35 of the *Constitution Act, 1982* recognizes and affirms Aboriginal and Treaty rights in Canada.

We recognize that African Nova Scotians are a distinct people whose histories, legacies, and contributions have enriched that part of Mi'kma'ki known as Nova Scotia for over 400 years.

”

Vision & Mission

Our Vision

The patients and communities we serve benefit from the highest quality, evidence-based anesthesia, pain management and perioperative medical care by committed clinicians, researchers, educators, and staff.

Our Mission

We are leaders providing innovative, high-quality education, research, and patient and family-centred clinical care across the lifespan. In all that we do, we respect and value the diversity of the people and communities we work with and serve, with an ongoing commitment to responsible stewardship.

Our Values

Innovation – We embrace curiosity and evidence and seek new knowledge from diverse perspectives.

Quality – We strive to set the highest standard of quality in everything we do and constantly challenge ourselves to improve.

Integrity – We strive to be fair, ethical, and transparent in all that we do and in the decisions that we make; we strive to act in the best interests of patients.

Respect – We demonstrate to our patients, learners, and colleagues that we respect, value and appreciate them through our words, actions, and relationships.

Accountability – We responsibly use the Department's resources to provide the best quality service possible and strive to exceed expectations as we meet our obligations. We advocate for better health outcomes and understand the importance of giving back to our communities, both locally and globally.

Equity, Diversity, and Inclusion – In all our work and in the way we interact with each other, we strive to remove barriers to equity and create an environment that fosters diversity and inclusion.



Greetings

Message from the Department Head, Associate Head and Chief Operating Officer



Dear colleagues,

It's our distinct pleasure to share our 2023-24 annual report, which highlights some of the key successes and achievements of the Department of Anesthesia, Pain Management & Perioperative Medicine over the past year. As a leadership team, we are incredibly proud of the dedication and commitment of our faculty members, staff, and all those who are affiliated with our Department. We are a strong clinical Department making great strides in advancing the academic mission of Dalhousie University, particularly in education, research, and scholarly activity.

Clinically, we are comprised of nearly 100 faculty members working in both Nova Scotia Health and IWK Health, based in the Halifax Regional Municipality of Nova Scotia. These physicians provide exceptional care to patients of the Atlantic Provinces on a daily basis. And by care, what we mean is leading edge anesthesiology and acute and chronic pain medicine, including such subspecialties as perioperative medicine, cardiovascular anesthesia, regional anesthesia, transplant anesthesia, quaternary obstetrical anesthesia, pediatric anesthesia, neuroanesthesia, thoracic anesthesia, and perioperative blood management, just to name a few. Beyond the subspecialties, our clinical practice sets the bar high for patient safety and quality. We stand committed to working in partnership on health system initiatives to improve timely access to quality care for those who need it.

Our Department is committed to growing and strengthening its research program. Through mentorship and direct support to early career researchers, we are actively working to build a cadre of world class researchers for the future. At the same time, we continue to yield successes by our senior research faculty, both clinical and fundamental. These successes translate as grants, publications in top tier journals, and academic presentations nationally and globally. We strive for transparency and accountability in all that we do—over the past year we've done some pioneering work in developing a research accountability tool which utilizes peer review and assessment.

(Cont.)

As a leadership team, we are incredibly proud of the dedication and commitment of our faculty members, staff, and all those who are affiliated with our Department.



Clinical education and training remain a cornerstone of our academic work. We are proud of our evolving residency and fellowship programs and the contributions of our clinical educators. Our teaching impact reaches into undergraduate medicine, to allied health care providers, and also supports our existing faculty through continuing professional education.

We couldn't do what we do without the collective efforts of our talented team.

Our heartfelt gratitude is extended to our professional, administrative, and clinical support teams, including staff located in both health authorities. Thank you for choosing to work with us – we couldn't do it without you! And to everyone who calls our Department 'home' – thank you for your contributions and professionalism. Thank you for being a part of our collective work to advance the fields of anesthesiology and pain medicine at Dalhousie University.

Janice Chisholm

Janice Chisholm, MD, FRCPC

Head and Professor,
Dalhousie University
Head, Central Zone,
Nova Scotia Health

André Bernard

André Bernard, MD, FRCPC

Associate Head and Assistant
Professor, Dalhousie University
Associate Head, Central Zone,
Nova Scotia Health

Carmelle d'Entremont

Carmelle d'Entremont, MA

Chief Operating Officer,
Dalhousie University

About Us

Who We Are

We are a clinical and academic department affiliated with Dalhousie University's Faculty of Medicine, including its New Brunswick campus, Nova Scotia Health and the IWK Health.

- Approximately 200 Dalhousie faculty in PEI, Nova Scotia and New Brunswick, with approximately 100 working in the Halifax area as part of our Clinical Academic Funding Plan (CAFP) within NSH Central Zone, IWK Women's & Obstetric and IWK Pediatrics.
- More than 30 professional and administrative staff, who are employees of the various partner institutions and support research, education, finance, and administration functions.
- Supported by healthcare workers at Nova Scotia Health and the IWK such as anesthesia assistants, anesthesia technicians, nurses and other allied health and support staff.

Our Executive Team

- **Dr. Janice Chisholm**, Dalhousie University Department Head, and NSH Central Zone Head
- **Dr. André Bernard**, Dalhousie University Department Associate Head and NSH Central Zone Associate Head
- **Dr. Narendra Vakharia**, Chief, Women's and Obstetric Anesthesia, IWK Health
- **Dr. Scott Drysdale**, Chief, Pediatric Anesthesia, IWK Health (*until March 2024*)
- **Dr. Sally Bird**, Chief, Pediatric Anesthesia, IWK Health (*since April 2024*)
- **Carmelle d'Entremont**, Chief Operating Officer

Our Executive Committee

Advisory to the Department Head on financial and academic matters and plays a central role in strategic planning, priority, and policy setting.

- **Dr. André Bernard**, Chair, Associate Head
- **Dr. Janice Chisholm**, Head
- **Dr. Narendra Vakharia**, Chief, Women's and Obstetric Anesthesia, IWK Health
- **Dr. Scott Drysdale**, Chief, Pediatric Anesthesia, IWK Health (*until March 2024*)
- **Dr. Sally Bird**, Chief, Pediatric Anesthesia, IWK Health (*joined in April 2024*)
- **Dr. Christian Lehmann**, Medical Director, Research
- **Dr. Shannon Bradley**, Program Director, Postgraduate
- **Dr. Robyn Doucet**, Medical Director, Education
- **Dr. Parvinder Sodhi**, Medical Director, EDIA
- **Dr. Stephanie Power**, Medical Director, Wellness (*joined in April 2024*)
- **Dr. Allana Munro**, Member at Large
- **Dr. Andrei Khorovets**, Member at Large
- **Dr. Bukky Akindele**, Member at Large (*joined in April 2024*)

Ex-officio non-voting members: **Carmelle d'Entremont**, **Carl Stevens**, **Laura Harris Buffett**, **Dr. Heather Butler (PhD)**, **Enoch Ng** and **Carla McLeod**

Where We Work

Faculty who hold academic appointments with Dalhousie University are based throughout the Maritimes.

Within Nova Scotia, members of our Clinical Academic Funding Plan deliver patient care primarily at the following sites:

- IWK Health Centre
- NSH Central Zone
 - QEII Health Sciences Centre
 - Halifax Infirmary (HI) site, Halifax
 - Victoria General (VG) site, Halifax
 - Dartmouth General Hospital, Dartmouth
 - Mount Hope, Dartmouth
 - Hants Community Hospital, Windsor
 - Scotia Surgery (18 Acadia St), Dartmouth

What We Do

We Provide Quality Patient Care

We provide full spectrum specialty anesthesia care to patients in Atlantic Canada:

- Programs and services in perioperative medicine, perioperative blood management, and chronic and acute pain management
- General, neuraxial, regional and monitored anesthesia care to patients undergoing surgery:

General Surgery, including surgical oncology	Ear, Nose and Throat
Obstetrics/Gynecology	Plastic surgery
Orthopedics surgery	Neurosurgery
Ophthalmology	Thoracic surgery
Oral & Maxillofacial surgery	Transplantation
Cardiac surgery	Urology
Vascular surgery	Pediatric surgery

- Adult and pediatric trauma care
- Epidural analgesia to pregnant people in labour and providing anesthesia for operative deliveries
- Anesthesia care to patients receiving procedures outside of the operating rooms, such as:

Electrophysiological ablation procedures
Transcatheter aortic valve implants
Cardioversion
General and neuro-interventional radiology procedures
Diagnostic imaging and radiation oncology/therapy

We Teach

We welcome learners annually who receive classroom and on-the-job clinical teaching from our clinical faculty. Learners include undergraduate medical students, post-graduate anesthesiology residents, and health professions such as nurses, paramedics, and respiratory therapists. We also offer up to seven fellowship opportunities for anesthesiologists seeking additional subspecialty training.

We Research

We foster relevant research that leads to impactful patient care, with a research program that includes clinician scientists, PhD researchers and a variety of trainees at Dalhousie University and beyond. Much of the focus of our research efforts are in areas of pain, airway management and perioperative care, spanning bench to bedside and across all ages.

A Year in Review – By the Numbers

Dalhousie University Faculty

199	Faculty Members (comprised of primary, cross-appointed, and adjunct appointments)
18	Professors
27	Associate Professors
145	Assistant Professors
3	Lecturers
6	Adjunct

Anesthesia for Surgical Procedures

Source PAR-NS 2023-2024

10,265	Halifax Infirmary
14,008	Victoria General
6,305	Dartmouth General
935	Hants
3,720	IWK Women and Obstetrics
6,214	IWK Pediatrics
541	Scotia Surgery
41,988	TOTAL

LIVER TRANSPLANTATION

28	Liver Transplantation Surgeries
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Patient Interactions by Specialized Program

NSH PAIN MANAGEMENT SERVICES

1,277	Acute Pain Services consults
2,266	Regional Anesthesia procedures

ADULT CHRONIC PAIN SERVICES

10,342	Total appointments
1,554	• Chronic pain blocks
1,396	• New patients seen
7,392	• Returning patients seen
2,445	New referrals received
175	Virtual Pain Self-Management Prog. patients

IWK PEDIATRIC PAIN MANAGEMENT

405	Pain clinic
1,072	In-patient care

PERIOPERATIVE BLOOD MANAGEMENT

1,446	Total visits
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Postgraduate Education

2	Fellows
31	Anesthesia Residents
60	Off-service and Visiting Elective Postgraduate Residents in NSH Central Zone and IWK
3	Off-service Residents outside Central Zone

Undergraduate Medical Education (UGME)

31	Year 1 and 2 Medical Students
30	Year 3 Medical Students
97	Year 4 Medical Students
1	Practice Ready Assessment Candidate
16	Students Shadowing Physicians
36	PREP Students
99	Other Learners
56	Faculty Involved in Undergraduate Teaching
857	UGME Teaching Hours
314	• Case-Based Learning Hours
543	• Exams & Teaching Sessions Hours

Cont. Faculty Professional Development

26	Grand Rounds
6	Mortality & Morbidity Rounds
4	Journal Clubs
13	Cardiac Anesthesia Rounds
4	Women's & Obstetrics Rounds

Research (2023 Calendar Year)

20	Faculty Researchers
5.4	Full-time equivalent protected research time
3.9 M	Grants and Industry Funding
30	New Research Projects
91%	Collaborative Projects
101	Peer-reviewed Publications
48	Presentations

Leadership

Demonstrating Leadership in Medicine



Welcoming a New Chief of Pediatric Anesthesia

In April 2024, the Department welcomed **Dr. Sally Bird** as the new IWK Chief of Pediatric Anesthesia, succeeding **Dr. Scott Drysdale** who ended his term. A heartfelt thank you is extended to Dr. Drysdale for his leadership and contributions over many years. Dr. Bird, a graduate of Dalhousie medical school and the McGill anesthesia residency program, held the Associate Chief position for the past eight years. Among her priorities, she intends to expand the team's activities to better meet the sedation and vascular access needs of the Children's Health Program at IWK Health. She also looks forward to establishing a pre-operative clinic that not only provides pre-operative assessment but also improved pre-operative preparation. Both initiatives are dependent on completing the most important task – recruiting new staff and expanding the clinical team.

“Pediatric anesthesia combines all of my favourite things about medicine: working with a great team towards a common goal, working with children and families, striving to provide the best possible experience during their most stressful time, and working in an innovative and interesting specialty,” says Dr. Bird.

Stepping into New Leadership Roles



Dr. Colin Audain



Dr. André Bernard

Following in his father's footsteps, **Dr. Colin Audain** was installed as Doctors Nova Scotia's President in June 2023 for a one-year term. Throughout his career, Dr. Audain has sought opportunities to contribute meaningfully to the health-care system as well as to the importance of equity, diversity and inclusion in medicine.

Dr. André Bernard was appointed to the Dalhousie University Senate for a three-year term as a representative of the Faculty of Medicine, with a goal of helping to shape the future of the University.



Dr. Robyn Doucet



Dr. Vanessa Sweet

Dr. Robyn Doucet was selected to represent Dalhousie University on the Royal College Anesthesiology Examiner Board, replacing **Dr. Ben Schelew** who completed his term.

Dr. Vanessa Sweet was appointed Senior Medical Director for Nova Scotia Health's provincial Quality and Patient Safety Program. In this capacity, she works to advance evidence-informed quality and patient safety initiatives as it relates to medical community in Nova Scotia.

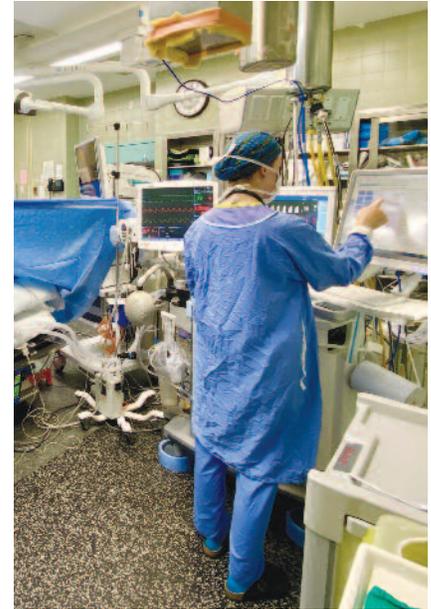
Meeting the Needs of Patients

Improving Access to Surgical Care

As part of the *Surgical Access and Quality Improvement Strategy*, our teams worked with partners to expand operating room (OR) capacity to address surgical waitlists and wait-times, increasing the number of OR days per week at the QEII Health Sciences Centre and Scotia Surgery in Dartmouth. Similarly, pediatric anesthesia expanded OR days at IWK Health as human resources would allow.

The Department also contributed to the Government's *Surgical Access Initiative* to extend ORs beyond their typical hours of operation wherever possible. In 2023-2024, the Department staffed 12 additional OR days after-hours – on weekends and holidays – at Nova Scotia Health. Additional surgeries on weekends are also planned for the months ahead.

"A sincere thank you to our scheduling teams and our clinical faculty for their work to make this happen. We know that patients are waiting too long for surgeries and clinically, we remain focused on improving access to care for those we serve," says **Dr. Janice Chisholm**, Department Head.



Clinical Leadership

Nova Scotia Health Central Zone

Dr. Janice Chisholm, Department Head

Dr. André Bernard, Associate Head

Dr. Kevin Bent, Site Chief,
Dartmouth General Hospital and
Scotia Surgery

Dr. Blaine Kent, Site Chief, Halifax
Infirmery & Medical Director of
Perioperative Blood Management

Dr. Colin Audain, Site Chief,
Victoria General

Dr. Jocelyn Foran, Site Lead,
Hants Community Hospital

Dr. Genevieve McKinnon,
Subspecialty Chief,
Neuroanesthesia

Dr. David Watton, Subspecialty
Chief, Thoracic Anesthesia

Dr. Paula Kolysher, Subspecialty
Chief, Cardiac Anesthesia

Dr. Ian Beuprie, Medical Director,
Chronic Pain Management Services

Dr. Adrienne Carr, Subspecialty
Chief, Liver Transplantation &
Associate Scheduler

Dr. Kwesi Kwofie, Subspecialty
Chief, Regional & Acute Pain
Management

Dr. David MacDonald, Medical
Director, Perioperative Medicine

Dr. Arnim Vlatten, Scheduler

IWK Health

Dr. Scott Drysdale, Chief, Pediatric
Anesthesia (*until March 2024*) &
Scheduler (*until Dec 2023*)

Dr. Sally Bird, Chief, Pediatric
Anesthesia (*as of April 2024*) &
Scheduler (*as of Jan 2024*)

Dr. Matt Kiberd, Associate Chief,
Pediatric Anesthesia (*as of May
2024*)

Dr. Narendra Vakharia, Chief,
Women's and Obstetric Anesthesia

Dr. Ana Sjaus, Associate Chief,
Women's and Obstetric Anesthesia

Dr. Bruce MacAulay, Medical
Director, Pre-Admission and
Information Technology

Dr. Rob Nunn, Scheduler, Women's
and Obstetric Anesthesia



Strengthening Anesthesia Care Teams

Teamwork is a critical element in our delivery of quality patient care. Nowhere is this more evident than in the important roles that anesthesia assistants and anesthesia technicians play within surgical settings. The Department is grateful that both NSH and IWK Health have increased the number of anesthesia assistant and technician positions in recent years. *“Whether by providing direct patient care or ensuring the availability of necessary equipment and supplies, these healthcare providers are key contributors to the OR environment,”* says **Dr. Narendra Vakharia**, Chief of Women’s and Obstetric Anesthesia.

To assist with recruitment, our clinical faculty provides essential training for students who are learning these professions. We continue to explore the full scope potential of anesthesia assistants and technicians, seeking to strengthen the anesthesia team overall, to ensure excellent care and improved patient outcomes.

Managing Chronic Pain



Chronic pain affects one in five Canadians and statistics show that people with untreated pain conditions have higher rates of mental illness, substance use disorder, and increased morbidity and mortality from all causes. Within the NSH Chronic Pain Management Services, significant efforts are underway to address the growing patient waitlist, including developing a proposal for a new care team model with enhanced nursing, physician, and allied health supports. This fiscal year, three physician specialists were recruited to the program, including an anesthesiologist and other specialists such as a psychiatrist and, for the first time ever, a neurologist.

As a neurologist, **Dr. Jessica Dawe** is bringing new expertise to the team with a clinical practice and a research focus on headache medicine and pain management. *“The area that I love the most in anesthesia is chronic pain management. It helps patients to achieve a quality of life and that there is nothing more rewarding than that,”* shares Dr. Dawe.

Demonstrating its educational expertise, the Chronic Pain Management Service hosted the Canadian Interventional Pain Course in Halifax in May 2024, a comprehensive 2-day review of diagnostic and therapeutic approaches to the patients suffering from chronic painful conditions. This course brought together the best pain management faculty from across the country and showcased our beautiful city, as well as Dalhousie University. It was made possible due to a wonderful collaboration between the pain management program, the anatomy department, and the skills lab.

Supporting Health Systems Transformations

The Department continues to support initiatives aimed at improving patient care such as the establishment of a new provincial clinical information system, One Person One Record (OPOR). Individuals who have provided their valuable time and expertise include our OPOP physician leads **Drs. André Bernard, Ivan Cohen** and **David MacDonald**, as well as anesthesia subject matter experts **Drs. Vanessa Sweet, Susanne Retter, Blaine Kent, Paula Kolysher, Bruce Macaulay, Tristan Dumbarton, Robyn Doucet, Jane Seviour, Ian Beauprie**, and **Kwesi Kwofie**. Pediatric anesthesia assistant **Sami Jreige** and IT Team Lead **Darren Bishop** are also instrumental to the project. The Department is optimistic about OPOP's future impact on patient care and research; however, we appreciate that its implementation requires careful planning and robust clinician supports.

The hospital buildings in which we work require much repair and attention. Our Department supports the *Action for Health Build* – the infrastructure redevelopment efforts for the QEII Health Sciences Centre, the Dartmouth General Hospital and IWK Health. A special thank you to **Dr. Blaine Kent** for his efforts to ensure that anesthesia interests are factored into the designs, and to all department members and patients as they deal with disruptions due to construction.

Striving for Quality Improvement

The Department is committed to the ongoing fostering of an organizational culture of quality and patient safety. NSH and IWK anesthesia teams participate in interdisciplinary quality improvement work and the National Surgical Quality Improvement Program (NSQIP).

At NSH Central Zone, the team has initiated a phased development of key anesthesia performance and quality indicators. To further enhance quality initiatives, we strengthened our collaboration with the Department of Surgery's Quality Improvement teams through NSQIP. One specific example is the implementation of a strategy to improve ASA scoring accuracy, a crucial component of precise NSQIP reporting.

Within IWK Pediatric Anesthesia, the surgical safety checklist is being updated to enhance the patient sign-in and briefing process, taking into account the valuable feedback received from patients and their families. Equipment-wise, the arrival of new anesthesia OR Pyxis machines has resulted in a fundamental improvement in opioid stewardship.

At IWK Women's and Obstetric, priorities included providing recurring intramural continuing education sessions, integrating point-of-care testing and holding the first gastric ultrasound workshop.

The Department continues to support initiatives aimed at improving patient care.



Anesthesia Quality & Patient Safety Leadership

Dr. Andrew Milne, NSH Co-Medical Director

Dr. Gregory Dobson, NSH Co-Medical Director

Dr. Vanessa Sweet, NSH Associate Medical Director

Melissa Berry, NSH Anesthesia Quality Lead

Dr. Ana Sjaus, IWK Women's and Obstetric Medical Director

Dr. Sally Bird, IWK Pediatric Medical Director (until April 2024)

Dr. Tristan Dumbarton, IWK Pediatric Medical Director (as of May 2024)



The session provided the basic training to anesthesiologists and anesthesia assistants in qualitative and quantitative assessment of gastric contents. In preparation for a revision of the IWK massive transfusion protocol, the Department also engaged with nursing, obstetrics, the blood bank and lab services in a joint simulation exercise. This exercise utilized realistic procedures and timings to explore systemic and team issues in the delivery of care. Several improvements were identified and are being integrated into policies and procedures.

"I am extremely proud of our talented and motivated team of anesthesia assistants, technicians, and anesthesiologists. Whether updating anesthesia practices or advocating for advancements in care and equipment, the daily engagement of their minds, hearts and hands is making care better and safer for our patients," says **Dr. Ana Sjaus**.

Transformational Education

Whether you are a student, resident, fellow, or other health care provider, you can be sure that you will experience the highest quality anesthesia education with the Office of Education.

Our Residency Program

Our residency program continues to thrive. Under the leadership of **Dr. Shannon Bradley**, Program Director, the team made further improvements to the Competency-Based Medical Education program in response to feedback received from residents and faculty. The Curriculum Review 3.0 Project focused on reducing the unnecessary administrative tasks faced by residents, to enhance resident satisfaction.

Strong resident leadership was provided by **Dr. Mike Smyth** who did a wonderful job serving as Chief Resident for the year.

The Department was excited to welcome three former Dalhousie residents and fellows who transitioned from trainee to staff in summer 2023, and we're looking forward to having three additional Dalhousie alumni join the staff in summer 2024. Our residency program continues to be well-sought after. During the winter, the Department received 168 applications through the Canadian Residency Matching System and offered 54 interviews for the six available resident positions starting in July 2024.

Training Medical Students and Healthcare Workers

The Department not only trains future anesthesiologists, we also play a key role in preparing the health workforce by educating other healthcare providers such as medical students, anesthesia assistants, paramedics, nurses and respiratory technologists.

Congratulations to **Dr. Carlo Mariotti** who was rated by medical students as the top 10% of tutors in the Medical School.

*"There is growing demand for our Department's expertise in teaching perioperative medicine, airway management, intubations and IV placements," says **Dr. Bukky Akindede**. "We continue to do our best to accommodate learner requests at NSH and the IWK, because the future of health care is in the hands of these professionals."*

Office of Education Leadership Team

Laura Harris Buffett, Managing Director, Education

Dr. Robyn Doucet, Medical Director, Education

Dr. Shannon Bradley, Program Director, Postgraduate Education

Dr. Andrew Jarvie, Associate Program Director, Postgraduate Education

Dr. Bukky Akindede, Medical Director, Undergraduate Education

Dr. Cathy Delbridge, Medical Director, Simulation

Dr. Jon Bailey, Medical Director, Serving & Engaging Communities

Dr. Tim Mullen, Medical Director, Fellowship

Dr. Mallory Garza, Medical Director, Continuing Professional Development

Dr. Karim Mukhida, Resident Scholarly Project Coordinator

Drs. Patricia Doyle and Jane Seviour, IWK Education Co-ordinators



Resident Achievements

Dr. Franziska Miller received the *Samuel R. McLaughlin Fellowship* from Dalhousie Faculty of Medicine to help fund her fellowship studies in chronic pain research and management at Stanford University.

Drs. Matthew Mackin and Regan Brownbridge were nominated for the 2024 *Resident Trauma Provider of the Year Award* from Trauma Nova Scotia.



Support for Internationally Educated Physicians

To build anesthesia human resource capacity in Nova Scotia, we again this year delivered a Practice Ready Assessment (PRA) to an internationally trained anesthesiologist, with another participant starting in September 2024. Supported by the Government of Nova Scotia and the College of Physicians and Surgeons Nova Scotia, this assessment program enables internationally trained doctors to demonstrate that they possess the competencies and skills to practice anesthesia.

"I consider the PRA not only a pathway to licensure, but also a valuable experience in a transition to practice in a new country and working environment," says **Dr. Slav Hrystay**, PRA participant now working in Sydney, Nova Scotia.

Facilitating Interprofessional Education

Dr. Cathy Delbridge played a key role in relaunching the interprofessional education simulations with NSH Post Anesthesia Care Units this year to meet the needs of healthcare providers and educators across Nova Scotia. As both uni-professional and interprofessional simulation has increased in academic and practice environments, these sessions will ensure that new and current healthcare providers and educators are supported to develop knowledge and skill in simulation.

Fellowship Programs

The Department takes great pride in our fellowship programs, offering seven specialized tracks for aspiring subspecialty anesthesiologists. These programs go beyond simply providing advanced clinical training. They cultivate well-rounded professionals by fostering a collaborative and supportive learning environment that integrates research opportunities and exceptional mentorship. Focus this year included updating our program eligibility guidelines and developing a new promotional video on Global Health, with other videos planned for 2025.

"The Department was welcoming and supportive from the very beginning of my fellowship year. The Regional Anesthesiology fellowship program provides a unique opportunity with world class expertise, great clinical exposure with a block room setup, and fantastic academic support. I thoroughly enjoyed my year in Halifax and will miss my former colleagues at the QEII!" – **Dr. Daniel Werry**, Regional Anesthesia and Acute Pain Fellow.

Residents & Fellows

Congratulations to our 2023-2024 graduates!

RESIDENTS



Dr. Scott Haslam



Dr. Matthew Mackin



Dr. Franziska Miller



Dr. Loran Morrison



Dr. Sarah Tremaine



Dr. Luke Wiseman



Dr. Julia Wright

FELLOWS



Dr. Abdulrahman Al Wakeel

Women's and Obstetrics



Dr. Daniel Werry

Regional Anesthesia and Acute Pain



Research, Innovation and Discovery

2023 was a year of innovation. Faculty researchers successfully secured funding from the Department, external agencies, and philanthropic donors to launch 30 projects that are transforming the delivery of evidence-based, best care practices within our health centre and beyond. Our researchers are truly aiming for the skies, such as one study exploring the feasibility of regional anesthesia in simulated space-like environments. Addressing pressures that are more on the ground, another study is assessing if a pocket-sized instrument that monitors intravenous fluid flow could offer cost savings to the health system. This year also saw the early development of a Research Centre at IWK Health, which will aim at Endometriosis and Chronic Pelvic Pain. The Office of Research continues to support all researchers with administrative and operational expertise.



Celebrating five years of Patients as Research Collaborators

2024 marks the fifth anniversary of the Department's Anesthesia Research Consultant Committee (ARCC), an innovative committee that advances research best practice within our Department through successful integration of patients into all phases of research. The ARCC brings together a diverse group of patient representatives who have authentic lived experience with anesthesia and chronic pain. Committee members collaborate meaningfully with researchers to ensure research projects are both relevant and impactful to the patient population that we serve. Members are also trained reviewers of the Anesthesia Research Fund (ARF) competitions. These reviewers specifically assess submissions on aspects related to patient engagement using a tailored, evidence-based rubric.

Office of Research Leadership Team

Dr. Heather Butler, PhD,
Managing Director of Research

Dr. Christian Lehmann,
Medical Director, Research

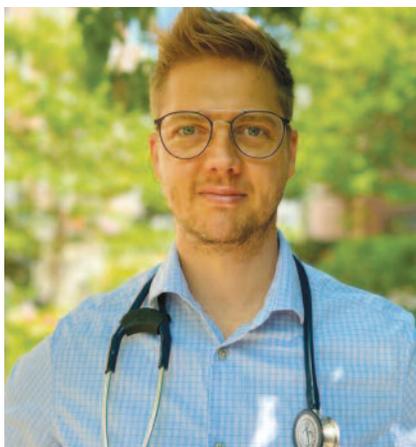
Dr. Tristan Dumbarton,
Associate Director, Pediatric Anesthesia

Dr. Jason McDougall, PhD,
Associate Director, Dalhousie Tupper site

Dr. Allana Munro, Associate Director, Women's and Obstetric Anesthesia

Dr. Vishal Uppal, Associate Director, NSH Central Zone

Cultivating Early Career Researchers



Recognizing that many senior researchers were retiring or reducing their research time, the Office of Research made it a priority to stimulate research curiosity, particularly among new faculty, through intentional dialogue and outreach. These efforts have been fruitful and as a result, a number of new faculty have begun developing their research programs.

Dr. Pieter de Jager is one of our new researchers. He joined the Department as a cardiac anesthesiologist in the summer of 2023 at NSH QEII Health Sciences Centre. His interest is enhanced recovery after cardiac surgery, and he serves as the site Principal Investigator for a multi-centre retrospective cohort study.

When asked about his aspirations as an early career researcher, Dr. de Jager says, *“My goal is to contribute to the scientific community and translate research findings into clinical practice to improve patient recovery and overall quality of care. I’m also keen on pursuing collaborations within Dalhousie, particularly the*

Department of Computer Science, and externally with the University of Alberta and the University of Toronto. I firmly believe that collaboration within and between departments, across institutions, and especially across disciplines is essential for innovative research.”

Collaborating on Clinical Research Trials

Patient clinical trials are important for discovering new cures for diseases, as well as new ways to diagnose, treat and prevent diseases. In recent years, a growing number of our researchers, such as Dr. de Jager, are collaborating on multi-site clinical trials, forging strong academic partnerships with other researchers nationally and internationally. By way of example, three of the clinical trials currently underway are seeking to assess what pain management strategies work best with specific populations with specific conditions.

At IWK Health, **Dr. Allen Finley**, site Primary Investigator, is currently recruiting for a multi-centre study exploring Cannabidiol-enriched Cannabis Herbal Extract for chronic headaches in adolescents. This is a Phase 2 Health Canada trial led by Dr. Lauren E Kelly, PhD, University of Manitoba.

Dr. Allana Munro and colleagues, also at IWK Health, are working on a CIHR funded, Phase 3 international multi-centre trial aimed at determining the effect of intraoperative intravenous lidocaine infusion on reducing the development of persistent pain three months after breast cancer surgery. She is collaborating with **Dr. James Khan** of the University Health Network, Toronto.

“I firmly believe that collaboration within and between departments, across institutions, and especially across disciplines is essential for innovative research.”

– **Dr. Pieter de Jager**



Dr. Allen Finley



Dr. Allana Munro



Dr. Jamie Dougherty

An early career researcher, **Dr. Jamie Dougherty** at the QEII Health Sciences Centre is working with Principal Investigator **Dr. Ahmad Alli** at Unity Health Toronto to explore the efficacy of superficial parasternal intercostal plane block on pain control after cardiac surgery.

Dr. Orlando Hung Innovation Fund Award

For many, the notion of surgery in space is unfathomable. But as travel into the relatively unknown increases, so too does the chance of serious injury and the need to provide safe care in space. A 2019 Canadian Space Agency report on "Canadian Healthcare in Deep Space" called for healthcare researchers to build capacity for minor procedures in deep space. **Dr. Jon Bailey**, the inaugural recipient of the Department's *Dr. Orlando Hung Innovation Fund Award*, was intrigued by the concept of surgery in space and sought to find answers. Together with residents and faculty colleagues – **Drs. Mathew Kiberd, Regan Brownbridge, Garrett Barry, Matthew Mackin, Daniel Werry** and **Sally Bird** – Dr. Bailey embarked on a unique project to test the viability of regional anesthesia methods in a simulated microgravity environment. In this case – underwater. *"It's a huge honour to receive the inaugural Orlando Hung Innovation Fund grant,"* says Dr. Bailey. The fund, named after **Dr. Orlando Hung**, is dedicated to supporting early ideas that can develop best practice models and procedures.

Read the full story [here](#).

Researching Patient-Reported Outcomes

Listening and learning from patients is what's driving a new research project at Nova Scotia Health. Led by **Dr. David MacDonald**, the project aims to improve quality of care by measuring outcomes from the patient's perspective. Team members include **Drs. Janice Chisholm, André Bernard, Vanessa Sweet, Lana Saciragic, Melissa O'Brien, PhD**, and patient consultant **Virginia McIntyre**.



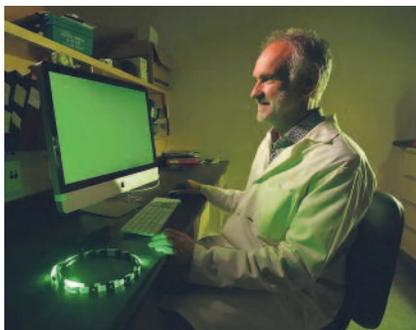
The study will monitor the recovery of older adults after they receive anesthesia by using patient-reported outcome measures (*PROMs*). The project will gather data directly from patients such as their symptoms, their activity level, as well as information regarding their physical, mental, and social well-being. The feedback gained from this first phase will inform the implementation of *PROMs* data collection as a standard of care, better equipping the health system to provide patient-centered care, especially to vulnerable populations such as older adults.

This project is made possible due to \$23,000 received from the QEII Foundation's *Translating Research into Care (TRIC) Grant*, with matched funding provided by the Department's Anesthesia Research Fund.



Alleviating Pain with Green Light Therapy

Congratulations to Principal Investigator **Dr. Jason McDougall, PhD**, jointly appointed with the Department of Pharmacology, and his co-investigators **Drs. Karim Mukhida** and **Javeria Hashmi, PhD**, for being awarded an operating grant of over \$446,000 from the Arthritis Society of Canada for their green light therapy research project. This translational research project is exploring green-light induced analgesia through both pre-clinical and clinical studies. Other team members include **Dr. Melissa O'Brien, PhD**, research coordinator **Sharon Amey**, and patient partner **Chris DeBow**.



The team will explore if green light exposure can change brain activity in individuals living with chronic pain due to osteoarthritis. They will also investigate the descending inhibitory pathways that respond to light in animals. They hope this research will directly benefit chronic pain patients with a simple, safe, and effective treatment. *"We are excited to see how this novel approach to manage arthritis pain evolves and to understand the neurophysiology behind green light analgesia,"* says Dr. McDougall.

First Café Scientifique

Does enjoying a coffee in a relaxed community setting while learning about science and pain research sound like fun? This is exactly what happened when departmental members and people with lived experience organized a Café Scientifique for Nova Scotians in the valley region. Speakers included **Dr. Jason McDougall, PhD**, **Dr. Melissa O'Brien, PhD**, **Dr. Andy MacLean** and **Virginia McIntyre**. Part of the CIHR Knowledge Mobilization program, Café Scientifique events prioritize knowledge dissemination to improve health literacy and health equity, and empower Canadians to take charge of their own health.

The Department's inaugural event took place in a Wolfville café in September 2023, and was a great success, drawing a full house of over 50 participants. Attendees discussed health services and clinical research in the province, explored pain research and new discoveries, and fostered new partnerships between individuals and researchers. The next event will take place at Dalhousie University campus in October 2024 with the support of the CIHR's Strategy for Patient-Oriented Research.





Anesthesia Research Day 2024

“Don't just ponder the unanswered questions raised today, actively pursue them. We can all break new ground in our fields by cultivating a culture of inquiry.”

– Dr. André Bernard

What research is stimulating the curiosity of our future medical practitioners and scientists? That was the focus of the Department's Annual Research Day held in spring 2024 at the Halifax Convention Centre. The collaborative event, hosted by the Departments of Anesthesia, Surgery and Ophthalmology and the Dalhousie Pain Network, was a huge success bringing together over 500 participants.

Dr. John Marshall of St. Michael's Hospital provided a shared keynote address on how the COVID-19 pandemic changed clinical research. The anesthesia portion of the day was attended by over 118 trainees, faculty, clinician/PhD scientists, and research and professional staff. In addition to the trainee presentations, a highlight for many was the anesthesia keynote speaker, **Dr. Gianni Lorello**, University of Toronto, who spoke eloquently about health inequities in medicine.

The Department is grateful for the Faculty of Medicine's Medical Re-

search Development Office's \$5000 grant to support this inter-departmental collaboration. **Dr. André Bernard**, Associate Head, closed the event by inspiring trainees and researchers: *"Continue to ask questions. Let curiosity be your compass. Don't just ponder the unanswered questions raised today, actively pursue them. We can all break new ground in our fields by cultivating a culture of inquiry."*

Valuing People

Recruiting Physician Talent

Qualified and compassionate faculty are essential ingredients of our success in meeting the needs of the people we serve. In this time of worldwide anesthesia shortages and human resource challenges, we continue to make great progress on our largest recruitment campaign ever, with support from the NSH recruitment team and the Office of Health Professionals Recruitment. From July 2023 to June 2024, the Department successfully recruited and onboarded 14 new clinical faculty as continuing appointments, with seven additional offers in place for Fall 2024 and into 2025. As well, the Department secured ten locum tenens physicians with terms varying from weeks to a full year, with seven locums in place for the upcoming academic year. And other offers are in the works. Of these 24 new appointments, 13 studied at Dalhousie University in either medical school, residency or fellowship programs, and 10 were internationally trained in anesthesia.

These physicians have brought a wonderful diversity of talent and experience from both close to home and across the world. A sincere thanks to our faculty, healthcare, professional and administrative team members for all their efforts in welcoming and onboarding the new faculty, with special mention to our peer mentors.

Mentors to New Faculty

Dr. Ben Schelew
 Dr. Tracy Kok
 Dr. Vanessa Sweet
 Dr. Shannon Bradley
 Dr. Husam Nashnoush
 Dr. Reza Mehrpooya
 Dr. André Bernard
 Dr. Paula Kolysner
 Dr. Arnim Vlatten
 Dr. Vladko Pelivanov
 Dr. Ana Sjaus
 Dr. Bukky Akindele
 Dr. Adrienne Carr

Dr. Sunti Barahi joined the IWK Women's and Obstetric department in early 2024 after completing a fellowship in Toronto. Though she misses her home country Nepal, Dr. Barahi chose to establish her career and family in Canada. *"Halifax is a lovely place and people are really nice and helpful. The working environment makes me feel included and at home,"* says Dr. Barahi. She particularly enjoys the closely knit group community at the IWK, where she gets to meet and connect with her colleagues. *"I'm finding my role increasingly engaging and fulfilling. It's exciting to be learning and growing in my first staff position."*

Qualified and compassionate faculty are essential ingredients of our success in meeting the needs of the people we serve.





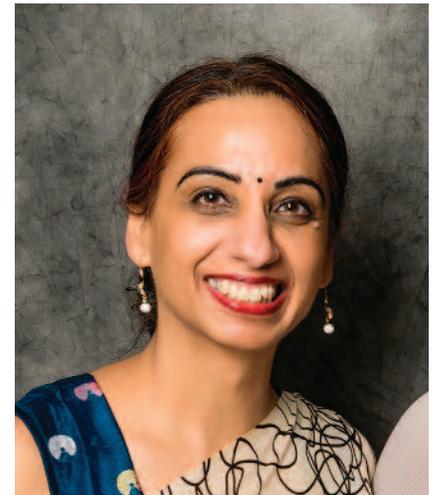
A graduate of the Dalhousie anesthesia residency program, **Dr. Emma Kehoe** returned to Halifax in 2023 to work with the IWK pediatric anesthesia team, after completing a fellowship in the United Kingdom. Halifax is special to her because it's her hometown and it's where her parents, some of her siblings and many nieces and nephews live. Accompanied by her husband and young children, she says, *"I'm biased, but I think it's the best place to raise a family."*

Originally from Nigeria and trained in London, United Kingdom, **Dr. Ibukunoluwa (IB) Adedugbe** joined the NSH team in 2024. An experienced clinician, Dr. IB Adedugbe previously worked at the National Hospital for Neurology and Neurosurgery in London, the same institution where she pursued her neuroanesthesia fellowship, followed by an obstetrical anesthesia fellowship at Mount Sinai Hospital in Toronto. What drew her to Nova Scotia? Her longtime friend who is departmental faculty recommended Halifax as a great place to work with a great community. *"Arriving in the spring has been a blessing as I have experienced Halifax in great weather and am enjoying the summer activities in the city."*



Equity, Diversity, Inclusion and Accessibility (EDIA)

Raising awareness of the importance of EDIA in medicine remains a key priority. *"While it is an unfortunate truth that racism and discrimination exist in medicine, we as health care providers have the power and privilege to lead the way to a more just and inclusive healthcare system,"* says **Dr. Parvinder Sodhi**, Medical Director. *"We are all at different stages of our EDIA journey and each one of us has the responsibility to dig deeper and educate ourselves."*



Nationally renowned speakers, **Drs. Saroo Sharda** and **Gianni Lorello**, were invited to deliver impactful presentations on equity, diversity and inclusion at our Grand Rounds and our annual Research Day respectively. Initial work has also begun on a new EDIA curriculum for residents and workshops for faculty members, both that are planned for next year. Recognizing the linkage between wellness and EDIA, collaborations are underway between wellness and EDIA leads on future shared activities.

Dr. Hilary MacCormick continues to build her research program on the impacts of health inequities on diverse populations. Her recently published article in the Canadian Medical Association Journal, *Lived experiences of transgender and nonbinary people in the perioperative context: a qualitative study*, garnered significant media attention. She advocates that the voices of transgender and nonbinary people are required to advance the development of educational materials for healthcare professionals at all levels.

Prioritizing Wellness

The Department continues to promote wellness and well-being. In addition to the annual golf tournament, a highlight this year was the 3rd annual Anesthesia Fitness Challenge. With support of a \$2000 wellness grant from the Dalhousie Faculty of Medicine, 100 departmental members walked 54 million steps in a virtual dystopian world in which teams try to reach a safe house over a six-week period. An app translates every step taken in the real world into virtual steps which are used to overcome obstacles and defeat aliens.

The challenge encourages staff to be physically active and generates a great sense of camaraderie and friendly competition. While the number of steps taken was impressive, the real success lies in the positive impact on well-being and engagement. The majority of the participants surveyed said that the challenge was fun and helped improve their lifestyle behaviours and build connections with other colleagues.



Looking ahead, **Dr. Stephanie Power**, the Medical Director of Wellness intends to build supports for career transitions and clinical incident debriefs to alleviate burnout and stress. *"We will also continue celebrating our Department and its members to recognize the hard work we are all doing every day to provide outstanding patient care and academic excellence,"* says Dr. Power.



The Department continues to promote wellness and well-being.

Celebrating Success



This year, the Department re-introduced its electronic newsletter, *The Gasette*, in order to share stories that showcase key initiatives and celebrate the accomplishments of faculty and staff. Copies of the newsletters with profile stories can be found [here](#).

Recognizing Exceptional Career Achievements



The Canadian Anesthesiologists' Society's highest award, the *Gold Medal*, was deservingly bestowed on **Dr. Adam Law** in recognition of his significant contributions to anesthesia in Canada through teaching, research, professional practice, or administration and leadership.



Dr. Vishal Uppal was awarded the prestigious American Society of Regional Anesthesia and Pain Medicine *Presidential Scholar Award*. This honour is a testament to his significant contributions to regional anesthesia and pain medicine over the past decade with a history of high-impact research publications.



In October 2023, **Dr. Orlando Hung** was awarded the *Dalhousie Medical Alumni Association Honourary President Award* in recognition of his stature as a highly regarded Dalhousie alumni whose career and service in medicine have been outstanding.

As evidence of his international reputation in airway management, Dr. Hung recently published the fourth edition of his lauded book, *Hung's Management of the Difficult and Failed Airway*, with **Dr. Michael Murphy**.

Other members who contributed as editors and authors include, but is not limited to: **Drs. Adam Law, Carrie Goodine, Andrew D. Milne, Ana Sjaus, Mallory Garza, Konstantin Lorenz, Allana Munro, George Kanellakos, Tristan Dumbarton, Michael Wong, Jade Panzaraza, Genevieve McKinnon, Kwesi Kwofie, Matthew Simms, Matthew Mackin, Mathew Kiberd, Thomas Coonan, Franziska Miller, Jon Bailey, Sue Galgay, Ronald Stewart, George Kovacs, Arnim Vlatten, Dennis Drapeau, Dietrich Henzler, Alexander Poulton and Loran Morrison.**

Department Awards of Excellence

Catherine Matheson,
Administrative Assistant
Internal Individual Award

Joanne Dunnington,
Executive Director (Interim),
QEI Central Zone
External Individual Award

Megan Arsenault,
Anesthesia Technician
Dale Morrison Memorial Award

Chantelle Jones Deveau,
Anesthesia Assistant
Dale Morrison Memorial Award

Dr. André Bernard,
Associate Head
Dr. Tom Marrie Leadership
Award

**NSH Perioperative Blood
Management Program Team**
Dr. Blaine Kent, Dr. Heather
Mingo, PhD, Erin Sampson
Internal Team Award



IWK MRI Technologists
Matthew Rogers, Sara Sullivan,
Jennifer Taylor, Amanda Boyd,
Nicole Lever
External Team Award

Department Teaching Awards of Excellence

**Drs. Patricia Doyle &
Stuart Wright**
Undergraduate Teacher of the
Year

Dr. Stephen Middleton
Clinical Teacher of the Year

Dr. Charlotte Edwards
Clinical Teacher of the Year –
Community

Dr. Stephanie Power
Mentor/Role Model of the Year





Dr. Shannon Bradley
Resident Advocate of the Year

Dr. Michelle Trenholm
Resident Teacher Award

Dr. Paula Kolysher
Daily Encounter Cards Award

Dr. Patrica Doyle
In-Training Assessment
Report Award



Department Research Day Trainee Awards

1ST Dr. Daniel Werry
2ND Dr. Loran Morrison
Clinical Fellow and Resident
Award

**1ST Daniel Eduardo Neria
Agonh**
2ND Jennika Veinot
Graduate Award

1ST Alex MacNeil
2ND Gaurav Arora
Undergraduate Award

Alex MacNeil
Pain Research Award

Retirements

Dr. Fiona Roper
Clinical Faculty, Nova Scotia

Dr. Andrew Clarke
Clinical Faculty, New Brunswick

Dr. David Hughes
Clinical Faculty, New Brunswick

Catherine Matheson
Administrative Assistant,
IWK Women's and Obstetrics



Appendix A

2023-24 Research Projects

NEW Funded Projects

- Baerg K, Tupper S, Cooke N, Finley GA (2023-2024). Addressing treatment variability for Pediatric Complex Regional Pain Syndrome in Canada: Preparing for national consensus guideline development [Grant] – Saskatchewan Health Research Foundation – \$9,775.
- Bailey JB, Kiberd M, Brownbridge R, Mackin M, Barry G, Bird S (2023-2025). Feasibility of Regional Anesthesia in Microgravity: A Proof-of-concept Study [Grant] – Anesthesia Research Fund, APMPM – \$9,961.
- Christian Lehmann (2022-2023). Bridge funding [Grant] – Anesthesia Research Fund, APMPM – \$20,000.
- Christian Lehmann (2023-2024). Novel formulation for the adjuvant treatment of bacterial cystitis [Grant] – Early-Stage Commercialization Fund (ESCF) – \$50,000.
- Christian Lehmann (2023-2025). Cannabis and cannabinoids in stroke – friends or foes? [Grant] – Anesthesia Research Fund, APMPM – \$24,970.
- Christian Lehmann, Balwantray Chauhan, Michael Dunbar (2024). Faculty of Medicine Conference Grant Awards – 2024 Combined Research Day [Grant] – Dalhousie – \$5,000.
- Clarke H, Balneaves L, Fitzcharles M, Karkouti K, Kotra L, Ladha K, Abrahamyan L, Atrey A, Badii M, Bosma R, Di Renna T, Diep C, Duggan S, Ganty P, Hart A, Hill M, Kapoor M, Karanicolas P, Kelly L, Ladak S, Leroux T, Madden K, Miles S, Mukhida K, Owusu-Bempah A, Peel J, Peer M, Perez J, Rockel J, Shanthanna H, Tanzer M, Tomlinson G, Trang T, Wijeyundera D (2023-2025). The effectiveness of oral cannabis extracts for osteoarthritic pain: an internal pilot, placebo controlled, blinded randomized trial [Grant] – CIHR – \$378,676.
- Gower S, Mossenson A, Upadhye V, Mrutu S, Whynot S, Ram Shrestha R, Livingston P (2023). The Vital Anaesthesia Simulation Training (VAST) Foundation Year for anaesthesia trainees: case study research exploring the influence of context on curriculum delivery [Grant] – Curtin University School of Nursing – \$8,900.
- Hung OR (2023). Difficult and Failed Airway videos [Grant] – McGraw-Hill Video Production – \$9,000.
- Hung OR (2023). Health for the Project FIVAFLOW – an innovative pocket-sized instrument designed to monitor intravenous fluid flow [Grant] – Innovation Hub, NS Health – \$10,000.
- Khan James S, Gilron Ian, Avramescu Sinziana, Brull Richard, Brulotte Veronique, Buckley David N, Busse Jason W, Choi Stephen, Clarke Hance A, Devereaux Philip J, Dillane Derek, Friedman Zeev, Hah Jennifer M, Hung Linda, Karkouti Keyvan, Ladha, Karim, Lim David W, Look Hong Nicole, MacDonell Su-Yin, Mackey Sean C, Miles Sarah, Paul, James E, Richebé Philippe G, Sessler, Daniel I, Shanthanna Harsha, Siddiqui Naveed T, Tomlinson George A, Tura Alparslan, Usichenko Taras, Wang, Li, Wright Frances C, Site PI [Munro A] (2023-2024). Prevention of persistent pain with Lidocaine infusions in breast cancer surgery (PLAN) Trial [Grant] – CIHR – \$1,285,200.
- Kiberd MB, Dumbarton T, El-Hawary R, Orlik B (2023-2025). Aprepitant for PONV Prophylaxis in children undergoing scoliosis surgery: An RCT [Grant] – Anesthesia Research Fund, APMPM – \$24,967.
- Livingston P, Mossenson A, Shrestha RR (2023). VAST Introduction to Nepal [Grant] – World Federation of Societies of Anaesthesiologist Small Project Grant – \$13,200.
- MacDonald D, Bernard A, Chisholm J, McIntyre V, O'Brien M, Sweet V, (2024-2026). Implementation of Patient Reported Outcome Measures (PROMs) Data Collection for Older Adults in the Perioperative Setting [Grant] – Anesthesia Research Fund, APMPM – \$21,987.
- MacDonald D, Bernard A, Chisholm J, McIntyre V, O'Brien M, Sweet V, (2024-2026). Implementation of Patient Reported Outcome Measures (PROMs) Data Collection for Older Adults in the Perioperative Setting [Grant] – NSHA – \$23,390.
- McDougall J, Mukhida K, Hashmi J, O'Brien M, DeBow C (2024-2026). Analysis of the Central Pathways Responsible for Green Light Therapy-Induced Pain Relief in Osteoarthritis [Grant] – Arthritis Society – \$446,912.
- Miró J, Wager J, Pogatzki-Zahn E, Wood C, Moscaritolo L, Lioffi C, Walker SM, Ståhl M, Fernandes AM, Ingelmo P, Finley GA, Mohair V, Dimiņa E, Goubert L, Koechlin H, Andersen RD, Jensen MP, Wicksell R, Lord SM, Reinoso-Barbero F, Cebrecos J, O'Keefe M (2023-2025). International Network on Chronic Pain in Childhood – IN-ChildPain [Grant] – NEURON– Network of European Funding for Neuroscience Research, ERA-NET (European Commission) – \$71,000.
- Mossenson A, Mongolian Society of Anesthesiologists, Livingston P (2024). Vital Anaesthesia Simulation Training (VAST) implementation in Mongolia [Grant] – Australia and New Zealand College of Anaesthetists 2024 Health Equity Project grant – \$18,000.
- Munro A, Randle E, Pink L, McEachern L, Bates B, Yong P (2023 - 2024). IWK Research Centre Phase 1 – Development Grant: [Grant] – IWK - \$32,451.
- Munro A, Randle E, West J (2023 - 2024). Creating and utilizing a clinical database to phenotype Endometriosis and Chronic Pelvic Pain (E&CPP) patients in an interdisciplinary tertiary care setting [Grant] – IWK – \$3,000.
- Saciragic L, Findley R, MacDonald D, Pelletier N, Pittman E, Willows K (2023-2024). (G)ynecologic (O)ncology same day disc(H)arge after (M)inimally invasive surgery – (E)valuation and implementation Study [Grant] – Dalhousie – \$39,700.

22. Spencer R, French D, Knapp G, Kieser K, MacDonald D, Mallery L, Mason R, Neumann K, Shetty N (2023-2025). Application of the Palliative and Therapeutic Harmonization (PATH) program for shared-decision making for frail or cognitively impaired patients scheduled for curative cancer surgery: a randomized control trial [Grant] – Dalhousie – \$50,000.
23. Werry D, Uppal V, Bailey J, Barry G (2024-2025). Anesthesiologists' assessment of the correctness, completeness, and coherence of ChatGPT artificial intelligence platform's answers to common patient preoperative questions [Grant] – Anesthesia Research Fund, APMPM – \$5,000.

NEW Scholarly Projects (unfunded)

1. Dumbarton TC, Kiberd KB (2023-2024). CRICKET – Critical Events during tracheal intubation in kids [Clinical]
2. Law JA, Driver B (2023). Confirmation of Tracheal Intubation [Medical Education or Training]
3. Law JA, Milne AD (2023). Stargate – International observational study on airway management in operating room and non-operating room anesthesia [Clinical]
4. Munro A, Wakeel A (2024). The incidence of intraoperative pain during cesarean delivery using regional anesthesia – a QI study [Clinical]
5. Munro A, Sjaus A, Courtney E (2023-2024). The incidence and predictors of general anesthesia during Cesarean Delivery – a Nova Scotian Cohort [Clinical]
6. O'Brien, MS, Dawe JA (2024). Systematic Review of Participant Demographics in Calcitonin Gene Related Peptide (CGRP) Clinical Trials [Clinical]
7. Sjaus A, Young VL (2023). Diagnostic point-of-care ultrasound in obstetric anesthesia and critical care: A scoping review [Clinical]

CONTINUING Ongoing Funded Projects

1. Bailey J, Nyirigira G, Mossenson A, Whynot S, Livingston P (2022-2024). The VAST Well-being Course for reducing burnout, anxiety and depression amongst healthcare providers working in resource-limited settings: a mixed methods study [Grant] – Anesthesia Research Fund, APMPM – \$16,844.
2. Calkin C, Friedman A, Hashmi J (2019-2023). Neuroanatomical and neurofunctional assessment in acquired brain injury [Grant] – Global Affairs Canada – \$3,600,000.
3. Chambers, CT & Maynard DJ (co-Directors), & Ali S, Barwick M, Campbell F, Campbell-Yeo M, Carter N, Finley GA, Jordan I, Larocque L, Mogil J, Noel M, Oberlander T, Stevens B, Stinson J, Taddio A (2019-2023). Solutions for Kids in Pain (SKIP) [Grant] – Networks of Centres of Excellence: Knowledge Mobilization initiative (NCE-KM) – \$1,600,000.
4. Chappe V, Lehmann C, Zhou, J (2022-2023). Structure-function study of the CFTR(ABCC7) chloride channel [Grant] – The Lung Association of Nova Scotia (LANS) Legacy Research Grant – \$50,000.
5. Christian Lehmann, Zhenyu Cheng (2022-2024). Role of iron in biofilm formation [Grant] – NSERC – \$44,184.
6. Forgeron PA, Birnie K, Dick BD, Finley GA, Jordan A, Qualter P, Stinson J (2022-2026). Lonelier Than Ever: Examining the experiences of Loneliness amongst adolescents with chronic pain in the context of COVID-19: A mixed methods study [Grant] – CIHR – \$239,226.
7. Fox-Robichaud A, Mark Ansermino, Catherine Cook, Kirsten Fiest, Patricia Fontela, Allan Garland, Michelle Kho, Paul Kubes, Manoj Lal, Francois Lamontagne (Co-Director), Osama Loubani, Claudio Martin, Bradeon McDonald, Lauralyn McIntyre, Melissa Parker, Jeanna Parsons-Leigh, Jeff Perry, Bram Rochweg, Lisa Schwartz, Diana Sherifali, Orla Smith, Elizabeth Wilcox, Bryan Yipp, Lehmann C, Zhou J et al and the Canadian Sepsis Research Network (2020-2025). Canadian Sepsis Research Network: Improving care before, during and after sepsis [Grant] – CIHR – \$6,789,630.
8. Gower S, Mossenson A, Upadhye V, Elaibaid M, Mrutu S, Whynot S, Livingston P (2023). The Vital Anaesthesia Simulation Training (VAST) Foundation Year for anaesthesia trainees: case study research exploring the influence of context on curriculum delivery [Grant] – Curtin School of Nursing Strategic Funds Grant – \$9,300.
9. Gyambibi A, Bailey J, Uppal V (2021-2023). Patient Perspectives of Informed Consent for Regional Anesthesia for Ambulatory Surgery [Grant] – Dalhousie – \$4,470.
10. Hashmi JA (2016-2026). Canada Research Chair Tier II (Pain) [Grant] – CIHR – \$500,000.
11. Kelly L, Finley GA, Lacaze T, Oberlander T, Huntsman R, Alcorn J (2020-2024). Cannabis for chronic daily headaches in adolescents [Grant] – SickKids Foundation – \$293,335.
12. Kelly L, tJong, Moore, Hepburn, Alcorn, Finkelstein, Lacaze, Oberlander T, Rassekh, Tsang, Balneaves, Balshaw, Burns, Crooks B, Drogemoller, Dupuis, Dyson, Finley GA, et al (2020-2024). Cannabis for symptom management in children with cancer: a demonstration project by the Canadian Childhood Cannabinoid Clinical Trials (C4T) platform [Grant] – CIHR – \$1,499,000.
13. Khan James S, Gilron Ian, Avramescu Sinziana, Brull Richard, Brulotte Veronique, Buckley David N, Busse Jason W, Choi Stephen, Clarke Hance A, Devereaux Philip J, Dillane Derek, Friedman Zeev, Hah Jennifer M, Hung Linda, Karkouti Keyvan, Ladha, Karim, Lim David W, Look Hong Nicole, MacDonell Su-Yin, Mackey Sean C, Miles Sarah, Paul, James E, Richebé Philippe G, Sessler, Daniel I, Shanthanna Harsha, Siddiqui Naveed T, Tomlinson George A, Turan Alparslan, Usichenko Taras, Wang, Li, Wright Frances C, Site PI [Munro A] (2023-2024). Prevention of persistent pain with Lidocaine infusions in breast cancer surgery (PLAN) Trial [Grant] – CIHR – \$1,285,200.
14. MacDonald D, Banfield J, Panek I, Maguire M, Heggie C, Williams K,

Bottomley T (2022-2024). Validation of a patient-centered questionnaire for assessing satisfaction with shared decision making in healthcare consultations [Grant] – Anesthesia Research Fund, APMPM – \$24,402.

15. McDougall J, Mukhida K (2022 - 2024). Management of Osteoarthritis Pain with Green Light Therapy [Grant] – Arthritis Society – \$99,652.
16. McIsaac D, Jerath A, Kidd G, Roberts D, Saha T, Taljaard M, Wijesundera D, Boet S, Bragg S, Bryson G, Carrier F, de Mestral C, Dubois D, Fergusson D, Flexman A, Grudzinski A, Kayssi A, Lalu M, Lee S, MacDonald D, McCartney C, McCluskey S, McKeen D, Nagpal S, Parotto M, Spence J, Thavorn K, Uppal V, van Walraven C (2022-2024). The Anesthesia for Lower limb revascularization to Optimize Functional Outcomes (ALOFT) Trial: a pilot multicenter randomized trial [Grant] – CIHR – \$202,725.
17. Mossenson A, Livingston P, Brown J (2023-2024). Developing a competency-based facilitation evaluation tool supporting health care simulation in resource-limited settings [Grant] – Australia and New Zealand College of Anaesthetists – \$115,715.
18. Mossenson A, Upadhye V, Livingston P, (2023). Implementation of VAST in Pune, India, including curriculum integration of the VAST [Grant] – ANZCA Health Equity Projects Fund – \$17,800.
19. Munro A, Kwofie MK (2022-2024). A randomized controlled trial evaluating the effect intravenous dexamethasone use has on the duration of spinal anesthesia as part of a multimodal antiemetic strategy for enhanced recovery after cesarean delivery [Grant] – IWK – \$25,000.
20. Neira V, Al-Faraj A, Thorleifson M, Duncan K, Doucet R (2021-2023). Procedural Skills Workplace Assessment of Internal Jugular Vein Catheterization: A Generalizability Study [Grant] – Anesthesia Research Fund, APMPM – \$7,861.
21. Parlow J, Gregory K, Johnson A, Bould D, Nyirigira G, Banguti P, Nizeyimana F, Bailey J, Jaeger M (2022-2025). Developing a Fellowship and Residency Modules in Knowledge Translation in Anesthesiology and Pain

Management in Low- and Middle-Income Countries [Grant] – International Development, Aid and Collaboration Grant – Royal College International – \$90,000.

22. Puts M, Alibhai S, Haase K, MacDonald D, et al (2021-2025). A mixed methods study to evaluate functional recovery, care needs and caregiver needs in older adults undergoing surgery: The Frail substudy of the Fit for Surgery study [Grant] – CIHR – \$424,575.
23. Ritchie CK, Sjaas A (2023-2024). Preparation for specialty examination is consolidation of routine and adaptive expertise acquired over the course of anesthesia residency: Or is it? [Grant] – Anesthesia Research Fund, APMPM – \$945.
24. Spence J, Connolly S, Lee S, Belley-Côté E, Cameron M, D'Aragon F, Deschamps A, Dulong B, Jacobsohn E, Mazer D, Pryor K, Rajamohan R, Whitlock R (2022-2023). Benzodiazepine-free cardiac anesthesia for reduction of postoperative delirium in the intensive care unit (B-Free): A multi-centre, randomized, cluster crossover trial [Grant] – CIHR – \$267,750.
25. Stinson J, Noel M, Birnie K, Laloo C, Nishat F, Ahola Kohut S, Baerg K, Barwick M, Battaglia M, Boerner K, Campbell F, Carreiro E, Cornish P, Dick B, Dore-Bergeron M, Findlay S, Finley A, Gill J, Hudspith M, Ingelmo P, Killackey T, Lamontagne C, Mohabir V, Oberlander T, Palermo P, Pham Q, Poolacherla R, Poulin P, Rash J, Rasic N, Soltani S, Beaudry H (2022-2026). Evaluating a virtual stepped care portal in youth awaiting tertiary chronic pain care: An Implementation-Effectiveness Hybrid Type III study [Grant] – CIHR – \$546,209.
26. Wijesundera DN, Juni P, Khadaroo R, MacDonald D, et al (2021-2025). FAST Walk (Functional Assessment for Surgery by a Timed Walk) study: A multicentre prospective cohort study of the six-minute walk test for improving preoperative risk stratification for major non-cardiac surgery [Grant] – CIHR – \$1,410,813.

CONTINUING Scholarly Projects (unfunded)

1. Doverty J Tallantire V, Eltom N, Middleton S, Livingston P (2021-2023). Curriculum for refugee doctor adaptation to practice in Scotland [Medical Education or Training]
2. Dumbarton TC, Kiberd KB (2023-2024). CRICKET – Critical Events during tracheal intubation in kids [Clinical]
3. Fakuade A, Mukhida K (2022-2023). The depiction of pain and addiction in contemporary Canadian hip hop and implications for medical education [Medical Education or Training]
4. Gower S, Mossenson A, Upadhye V, Elaibaid M, Mrutu S, Livingston P (2022-2024). The Vital Anaesthesia Simulation Training (VAST) Foundation Year for anaesthesia trainees: case study research exploring the influence of context on curriculum delivery [Medical Education or Training]
5. Gower S, Mossenson A, Upadhye V, Livingston P (2022-2023). Exploration of participants' experience following a global SIMposium focussed on peri-operative simulation in low-resource settings [Medical Education or Training]
6. Law JA, Driver B (2023). Confirmation of Tracheal Intubation [Medical Education or Training]
7. Law JA, Milne AD (2023). Stargate – International observational study on airway management in operating room and non-operating room anesthesia [Clinical]
8. Lehmann C (2022-2024). CIDS [Pre-Clinical]
9. Mossenson A, Livingston P, Kemp S, Kelly M, Brown J (2023-2024). Delphi study exploring criteria for effective healthcare simulation facilitation in low-resource settings [Medical Education or Training]
10. Mossenson A, Livingston P, Kemp S, Kelly M, Brown J (2023-2024). Tools for evaluation of healthcare simulation facilitation or debriefing, with focus on utility in low-resource settings: A scoping review protocol [Medical Education or Training]



11. Munro A, Sjaus A, Courtney E (2023-2024). The incidence and predictors of general anesthesia during Cesarean Delivery – a Nova Scotian Cohort [Clinical]
12. Munro A, Wakeel A (2024). The incidence of intraoperative pain during cesarean delivery using regional anesthesia – a QI study [Clinical]
13. Oprea A, Mukhida K (2022-2023). Medical students' attitudes about supports for chronic pain management [Clinical]
14. Panzarasa J, Mukhida K (2022 - 2023). The depiction of female physicians in Hollywood films and implications for equity, diversity and inclusion [Clinical]
15. Sjaus A, Ash S (2023-2024). Consenting for publication of medical information in social media: Patients' attitudes and opinions [Pre-Clinical]
16. Sjaus A, Young VL (2023). Diagnostic point-of-care ultrasound in obstetric anesthesia and critical care: A scoping review [Clinical]
17. Smith S, Tallentire V, Doverty J, Carney E, Livingston P (2022-2023). The social integration needs of refugee doctors: An integrative review [Medical Education or Training]
18. Vlatten A (2021-2024). Comparison of pediatric airway training and available airway equipment in EMS [Clinical]

Appendix B

2023 Publications

Note that this list of publications includes peer-reviewed articles that are currently published and accessible online by members of the Department (63).

1. Ammar H, Sharawy N, Lehmann C (2023). Remodeling in cardiometabolic diseases: Towards biomarker characterization, target therapy identification, and drug delivery strategies. *Front Physiol.*, 14, 1161720. [Editorial – Published] PubMed ID: 36935748.
2. Astapenko D, Hyspler R, Tich A, Tomasova A, Navratil P, Zrzavecky M, Byreddy B, Sedlacek P, Radochova V, Skulec R, Hahn RG, Lehmann C, Malbrain MLNG, Cerny V (2023). Protection of the endothelium and endothelial glycocalyx by hydrogen against ischaemia-reperfusion injury in a porcine model of cardiac arrest. *Clinical Hemorheology and Microcirculation*, 1-12. [Published] PubMed ID: 37694356.
3. Astapenko D, Zrzavecky M, Gorskaja D, Hyspler R, Ticha A, Radochova V, Lehmann C, Malbrain MLNG, Cerny V, Hahn RG (2023). Modulation of the capillary leakage by exogenous albumin in a rat model of endothelial glycocalyx damage. *Clinical Hemorheology and Microcirculation*. [Published] PubMed ID: 38073383.
4. Bailey J, Uppal V (2023). The erector spinae plane block: silver bullet or over-hyped? *Canadian Journal of Anesthesia*. [Editorial – Published] PubMed ID: 37957437.
5. Barry G, Sehmbi H, Retter S, Bailey JG, Tablante R, Uppal V (2023). Comparative efficacy and safety of non-neuraxial analgesic techniques for midline laparotomy: a systematic review and frequentist network meta-analysis of randomised controlled trials. *British Journal of Anaesthesia*. [Published] PubMed ID: 37770254.
6. Bietar B, Tanner S, Lehmann C (2023). Neuroprotection and Beyond: The Central Role of CB1 and CB2 Receptors in Stroke Recovery. *International Journal of Molecular Sciences*, 24(23). [Scoping Review – Published] PubMed ID: 38069049
7. Burcheri A, Coutin A, Bigham BL, Kruse MI, Lien K, Lim R, MacCormick H, Morris J, Ng V, Primani N, Odorizzi S, Poirier V, Upadhye S, Primavesi R (2023). Exploring a case for education about sexual and gender minorities in postgraduate emergency medicine training: forming recommendations for change. *Postgraduate Medicine*, 135(6), 623-632. [Editorial – Published] PubMed ID: 37310186.
8. Cheung C, MacCormick H, Munro A, George RB (2023). Sexual and gender minorities curricular content in Canadian anesthesia residency programs. *Canadian Journal of Anesthesia*, 70(6), 1100-1102. [Letter to the Editor – Published] PubMed ID: 37193864.
9. Cohen A, Wisseman L, Al Faraj A, André u P, Hall RI, Neira VM (2023). Use of liquid chromatography-tandem mass spectrometry method to assess the concentration of epinephrine, norepinephrine, and phenylephrine stored in plastic syringes. *Pharm Technol Hosp Pharm*, 8(1), 1-8. [Published] DOI: 1-.1515/pthp-2022-0010.
10. Coppens S, Hoogma DF, Uppal V, Kalagari H, Herman M, Rex S (2023). Erector spinae plane block: the ultimate 'Plan A' block? Comment on Br J Anaesth 2023; 130: 497-502. *British journal of Anaesthesia*. [Letter to the Editor – Published] PubMed ID: 37225536.
11. de Jager P, Aleman D, Baxter N, Bell C, Bodur M, Calzavara A, Campbell R, Carter M, Emerson S, Gagliardi A, Irish J, Martin D, Lee S, Saxe-Braithwaite M, Seyedi P, Takata J, Yang S, Zanchetta C, Urbach D (2023). Social determinants of access to timely elective surgery in Ontario, Canada: a cross-sectional population level study. *CMAJ Open*, 11(6), E1164-E1180. [Published] PubMed ID: 38114259.
12. Deane AM, Alhazzani W, Guyatt G, Finfer S, Marshall JC, Myburgh J, Zytaruk N, Hardie M, Saunders L, Knowles S, Lauzier F, Chapman MJ, English S, Muscedere J, Arabi Y, Ostermann M, Venkatesh B, Young P, Thabane L, Billot L, Heels-Ansell D, Al-Fares AA, Hammond NE, Hall R, Rajbhandari D, Poole A, Johnson D, Iqbal M, Reis G, Xie F, Cook DJ, Canadian Critical Care TrialsGroup and the Australian and New Zealand Intensive Care Society Clinical Trials Group (2023). REVISE: re-evaluating the inhibition of stress erosions in the ICU-statistical analysis plan for randomized trial. *BMJ Open*, 13(11), e075588. [Statistical Analysis Plan – Published] PubMed ID: 37968012.
13. Dickson K, Scott C, White H, Zhou J, Kelly M, Lehmann C (2023). Antibacterial and Analgesic Properties of Beta-Caryophyllene in a Murine Urinary Tract Infection Model. *Molecules*, 28(10), 4144. [Published] PubMed ID: 37241885.
14. Dobson G, Chau A, Denomme J, Fuda G, McDonnell C, McIntyre I, Milne AD, Milkovich R, Sparrow K, Wang Y, Young C (2023). Correction: Guidelines to the Practice of Anesthesia: Revised Edition 2023. *Canadian Journal of Anesthesia = Journal Canadien d'anesthésie*. [Letter to the Editor – Published] PubMed ID: 36810674.
15. Dobson GR, Chau A, Denomme J, Fuda G, McDonnell C, McIntyre I, Milne AD, Milkovich A, Sparrow K, Wang Y, Young C (2023). Guidelines to the Practice of Anesthesia - Revised Edition 2023. *Canadian Journal of Anesthesia*, 70(1), 16-55. [Published] PubMed ID: PMID: 36690905.
16. Dumbarton TC (2023). Regional anesthesia in complex pediatric patients: advances in opioid-sparing analgesia. *Canadian Journal of Anaesthesia = Journal Canadien*

- d'anesthesia*. [Editorial - Published] PubMed ID: 37884770.
17. El-Boghdady K, Albrecht E, Wolmarans M, Mariano ER, Kopp S, Perlas A, Thottungal A, Gadsden J, Tulgar S, Adhikary S, Aguirre J, Agur AMR, Altiparmak B, Barrington MJ, Bedford N, Blanco R, Bloc S, Boretsky K, Bowness J, Breebaart M, Burckett-St Laurent D, Carvalho B, Chelly JE, Chin KJ, Chuan A, Coppens S, Costache I, Dam M, Desmet M, Dhir S, Egeler C, Elsharkawy H, Bendtsen TF, Fox B, Franco CD, Gautier PE, Grant SA, Grape S, Guheen C, Harbell MW, Hebbard P, Hernandez N, Hogg RMG, Holtz M, Ihnatsenka B, Ilfeld BM, Ip VHY, Johnson RL, Kalagara H, Kessler P, Kwofie MK, Le-Wendling L, Lirk P, Lobo C, Ludwin D, Macfarlane AJR, Makris A, McCartney C, McDonnell J, McLeod GA, Memtsoudis SG, Merjavy P, Moran EML, Nader A, Neal JM, Niazi AU, Njathi-Ori C, O'Donnell BD, Oldman M, Orebaugh SL, Parras T, Pawa A, Peng P, Porter S, Pulos BP, Sala-Blanch X, Saporito A, Sauter AR, Schwenk ES, Sebastian MP, Sidhu N, Sinha SK, Soffin EM, Stimpson J, Tang R, Tsui BCH, Turbitt L, Uppal V, van Geffen GJ, Vermeylen K, Vlassakov K, Volk T, Xu JL, Elkassabany NM (2023). Standardizing nomenclature in regional anesthesia: an ASRA-ESRA Delphi consensus study of upper and lower limb nerve blocks. *Regional Anesthesia and Pain Medicine*. [Published] PubMed ID: 38050174.
 18. Greene A, Wood L, Champion P, Castonguay M, Scheffler M, Deshaies C, Wood J, French D (2023). Resection of a Large Growing Mediastinal Germ Cell Tumor Using a Multidisciplinary Approach. *Current Oncology* (Toronto, Ont.), 31(1), 42-49. [Case Report – Published] PubMed ID: 38275829.
 19. Hall S, Faridi S, Trivedi P, Castonguay M, Kelly M, Zhou J, Lehmann C (2023). Cannabidiol Reduces Systemic Immune Activation in Experimental Acute Lung Injury. *Cannabis and Cannabinoid Research*. [Published] PubMed ID: 37815809.
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 21. Hansel J, Law JA, Chrimes N, Higgs A, Cook TM (2023). Clinical tests for confirming tracheal intubation or excluding oesophageal intubation: a diagnostic test accuracy systematic review and meta-analysis. *Anaesthesia*. [Systematic Review – Published] DOI: 0.1111/anaes.16059.
 22. Heels-Ansdell D, Billot L, Thabane L, Alhazzani W, Deane A, Guyatt G, Finfer S, Lauzier F, Myburgh J, Young P, Arabi Y, Marshall J, English S, Muscedere J, Ostermann M, Venkatesh B, Zytaruk N, Hardie M, Hammond N, Knowles S, Saunders L, Poole A, Al-Fares A, Xie F, Hall R, Cook D (2023). REVISE: re-evaluating the inhibition of stress erosions in the ICU-statistical analysis plan for a randomized trial. *Trials*, 24(1), 796. [Trial Protocol – Published] PubMed ID: 38057875.
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 24. Hung O, Coonan T (2023). In reply: Artificial intelligence in anesthesia: an uphill but inevitable road. *Canadian Journal of Anaesthesia = Journal Canadien d'anesthesie*, 70(10), 1705-1706. [Letter to the Editor – Published] PubMed ID: 37704898.
 25. Hung OR, Coonan T (2023). Artificial Intelligence versus Art of Anesthesia: A long and winding road ahead. *Canadian Journal of Anesthesia*, 70(10), 1422-1424. [Editorial – Published] PubMed ID: 37085659.
 26. Huntsman RJ, Elliott J, Lewis E, Moore-Hepburn C, Alcorn J, Mansell H, Appendino JP, Bélanger RE, Corley S, Crooks B, Denny AM, Finkelstein Y, Finley A, Fung R, Gilpin A, Litalien C, Jacobs J, Oberlander TF, Palm A, Palm J, Polewicz M, Quinn D, Rassekh SR, Repetski A, Rieder MJ, Robson-McKay A, Seifert B, Shackelford A, Siden H, Szafron M, 't Jong G, Kelly LE (2023). Removing barriers to accessing medical cannabis for paediatric patients. *Paediatrics and Child Health*, pxac129. [Published] DOI: 10.1093/pch/pxac129.
 27. Jin S, Munro A, George RB (2023). The association between labour epidural analgesia and postpartum depression in primiparous patients: a historical cohort study. *Canadian Journal of Anaesthesia = Journal Canadien d'anesthesie*, 70(12), 1909-1916. [Published] PubMed ID: 37726496.
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 30. Kiberd MB, Dumbarton T (2023). In reply: Increasing the success rate of large and small intravenous access. *Canadian Journal of Anaesthesia = Journal Canadien d'anesthesie*. [Letter to the Editor – Published] PubMed ID: 37280456.
 31. Kukreja P, Uppal V, Kofskey AM, Feinstein J, Northern T, Davis C, Morgan CJ, Kalagara H (2023). Quality of recovery after pericapsular nerve group (PENG) block for primary total hip arthroplasty under spinal anaesthesia: a randomised controlled observer-blinded trial. *British Journal of Anaesthesia*. [Published] PubMed ID: 36964012.
 32. Law JA, Thana A, Milne AD (2023). In reply: Awake tracheal intubation: what can be done to maintain the skill? *Canadian Journal of Anaesthesia = Journal Canadien d'anesthesie*. [Letter to the Editor - Published] PubMed ID: 37138152.

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37. McKay, Madeleine BSSc, Brown, Ryan MPH, MBA, FRSPH, Mallam, Katie BA, BPR, MPR1, MacDonald Green, Amanda, MD, CCFP1, Bernard, André, MD, MSc, FRCPC (2023). Engaging the collective voice of physicians: Optimizing participation in research and policy development in the context of COVID-19 and physician burnout. Canadian College of Health Leaders, *Healthcare Management Forum*, 1-4. [Systematic Review - Published] DOI: 10.1177/08404704231199083.
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