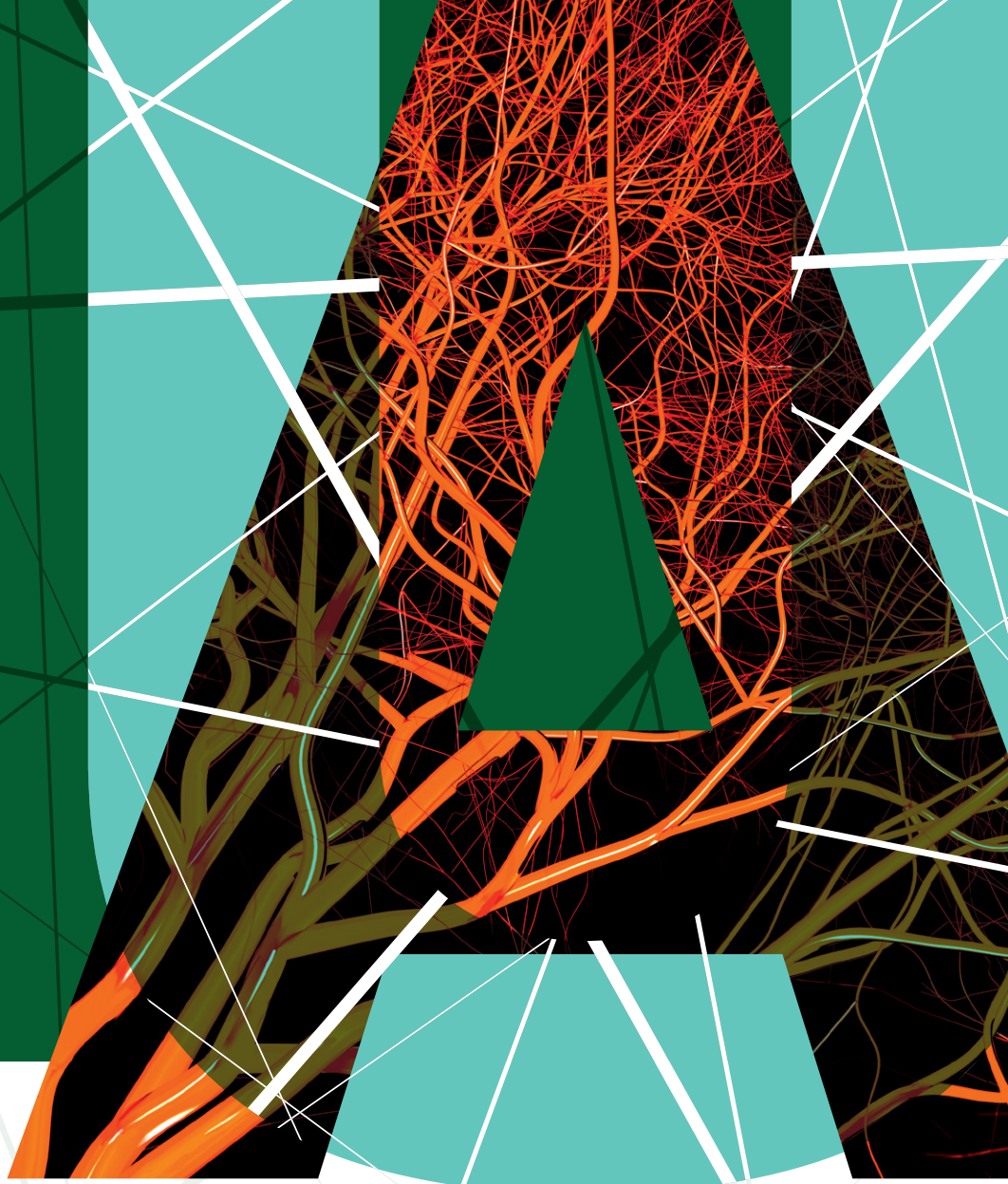




UNIVERSITY
OF ALBERTA



2025-26

Department of Critical Care Medicine

Annual Report

JULY 1, 2025 - JUNE 30, 2026

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A large, dark stone sculpture of a bison, facing left, stands on a large, light-colored stone base. The base is inscribed with the following text in bold, capital letters: SWEETGRASS TEACHINGS, HUMBLE KINDNESS, SHARING, HONESTY, DETERMINATION. The background features green trees and a clear blue sky.

**SWEETGRASS TEACHINGS:
HUMBLE KINDNESS
SHARING
HONESTY
DETERMINATION**

Territorial Land Acknowledgement

The University of Alberta, and the Department of Critical Care Medicine, its buildings, labs and research stations are primarily located on the territory of Néhiyaw (Cree), Niitsitapi (Blackfoot), Métis, Nakoda (Stoney), Dene, Haudenosaunee (Iroquois) and Anishinaabe (Ojibway/ Saulteaux), lands that are now known as part of Treaties 6, 7 and 8 and homeland of the Métis. The University of Alberta respects the sovereignty, lands, histories, languages, knowledge systems and cultures of all First Nations, Métis, and Inuit.

Mission, Philosophy, Transparency and Diversity

Mission

Our mission is to provide exemplary patient and family-centred care for the critically ill today and tomorrow.

Department Philosophy

The Department of Critical Care Medicine provides patient care, supports education and training, and facilitates research across the mixed medical/surgical and specialized critical care units in the Edmonton Zone. These critical care units are where the most unstable and seriously ill patients are cared for. Our ICUs consist of highly trained inter-disciplinary teams, advanced monitoring capabilities and life-support technology. We have integrated the “ICU without walls” concept, where in addition to having a dedicated location in the hospital, we also take the necessary expertise and support to rescue patients with acute deterioration who are at-risk of critical illness and adverse outcomes. As a result, critical care outreach services are now recognized and integrated as a vital component of Critical Care.

Transparency and Diversity

The department is committed to ensuring transparency, social accountability and to facilitate diversity for recruitment, promotion and leadership. The department has been working closely to align with the Faculty of Medicine and Dentistry and Alberta Health Services on these processes.

Message from the Chair



Sean M Bagshaw, MD, MSc, FRCPC, FCAHS

Chair and Clinical Department Head, Critical Care Medicine
Faculty of Medicine & Dentistry, College of Health Sciences,
University of Alberta
Edmonton Corridor, Alberta Health Services

On behalf of the department, it is my privilege to present our 2025-26 Annual Report for the Department of Critical Care Medicine.

I hope this year's Department report nicely highlights our achievements and dedication to serving our clinical and academic mission and our broader critical care community. I find the enormous talent, efforts and accomplishments of our faculty toward advancing patient and family-focused clinical excellence and innovation, quality, education and research inspirational. The year's report aims to showcase the spectrum of activities of our critical care units and the academic department in Edmonton and the Central Corridor.

The department has seen new faces emerge and transitions in leadership this past year. **Dr. Clint Torok-Both** has graciously taken on the role of Deputy Clinical Department Lead for the Edmonton Corridor. I would like to again thank **Dr. Jon Davidow** for his years of dedicated leadership, first as Medical Director of the RAH ICU and more recently in the Deputy position, where he championed several initiatives that have a lasting legacy, including the provincial pandemic triage protocol, the patient and family-centered care committee, the donation after cardiocirculatory determination of death protocol, and the acute pulmonary embolism triage and management protocol.

I would like to welcome **Dr. Shaun Cowan** in his role of Medical Director (Clinical Department Facility Chief) of the Sturgeon Community Hospital and again thank **Dr. Oleksa Rewa** for his leadership, where he advanced several initiatives at the SCH, including enabling unit participation in several clinical trials, growing the intensivist workforce, launching the hospital-wide MET/RRS service, and expanding dialysis (IHD) services in the ICU.

The department also celebrated the retirement of **Dr. David Zygun**, who was honored for his years of dedication and contributions to the development of our department with this year's *Dr. Richard Johnston Award for Distinguished Service to Critical Care Medicine*. I would like to wish him well in his exciting new opportunity in health quality in Vancouver.

We sadly suffered the unexpected loss of **Dr. Darren Markland** this year. The department has created a new award, the *Dr. Darren Markland Award for Community Engagement* to recognize and honour his legacy and commitment to patient care, education and community.

The department's Education portfolio continues to thrive. A huge kudos to **Dr. Adam Romanovsky** for leading a successful accreditation campaign (along with all faculty who showed their support during the process). Dr. Romanovsky has assumed the Education Portfolio lead and transitioned the role of Program Director for the Royal College training program to **Dr. Jocelyn Slemko**. Welcome Dr. Slemko! We have seen the successful launch of the UGME curriculum in critical care medicine, led by **Dr. Vincent Lau** with clinical clerks now rotating across all ICUs in the Edmonton Corridor and Red Deer. The department again has been acknowledged for outstanding contributions to teaching and as an educational experience for learners.

The Critical Care Ultrasound portfolio, led by **Dr. Brian Buchanan** continues to be a national leader and centre of excellence in point-of-care ultrasound, encompassing both education and research and innovation. The portfolio will welcome a new CCUS fellow this year. The Simulation portfolio, led by **Dr. Janek Senaratne**, continues to engage and expand the spectrum of high-fidelity multi-disciplinary and multi-level learner simulations.

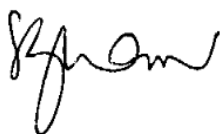
I would like to acknowledge the great work of **Dr. Andrea Letourneau** in further progressing and promoting a culture of quality and safety for the department. Several initiatives are in development. Stay tuned for the new KPI report card, webinar series and quarterly QI newsletters. These initiatives are further supported by the informatic genius of **Dr. Darren Hudson**, through his leadership with eCritical/TRACER.

The Research and Innovation portfolio, led by **Dr. Oleksa Rewa**, has remarkably contributed to numerous local, national and international research programs and high impact clinical trials, including >170 publications! This year, the department looks to welcome new critical care research fellows.

The clinical and academic footprint of our department continues to grow, and our faculty consistently create impact and generate substantial academic output. This year marked the success of a decades long process to create a new provincial AMHSP arrangement for critical care that will hopefully extend and foster our department's successes.

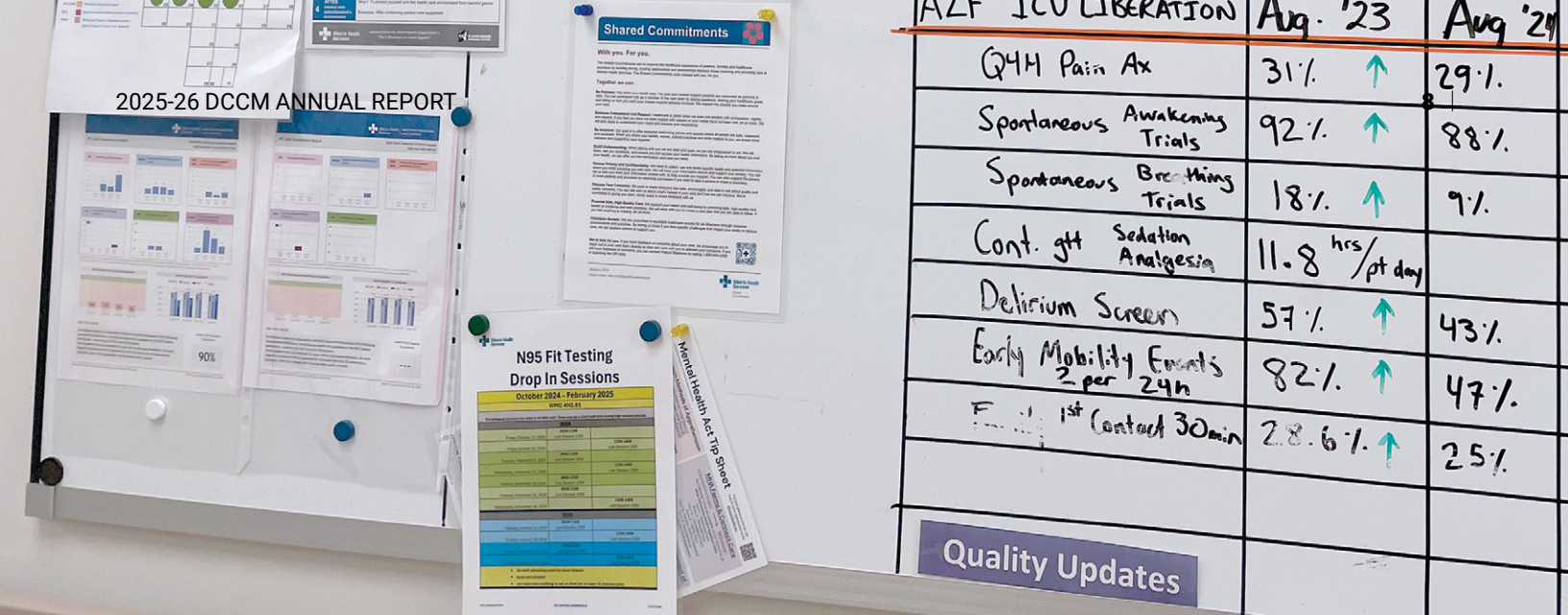
I would like to sincerely thank all our department members for their commitment, their dedication, and the scholarly activity focused to advancing critical care.

Sincerely,



Sean M Bagshaw, MD, MSc, FRCPC, FCAHS

Chair and Clinical Department Head, Critical Care Medicine
Faculty of Medicine and Dentistry, College of Health Sciences, University of Alberta
Edmonton Corridor, Alberta Health Services



CLINICAL UNITS

Clinical Units

July 1, 2025 to June 30, 2026 (Academic Calendar Year)

UNITS	Edmonton Zone	UAH GSICU	UAH Neuro	MAZ CVICU	RAH ICU	GNH ICU	MIS ICU	SCH ICU	RDRH ICU	GPRH ICU
ADMISSIONS										
	7919	1768	564	1411	1490	486	418	444	566	772
AVOIDABLE TIME (%)										
	6.6	7.1	4.6	5.05	4.2	10.85	9.05	8.3	11.35	5.8
ICU LOS										
 (med, days)	3.7	4.4	3.8	3.2	3.5	3.0	3.9	2.7	6.9	2.7
IMV (%)										
	49	58	65	41	61	48	38	28	62	22
ICU MORTALITY (%)										
	19.2	17.6	16.15	3.6	16.95	20.55	19.6	14.95	21.05	8.8
APACHE III										
 (score mean)	65.05	71.8	55.35	56.1	71.1	79.35	70.2	63.05	74.55	43.55

Grey Nuns Community Hospital Intensive Care Unit



ADMISSIONS (N)

486AVOIDABLE TIME
(% DAYS)**10.85**ICU LOS
(MED, DAYS)**3**

IMV (%)

48

ICU MORTALITY (%)

20.55APACHE III
(SCORE MEAN)**79.35**

JULY 1, 2025 – JUNE 30, 2026

The Grey Nuns Community Hospital Intensive Care Unit is a 10-bed general systems ICU with specialized expertise in high-risk and emergency vascular surgery. Over the last year it has continued to advance its mission in clinical excellence, education and research.

The GNH ICU is supported by a team of 9 fellowship trained critical care physicians, advanced nurse practitioners, fellows, nurses, respiratory therapists, physiotherapists, pharmacists, dietitians, social workers, educators, and operational experts providing all tertiary critical care services including advanced mechanical ventilation, acute renal replacement therapy, and plasmapheresis. Over the last year the GNH ICU admitted 486 patients with a mean APACHE II score of 79.35 and average ICU mortality of 20.55% reflecting a high level of acuity and complexity.

The unit supports the critical care fellowship program with one on one bedside teaching involving fellows, nurse practitioners, and intensivists. The site hosts quarterly academic half-days and provides subspecialty teaching in respiratory medicine, ultrasound, transport medicine, ultrasound-guided line placement for nursing and respiratory therapy staff, and a dedicated RT teaching week that immerses fellows in high-acuity respiratory scenarios, surgical airways, foreign body retrievals, and patient-ventilator interactions.

The Grey Nuns Hospital Research Office is a fully integrated team comprising a Research Manager (Anushka Jayasekara), three Research Coordinators (Bernadette Fernando, Hafsa Choudhry, Isumi de Silva), multiple research students as well as 17 additional interdisciplinary clinical research staff. The team continues to lead the Department in trial recruitment having randomized greater than 650 patients into clinical trials in the last 4 years. The Research Office handles inpatient and outpatient research, runs both investigator-initiated and corporate-sponsored trials, and has experience in Phase 1 through 4 studies. It is currently supporting 13 active trials.

Paula Sharman, RN

Patient Care Manager

Unit Medical Director: Vacant

Mazankowski Alberta Heart Institute

Cardiovascular Surgical Intensive Care Unit



ADMISSIONS (N)

1411AVOIDABLE TIME
(% DAYS)**5.05**ICU LOS
(MED, DAYS)**3.2**

IMV (%)

41

ICU MORTALITY (%)

3.6APACHE III
(SCORE MEAN)**56.1**

The Cardiovascular Intensive Care Unit (CVICU) at the Mazankowski Alberta Heart Institute is a 26-bed unit renowned for its comprehensive support of advanced adult cardiac surgical programs. These include open-heart surgery, adult congenital heart disease, heart and lung transplants, combined heart/lung and heart/liver transplants, and rescue of advanced cardiogenic shock and severe acute respiratory distress syndrome (ARDS).

Specialized support is offered with mechanical circulatory support (MCS), including ventricular assist devices (VADs) and extracorporeal membrane oxygenation (ECMO) for cardiopulmonary failure. These programs are amongst the most advanced in Canada, setting a national benchmark for excellence. In particular, the MCS program is the largest of its kind in the nation, routinely attracting national and international attention and visitors.

The CVICU programmatic reach is geographically vast, extending beyond northern Alberta, serving large parts of western Canada and the Northwest Territories, ensuring broad population access to the highest standards of cardiovascular critical care. Our dedicated team is committed to delivering exceptional patient outcomes through innovative therapies and compassionate care.

Mazankowski Alberta Heart Institute

Cardiovascular Surgical Intensive Care Unit

The CVICU team consists of nine Royal College of Physicians and Surgeons of Canada (and equivalent) certified critical care medicine specialists with diverse backgrounds, including anesthesia, cardiac surgery, cardiology, emergency medicine, and internal medicine. These CV intensivists provide in-house medical coverage 24/7, ensuring continuous, high-level care. They are supported by a team of highly specialized nurse practitioners with extensive experience in cardiac surgical critical care, dedicated nursing and allied health staff, and skilled ECMO specialists. Together, they form a cohesive unit that exemplifies excellence in cardiac critical care, working tirelessly to improve patient outcomes and advance the field of cardiovascular critical care.

Our unit has a strong commitment to training, education, and growing clinical research. Members consistently collaborate and participate in national and international conferences, teaching, speaking engagements, and consensus document/guideline development.

We offer a unique one-year advanced clinical fellowship in cardiovascular critical care to qualified Canadian and international trainees. The unit also regularly hosts rotating residents and fellows from various programs, enriching their training with electives in the CVICU. Further, we have a dedicated quality assurance council overseeing local quality initiatives, ensuring continuous improvement of our practices and maintenance of the highest standards of care.

Peetinder Atwal, BScN RN

Patient Care Manager

Gurmeet Singh, MD, MSc, FRCSC, FCCS

Medical Director

Associate Clinical Professor, Department of Critical Care

Medicine & Surgery, Division of Cardiac Surgery

Misericordia Community Hospital Intensive Care Unit



ADMISSIONS (N)

418



AVOIDABLE TIME
(% DAYS)

9.05



ICU LOS
(MED, DAYS)

3.9



IMV (%)

38



ICU MORTALITY (%)

19.6



APACHE III
(SCORE MEAN)

70.2



Beyond patient care, we are active in facilitating research and quality improvement, with participation in several provincial clinical and quality initiatives. We endorse initiatives such as Venting Wisely, Harmonization of Analgesia and Sedation Practices and Delirium and have introduced Dialyzing Wisely and Don't Misuse my Blood, allowing us to uphold standard practices in patient care. We continue to work towards a robust program to evaluate care and outcomes associated with prolonged mechanical ventilation, as well as support patients beyond discharge, in our ICU Recovery clinic.

As a Unit, we are committed to constant improvement of the patient care experience and health care outcomes. Following our acceptance as a provincially accredited simulation program, we have successfully completed two large-scale simulation activities involving multiple departments and using advanced treatment procedures. These opportunities highlight our commitment to enhancement of the care environment, adaptation of new technology and incorporation of expertise. On a smaller scale, our local quality council is actively engaged in identifying opportunities to enhance best practice and uphold safe patient care.

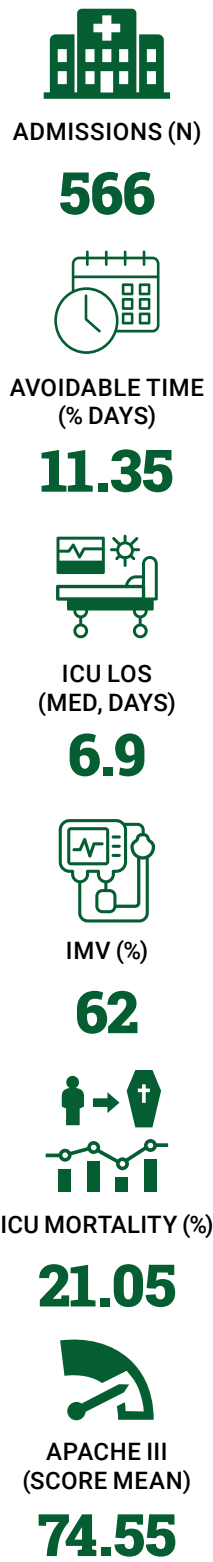
Our unit was fortunate to receive two generous donations this year, allowing us to enhance our family room spaces and to purchase rapid infuser equipment. This generosity is a direct testament to the experiences of patients and families cared for at Misericordia ICU. Our team is passionate about ensuring that our patients and their families have the best possible support during an incredibly trying time.

Anik Pelletier, RN
Patient Care Manager

Erin Taylor, RN
Program Manager

Clint Torok-Both, MD FRCPC
Medical Director
Clinical Associate Professor,
Department of Critical Care Medicine

Red Deer Regional Hospital Intensive Care Unit



As the sole Intensive Care Unit serving Alberta’s Central Corridor, the Red Deer Regional Hospital Centre (RDRHC) ICU plays a vital role in delivering critical care services within Alberta Health Services. The recently renovated 20-bed unit is supported by a highly skilled multidisciplinary team dedicated to providing exceptional care for patients with a broad range of complex critical care needs.

The ICU is staffed by six fellowship-trained intensivists, rotating residents and fellows, a Clinical Nurse Specialist, Clinical Nurse Educators, a dedicated Mentor Nurse, more than 100 Registered Nurses, and numerous allied health professionals. Together, they deliver comprehensive, patient-centered critical care services while fostering clinical excellence, education, and innovation.

In addition to providing intensive care services, the RDRHC ICU offers several specialized programs and initiatives, including the ICU Access Program for early intervention and post-ICU follow-up, the hospital’s Code Blue Response Team, and Therapeutic Plasma Exchange services. As the hospital continues its redevelopment, including the addition of a cardiac catheterization laboratory, the ICU is preparing to expand its scope of practice and enhance its capacity to support increasingly complex patient populations.

Over the coming year, the RDRHC ICU will focus on advancing clinical capabilities, expanding critical care services, and strengthening educational opportunities through dedicated nursing education days and simulation-based training. The unit will also continue its active participation in provincial quality improvement initiatives through the Critical Care Program Improvement and Integration Networks (PIN), including *Dialyzing Wisely*, *Don’t Misuse My Blood*, and *Venting Wisely*, with the goal of improving patient outcomes and promoting evidence-informed care across the province.

Heather Stangler, RN, BScN, CNCC(C)
Interim Intensive Care Unit Manager

Aimee Pennell, CHE, MHA, RN, BScN
Intensive Care Unit Manager

Blaine Ironside, RN, BScN
Patient Care Manager, Emergency Department,
Critical Care, CASART, and Trauma

Kelly Longard, RN, MAL Candidate
Director, RDRHC Emergency, Critical Care,
Cardiac Sciences & Respiratory

Lawrence Gutman, MD, FRCPC
Medical Director

Royal Alexandra Hospital Intensive Care Unit



ADMISSIONS (N)

1490AVOIDABLE TIME
(% DAYS)**4.2**ICU LOS
(MED, DAYS)**3.5**

IMV (%)

61

ICU MORTALITY (%)

16.95APACHE III
(SCORE MEAN)**71.1**

The Royal Alexandra Hospital has over 800 beds and is one of Canada's oldest, largest and busiest clinical and teaching hospitals, treating patients from across Alberta, northern Saskatchewan and British Columbia, the Northwest Territories and the Yukon. The RAH General Systems ICU treats medical, surgical, trauma, obstetrical, and bariatric patients. The ICU is served by 14 fellowship trained intensivists, rotating residents and fellowship trainees, Nurse Practitioners, Patient Care Manager, four Unit Managers, Clinical Nurse Specialist, Clinical Nurse Educators, over 200 Registered Nurses and 50 allied healthcare team members.

The Royal Alexandra Hospital prides itself in providing excellent patient care. Numerous initiatives are fostered in the ICU from the bedside and up through both the unit-based Patient and Family Centered Care Committee and our ICU Quality Council.

Current work has focused on reducing central line associated blood stream infections, improving sedation and analgesia use in the ICU, creation of a tracheostomy weaning pathway, development of airway alert signage, improving first contact with family after ICU admission, reducing exposure keratopathy, and spontaneous awakening and breathing trials. The RAH ICU has developed high level educational sessions for staff intensivists, nurse practitioners, and bedside nurses, including sessions on esophageal manometry, transvenous pacemakers, and pulmonary artery (PA) catheterization.

The Royal Alexandra Hospital ICU has been lucky to work with amazing team members. This past year, we have welcomed three locum physicians. The RAH ICU has been proud to support the clinical scholar program including the work of Dr. Michal Chwalek and Dr. Nikita Singh.

Tove Le Blanc, RN, BScN

Patient Care Manager

Eugene E. Mondor, RN, MN, CNCC(C)

Clinical Nurse Specialist

Arabesque Parker, MD, FRCPC

Medical Director

Assistant Clinical Professor,
Department of Critical Care Medicine

Sturgeon Community Hospital Intensive Care Unit/Cardiac Intensive Care Unit



ADMISSIONS (N)

444



AVOIDABLE TIME
(% DAYS)

8.3



ICU LOS
(MED, DAYS)

2.7



IMV (%)

28



ICU MORTALITY (%)

14.95



APACHE III
(SCORE MEAN)

63.05



The Sturgeon Community Hospital is a 167-bed tertiary care centre located in St. Albert, just north of Edmonton. The SCH offers a wide range of specialty services including internal medicine, cardiology, gastroenterology, nephrology, neurology pulmonology, general surgery and orthopedic surgery, women's health, emergency medicine, and intensive care medicine. The intensive care unit is a 9-bed unit comprised of 6 ventilated patient beds and 3 close-observation beds. Day-to-day operations are overseen by a unit manager in conjunction with an on-call intensivist. The SCH critical care program provides advanced ventilatory and hemodynamic support. Coverage is provided through a two-physician weekly model, supported by a team of critical care providers including nurse practitioners, a physician assistant, and resident extenders.

All admissions to the unit are accepted by our intensivists, as this is a closed unit. The SCH is a teaching site, with residents and students rotating through various services throughout the hospital. The ICU is supported by registered nurses, nurse practitioners, a physician assistant, respiratory therapists, pharmacists, speech-language pathology, dietitians, resident extenders, unit clerks, physiotherapists/occupational therapists, spiritual care and social workers. The ICU has an active multidisciplinary Quality Council and leads SCH site initiatives such as the Code Blue and MET Teams as well as site Resuscitation Rounds.

Leadership Transition

Dr. Shaun Cowan assumed the role of ICU Unit Director on April 1, 2026, succeeding Dr. Oleksa Rewa at the end of his term. Dr. Rewa has stepped down from the Medical Director role to focus on his citywide Research Director portfolio. These are large shoes to fill, and the program is grateful for the foundation of clinical, academic, and research excellence he leaves behind.

Sturgeon Community Hospital Intensive Care Unit/Cardiac Intensive Care Unit

Research Program

The Sturgeon ICU research program continued to grow this year. The program obtained funding from the SCH Foundation for a 0.5 FTE research coordinator position for three years, and has since hired a new research coordinator to support this expanding portfolio.

The unit continued enrolment in LIBERATE (midodrine for critically ill patients recovering from shock) and opened enrolment into WISDOM (comparing low- versus standard-dose intensity for patients requiring continuous renal replacement therapy). Both the medical lead and research coordinator attended the Spring Canadian Critical Care Trials Group (CCCTG) Meeting in Kingston, Ontario; the research coordinator also received travel support from the CCCTG to attend.

The program has also engaged with several additional CCCTG-endorsed studies, including ATOMIC (magnesium for atrial fibrillation prophylaxis in critically ill patients), FAST-3 (nebulized furosemide for patients with hypoxemic respiratory failure), and the platelet domain of the Canadian Critical Care

Comparative Effectiveness Platform (CEPEC). All three are planned to begin recruitment in the coming academic year.

Clinical Program Development

Renovations to support the implementation of intermittent hemodialysis (IHD) in the ICU have been completed. Nurse training is scheduled for completion this fall, and the unit will be clinically ready to offer IHD as required, at full capacity, beginning November 1, 2026.

New Physician Recruitment

The Sturgeon ICU welcomed two new clinical locum intensivists this year.

Dr. Jack Yuan joined as a clinical locum from July 2026 to June 2027, providing attending intensivist coverage at both the Sturgeon Community Hospital and the University of Alberta GSICU.

Dr. Yiming Huang also joined as a locum Intensivist this year and is already engaging in further contributions to the program through support of our ongoing Critical Care Simulation Program.

In-Situ and Lab Simulation

The unit's simulation program, run to date by Dr. Cowan, is beginning to transition in part to Dr. Huang as he onboards to the portfolio. Simulation activities at the hospital have included monthly in-situ ICU unit simulation and quarterly large-scale interdepartmental simulation, delivered with the support of provincial eSim. Themes explored this year include the deteriorating patient on the medicine ward and transition to ICU, massive transfusion in GI bleed, cardiac arrest, and difficult airway management in the Emergency Department with transition to ICU.

Education, Quality and Patient Safety

Dr. Taylor Nikel has been running well-received monthly education rounds for nursing staff, Tier 1 providers, and interdepartmental colleagues.

Sturgeon Community Hospital Intensive Care Unit/Cardiac Intensive Care Unit

Dr. Warren Luksun is leading the unit's quality and safety initiatives, chairing a monthly Quality Program Committee. The committee is currently reviewing the implementation of an airway checklist through a collaborative, iterative process. The unit has also reviewed its use of central and arterial lines and reached unit-wide consensus on implementing recent research to reduce utilization of both where clinically reasonable and safe to do so including deferred arterial lines and peripheral vasopressor criteria.

Our nurse education team launched an aggressive mobility initiative this year, aimed at improving daily physiotherapy and mobility for all ICU patients, and RN Guided ultrasound IV training ongoing.

Additional quality work this year has included monthly Medical Emergency Team (MET) and Code case reviews with trend reporting, with the Quality Assurance Committee providing recommendations to the Resuscitation Committee for implementation of findings from quality review.

Informatics

Dr. Ehab Eshtaya has continued working with the team to improve Connect Care familiarity and utilization of problem-based charting, as well as to standardize documentation practices across the team.

We look forward to the next year and continuing to build upon this excellent program with the foundation of an amazing team.

Glenda Corrigan, RN

Patient Care Manager

Shaun Cowan, MD, EMT-P, FRCSC

Medical Director

Clinical Lecturer, Department of Critical Care Medicine

University of Alberta Hospital

Peter Allen Neurosciences Intensive Care Unit and Neurosciences Observation Unit



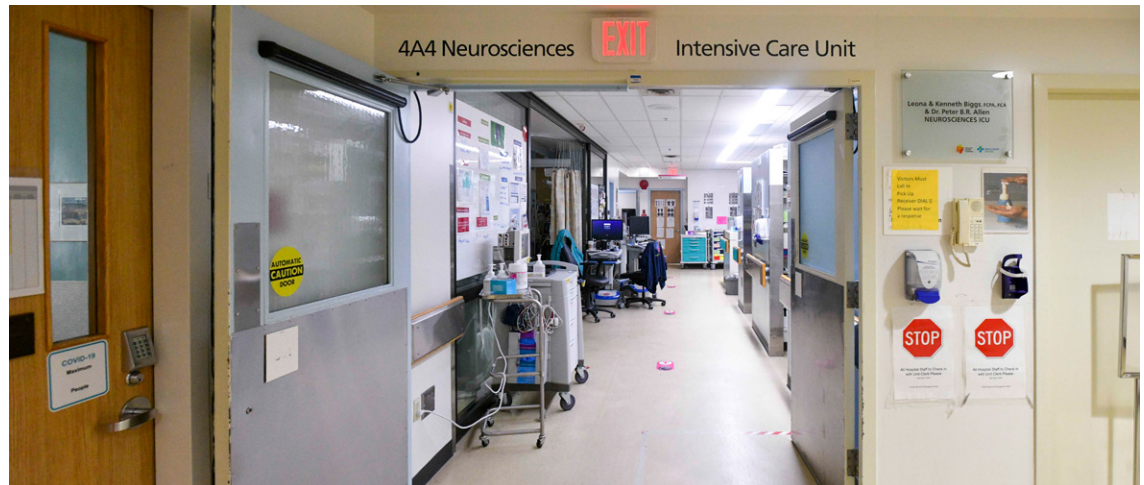
ADMISSIONS (N)

564AVOIDABLE TIME
(% DAYS)**4.6**ICU LOS
(MED, DAYS)**3.8**

IMV (%)

65

ICU MORTALITY (%)

16.15APACHE III
(SCORE MEAN)**55.35**

The Peter Allen Neurosciences ICU and High Intensity Unit (HIU) provide specialized neurocritical care services for patients across Alberta, supporting Neurosurgery, Stroke, Neuro-Interventional Radiology, Trauma, Orthopedics, and General Neurology programs. The unit also plays a key role in the Edmonton Zone organ donation program.

The program includes 11 ventilated ICU beds and 8 high-acuity HIU beds and manages more than 900 admissions annually, with occupancy rates consistently exceeding 90%. Planning continues for expansion to 24 ICU beds by 2026–27 to meet growing demand for specialized neuroscience critical care services.

Operations leadership of the program includes Kara Penney (Executive Director), Ruth Santos (Patient Care Manager), Xerxes Magallanes and Llewelyn Ramos (ICU Unit Managers), and Angela Ibe (HIU Unit Manager). Care is delivered by a multidisciplinary team of physicians, nurses, respiratory therapists, pharmacists, physiotherapists, occupational therapists, dietitians, social workers, and other allied health professionals.

This year, we were pleased to welcome Dr. Sherif Mahmoud as Research Lead for the unit. Dr. Mahmoud brings a strong vision for advancing neurocritical care research and fostering innovation within the program. His leadership is helping strengthen research capacity, promote interdisciplinary collaboration, and support the integration of evidence-based practices that improve patient outcomes.

Key achievements this year included ongoing quality improvement initiatives focused on patient safety including sustained reductions in central line-associated bloodstream infections, continued growth of the Three Wishes Program, and expansion of activities supporting innovation in organ donation.

Elizabeth Wilcox, MD, FRCPC

Medical Director

Associate Professor, Department of Critical Care Medicine

University of Alberta Hospital E. Garner King General Systems Intensive Care Unit



ADMISSIONS (N)

1768AVOIDABLE TIME
(% DAYS)**7.1**ICU LOS
(MED, DAYS)**4.4**

IMV (%)

58

ICU MORTALITY (%)

17.6APACHE III
(SCORE MEAN)**71.8**

The EG King General Systems Intensive Care Unit is a 41 bed unit that strives to provide cutting edge care for many highly specialized patient populations including transplants, trauma, liver failure, and hematologic malignancies. The King is also home to only one of two American Burn Association accredited burn centres in Canada, and we just completed our third successful verification process. Well done, team!

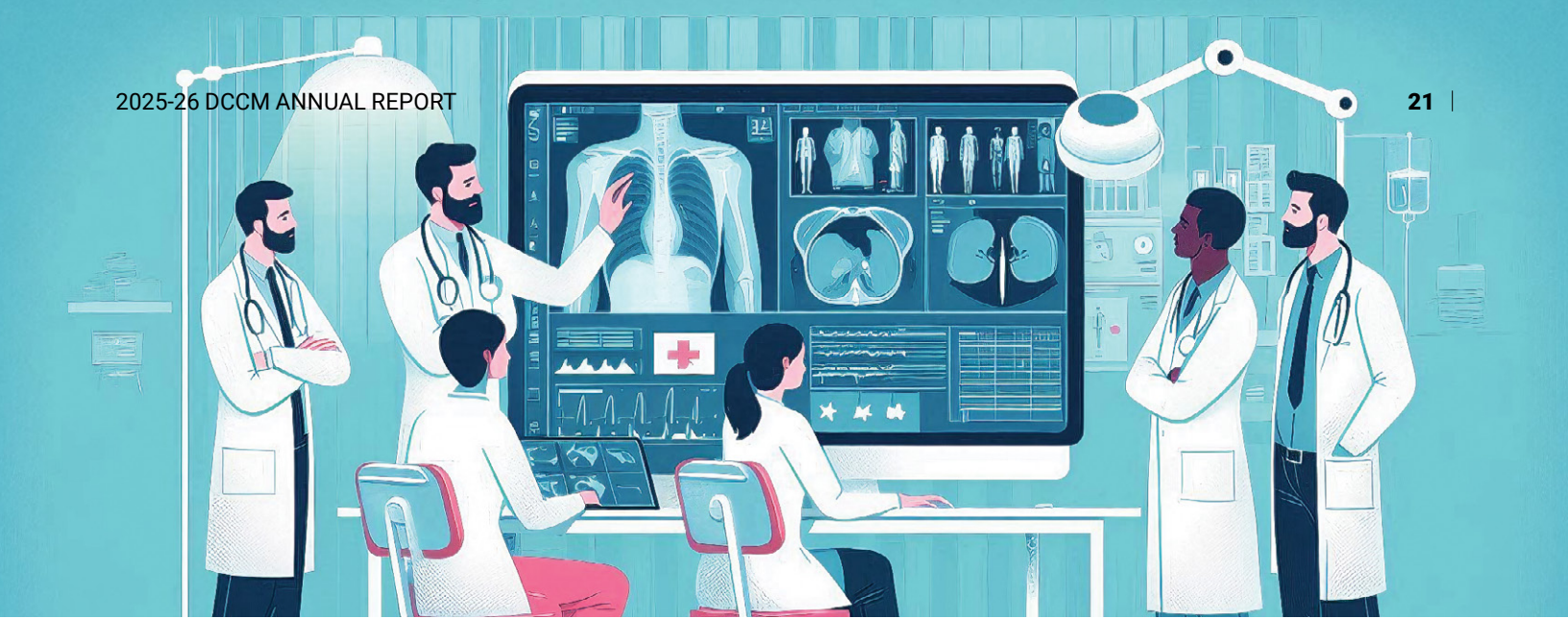
Renovations continue for two unique patient care areas. The King is the home of the Special Isolation Unit, the only site in Northern Alberta capable of safe care for patients with viral hemorrhagic fever. Also, our 8 bed ICU satellite wing in unit 6A8 of the Mazankowski Institute will soon find a brand new longer term home as a 9 bed wing in unit 5A8.

Our Quality committee continues to support numerous patient safety and human factor initiatives. The Three Wishes Program supports patient families at end of life with three small but meaningful efforts, and has experienced tremendous success. Most impressive is that the work is fully bedside initiated and supported. Our Research office remains extremely busy, and recruitment for a broad variety of clinical trials continues, many of them led by our own intensivist group.

Patient care starts and ends with people, and we have some of the best within our ranks. Our clinical scholar program supports clinicians developing impactful academic portfolios. We would like to congratulate our two recent graduates, Dr. Chwalek and Dr. Nikouline, and are excited to provide ongoing training for Dr. Nikita-Singh. Dr. Jack Yuan joins our physician group as a clinical locum and RN Sonja Haug is reaching new educational and entertainment heights with her GSICU podcasts.

Carmen Boyd, RN
GSICU Patient Care Manager

Dennis Djogović MD, FRCPC
Medical Director, EG King General Systems Intensive Care Unit
Medical Director, Give Life Alberta-North
Clinical Professor, Department of Critical Care Medicine



CLINICAL INNOVATION

Clinical Innovation Edmonton Zone - ICU Survivorship Clinic

In its fifth year, the Edmonton ICU Survivorship Clinic continues to provide care for survivors of critical illness in Edmonton and the surrounding regions.



Lazar Milovanovic, MD, FRCP

Medical Director,
ICU Survivorship Clinic
Clinical Lecturer, Department of Critical Care Medicine

Based at the Misericordia Community hospital, the clinic offers both virtual and in-person services. The clinic currently includes physician assessment with consultation provided by registered nurses, physiotherapists, respiratory therapists, pharmacists and occupational therapists. Since its inception, the clinic has triaged over 200 referrals and focuses on evaluating and optimizing the long-term outcomes of acute respiratory distress syndrome (ARDS), post-intensive care acquired weakness and cognitive impairment.

Key assessment areas include assessment of exercise capacity, cognitive function, quality of life and development of psychiatric symptoms. Patients are followed long-term and our longest-tenured patients have been followed for over 5 years from their critical illness to support their ongoing recovery. Among clinic patients, frailty has been a central clinical focus of care. They have prolonged ICU stays and the majority of those referred had symptoms of post-ICU syndrome, primarily in the domains of physical function as well as psychological symptoms and cognitive issues.

The post-ICU clinic continues to expand its role in education and quality improvement, hosting internal medicine and critical care residents rotating through the clinic, sharing outcome data to multiple intensive care units across the Edmonton Zone as well as participating in the ICU Recovery Network through the Canadian Critical Care Trial Group.

In parallel with clinical assessment and care of ICU survivors, the clinic participates in research evaluating long-term outcomes of ICU survivors, the development of a standardized referral pathway for patients at hospital discharge and the implementation of a multi-disciplinary team model for the routine assessment of ICU survivors.

Recently the clinic welcomed two additional physicians, Dr. Bryan Franco and Dr. Shannon Tang to the team. Dr. Franco is a general internal medicine specialist with interest in palliative care, critical illness and post-discharge transitions. Dr. Tang is a general internal medicine and critical care specialist with interest in preventative and transitional care associated with critical illness recovery.

The ICU Survivorship Clinic team includes Dr. Raiyan Chowdhury, Dr. Lazar Milovanovic, Dr. Bryan Franco, Dr. Shannon Tang, Carmel Montgomery PhD, RN, Kelsey Huber, and Alla Kyriash. For further information regarding the clinic function or referral process, please consult the Alberta Referral Directory.

Chronic Ventilation

The position of Chronic Ventilation, Medical Lead was created in March of 2025.



Erika MacIntyre

Chronic Ventilation, Medical Lead

One of the main purposes of the position is to support the delivery of chronic and home mechanical ventilation for the residents of the Chronic Ventilation (CVU) and Complex Respiratory (CRU) Long Term Care unit. The unit recently underwent a large scale expansion from 24 to 45 beds in 2023. Clinical and leadership support includes reviewing and approving all new admissions to the CVU and CRU. Optimizing safe and effective transitions of care from critical care to acute care to long term care is part of this service. Dr. MacIntyre has overseen the admission of 10 residents to the CVU with complex respiratory disease this year.

The Chronic ventilation specialists currently include Dr. Erika MacIntyre, Dr. Laz Milovanovic, Dr. Ella Rokosh, Dr. Mark Heule (Critical Care) and Dr. Jalal Moolji and Dr. Richman-Eisenstat (Pulmonary). These physicians provide on site care at the CVU and service chronic and home ventilation directly and indirectly throughout the province. A regular service rotation will begin Sept 2, 2025. Safety concerns have been raised at the CVU in and around the alarm system. This system has been reviewed by the CVU physicians and now considered safe. Initiatives to promote recruitment and retention are underway including trainee rotations and an application for a clinical ARP.

Collaboration with key stakeholder include Provincial Integrated Respiratory Services (PIRS), Amyotrophic and Neuromuscular multidisciplinary teams and clinics, respiratory vendors/equipment suppliers and community home care providers. A monthly chronic ventilation meeting now occurs as of May 2024. Dr. MacIntyre attends quarterly meetings with the PIRS Clinical advisory committee which determines provincial regulations around respiratory equipment funding and acquisition. Dr MacIntyre is now part of the Edmonton Zone Acute Spinal Cord Injury Project to improve the delivery of respiratory services for this population which is essential for maintaining accreditation in the Edmonton Zone as of May 2024.

Additional key initiatives include ongoing support for the insertion of PEG tubes in a neuromuscular population with approximately 2-3 performed per month and the Misericordia ICU. Weaning outreach is a service that was developed >5 years ago but has recently been revived. This is where consultation is provided for patients who require prolonged invasive mechanical ventilation or initiation of long term non-invasive or invasive mechanical ventilation in acute care settings, which is primarily ICUs. Consults are added to the shared inpatient list "Chronic Ventilation Northern Alberta" which was developed by Dr. Rokosh.

In collaboration with pediatric Dr. MacIntyre inserted the first diaphragm pacemaker in Edmonton in Oct 2023. Research and quality improvement is supported ad hoc.

3 Wishes Project



The 3 Wishes Project (3WP) is an evidence-based initiative, first developed by Dr. Deborah J. Cook in Hamilton, Ontario, to humanize and personalize end-of-life care.



Sarah Anderson, MD, FRCP

3WP Medical Lead
Assistant Professor,
Department of Critical
Care Medicine



Matthew Douma, CNS

3WP Medical Lead
Adjunct Assistant
Professor, Department of
Critical Care Medicine

By eliciting and fulfilling meaningful wishes for critically ill patients, their families, and the clinicians who care for them, GSICU staff help co-create lasting memories and legacy-building experiences. These may include hand or fingerprint keepsakes, reunions with loved ones, pet visits, donated knit blankets, time outdoors, or special meals and celebrations. The project brings dignity, compassion, and connection to one of life's most vulnerable moments.

Since its launch in October 2024, the GSICU 3WP has engaged more than 180 patients and families, supported by over 30 trained ICU staff members. Feedback from families continues to be overwhelmingly positive, describing the program as "an outpouring of compassion" that eased their grief and allowed them to create positive final memories with their loved one.

"I would like to thank you and all the staff for thinking not only of my wife but also what you did for me and my family. There are not any words that can express how much we appreciate this kind gesture."

Family member TF

As the 3 Wishes leadership team shifts to focus on program sustainability, 3WP has become a cornerstone of staff well-being efforts in the GSICU and is now embedded as a routine element of compassionate end-of-life care. Palliative care and 3WP training is now embedded in the orientation for all newly hired nursing staff and dedicated 3 wishes training sessions continue to expand our team of unit champions. We have also expanded our efforts to include a compassionate care refreshment cart that is available for families in stressful times.

The GSICU team remains committed to offering every eligible patient and family the opportunity to participate in the 3WP, ensuring that each end-of-life experience is dignified, personalized, and compassionate. We are proud to be building partnerships with CICU, CVICU and Neurosciences and supporting other non-critical care programs across the UAH to establish their own teams.

The 3WP is part of a broader program of work focused on end of life care that also includes training and education for staff to boost confidence and competence, as well as implementation of an end of life order set and other clinical support tools. This spring, the GSICU Palliative and End-of-Life working group was pleased to sponsor two full-day Pallium LEAP educational workshops focused on palliative care skills in the ICU setting. These workshops, led by trained LEAP facilitators with expertise in critical care and palliative care nursing, were attended by 36 staff from GSICU, CVICU and Neuro ICU. The feedback from these sessions will be used to guide the development of further ICU-focused palliative courses by Pallium Canada.

The 3WP Leads include Dr. Sarah Andersen, MD; Matthew Douma, CNS; and numerous GSICU staff who volunteer their time energy to make this innovation part of their daily practice.

Informatics and Data Science



Darren Hudson, MD, FRCPC

Physician Design Lead,
Connect Care

Physician Master Builder,
Connect Care

Medical Director,
eCritical Alberta

Assistant Clinical
Professor, Department of
Critical Care Medicine

As the final phases of the Connect Care implementation in community sites and provincial programs have concluded, our leadership commitment is squarely focused on the next crucial stage: refocusing on and improving the system for our users. This update outlines key progress in our leadership, user support initiatives, and ongoing quality improvement work.

USER EXPERIENCE AND SYSTEM IMPROVEMENT

The feedback from the follow up KLAS survey highlighted areas that have improved, however. The finding was too generalized and not focused on specific critical care issues. Dr. Ehab Eshtaya and Selena Au have developed a critical care specific provincial survey for prescribers to better identify our own issues.

PROVINCIAL IMPROVEMENT NETWORKS (PINs)

The reorganization of our SCNs and area councils is now established. **Work continues within the clinical system improvement teams under the new PINs structure.** This streamlined model places a greater focus on improving the user experience, and these teams are actively addressing feedback and optimization opportunities. Each clinical system improvement team has dedicated resources and road map for system improvement.

DATA, ANALYTICS, AND QUALITY

Alongside user-facing improvements, the foundational work at **eCritical remains focused on data quality, analytics, and optimization.** We continue to provide critical support for all provincial quality improvement initiatives in addition to numerous individual research projects and local quality improvement initiatives.

Thank you for your ongoing engagement and dedication. Your feedback and collaboration are essential as we work together to enhance Connect Care for all users.



PARTNERSHIPS



Partnerships



Acute Care
Alberta

Critical Care Alberta (CrCA) Annual Report

The **Critical Care Alberta (CrCA) Annual Report (July 2025 – June 2026)** details the program's efforts to provide system-level leadership, coordination, and the adoption of evidence-based practices across Alberta's critical care landscape. As a provincial program within **Acute Care Alberta (ACA)**, CrCA oversees 17 adult and 3 pediatric intensive care units (ICUs), including specialized units for burns, neurosciences, and cardiovascular surgery.

Strategic Governance and Partnerships

CrCA emphasizes a collaborative approach, working closely with the Critical Care Community, internal data analytics teams, and various provincial programs like Cardiovascular Care Alberta. A key pillar of their work is the inclusion of Patient-Family Advisors (PFAs), such as D'Arcy Duquette and Scotty Kupsh, who help co-develop priorities like the Patient Journey Map and Sepsis Care.

The program's core functions include defining provincial quality standards, overseeing ICU capacity and flow, and leading the implementation of clinical guidelines. For the 2026–2029 period, strategic priorities focus on strengthening governance, monitoring metrics, and advancing high-impact initiatives to support system sustainability.

2025-26 Key Initiatives and Accomplishments

The past year saw the advancement of several data-driven initiatives designed to improve patient outcomes and operational efficiency:

- **Establishment of Operational Metrics:** CrCA contributed to the 30-Day Acute Care Operational Report, providing a provincial view of bed occupancy, mortality, and length of stay. Additionally, Quarterly Sustainability Reports were launched to monitor the long-term impact of previously implemented quality improvement initiatives.
- **Don't Misuse My Blood (DMMB):** This initiative aims to reduce unnecessary blood transfusions. By March 2026, 10 acute care hospitals had converted to small-volume blood collection tubes. Since June 2023, DMMB has successfully **avoided over 3,200 transfusions**, generated **\$1.95 million in cost avoidance**, and reduced carbon emissions by 25,000 kg of CO₂.
- **Harmonization of Sedation and Analgesia Practices (HSAPA):** Implemented in all adult ICUs on April 28, 2026, this project standardizes delirium and sedation management. It included optimizing Connect Care™ for goal ordering and breathing trial documentation.

- **ICU Capacity Strain Tool:** A validated tool has been developed to measure the impact of patient workload and acuity on ICU resources. Provincial implementation via the Bed Occupancy Dashboard is planned for early 2027.
- **Tier 1 Coverage Report:** CrCA conducted an environmental scan and literature review regarding medical provider coverage. The report recommends a targeted, risk-based approach to after-hours staffing, prioritizing in-house intensivist coverage in high-acuity, specialized ICUs.

Future Directions and Academic Contributions

Looking forward, CrCA is developing a Sustainability Framework to prevent reversion to old workflows and a structured *Initiative Intake and Prioritization Process* to ensure resources are directed toward high-value opportunities. Future projects include a Portable CT in ICU trial to reduce patient transport risks and a phased initiative to reduce sepsis-related mortality, which currently carries a rate of 20–40% in ICUs.

The program also maintained a strong academic presence, with representatives presenting on *Dialyzing Wisely* at international summits in Bangkok and Kananaskis, and publishing research in journals such as *Australian Critical Care* and *BMJ Open*.

Contact Information

For further inquiries, the program is led by Dr. Wendy Sligl (Medical Lead), Emma Folz (Senior Program Lead), and Cassandra Dirks (Program Lead).

Edmonton Zone Patient & Family Centered Care Committee Annual Report (2025–26)

The Edmonton Zone Patient & Family Centered Care (EZPFCC) Committee continues to bring together clinicians, nursing leaders, physicians, and patient and family partners from adult intensive care units (ICUs) across the Edmonton Zone to advance patient- and family-centred care in critical care. Through ongoing collaboration across sites, the committee remains committed to strengthening partnerships with patients and families, improving communication, and supporting initiatives that enhance the ICU experience throughout hospitalization and recovery.

Over the past year, the committee successfully expanded the **3 Wishes Program** across all adult ICUs within the Edmonton Zone. This compassionate initiative continues to support dignified, personalized end-of-life care by honouring the wishes of patients and their families during one of life's most difficult moments. As implementation has expanded, committee members have collected feedback from participating sites to better understand successes, identify opportunities for improvement, and support the program's long-term sustainability. Building on this work, the committee has also expressed interest in conducting an internal evaluation of the 3 Wishes Program to better understand its impact on patients, families, and healthcare providers, while identifying opportunities to further strengthen implementation across the zone.

The committee also finalized the development of the **Edmonton Zone ICU Family Satisfaction Survey**. Building on previous work, committee members collaborated to refine the survey to better capture family experiences related to communication, involvement in care, emotional support, and overall satisfaction during an ICU admission. A pilot implementation is planned for Fall 2026, with findings intended to guide future quality improvement initiatives and support consistent measurement of family experiences across Edmonton Zone ICUs.

Recognizing the critical role that family caregivers play during and following critical illness, the committee strengthened its partnership with **Caregivers Alberta**. Representatives from Caregivers Alberta met with the committee to explore opportunities to better support informal caregivers throughout the ICU journey and during transitions in care. As a result of these discussions, the Grey Nuns Community Hospital, Misericordia Community Hospital, and Sturgeon Community Hospital have incorporated Caregivers Alberta resources into their ICU welcome packages, ensuring families are introduced to available community supports early in their critical care experience. Staff have also begun referring family caregivers to Caregivers Alberta services to improve access to education, navigation, and ongoing support following hospitalization.

The committee also welcomed members of **Dr. Jasneet Parmar's Caregiver-Centered Care team**, who presented the principles of caregiver-centred care and shared evidence-informed educational modules developed for healthcare professionals. The presentation highlighted the essential role family caregivers play in supporting critically ill patients during hospitalization and recovery, while emphasizing the importance of recognizing caregivers as partners in care rather than visitors. Committee members discussed how these resources can increase staff awareness of caregiver needs, strengthen communication and engagement with families, and support more caregiver-centred practices within critical care settings.

Looking ahead to the coming year, the committee will continue to prioritize enhancements to the **Edmonton ICU App**. Planned updates will allow individual ICUs greater flexibility to customize unit-specific information while maintaining standardized educational content across the Edmonton Zone. Once these enhancements are complete, the committee intends to renew efforts to socialize the app among patients, families, and healthcare providers to improve awareness, communication, and access to reliable ICU information.

The committee will also begin exploring opportunities to increase awareness of **Post-Intensive Care Syndrome (PICS)** across the Edmonton Zone. Recognizing that many ICU survivors experience ongoing physical, cognitive, and psychological challenges following critical illness, the committee aims to better understand current practices that help prevent or mitigate these long-term effects during ICU care. The committee will also explore how patients and families are currently supported following ICU discharge, identify opportunities to strengthen recovery pathways, and promote greater awareness of post-ICU survivorship among healthcare professionals. This work will help inform future quality improvement initiatives focused on improving long-term outcomes for ICU survivors and their families.

The EZPFCC Committee remains committed to advancing patient- and family-centred critical care through collaboration, innovation, and continuous quality improvement. By fostering partnerships across healthcare teams, patients, families, and community organizations, the committee continues to promote initiatives that improve communication, strengthen caregiver support, and enhance the experience of patients and families throughout the critical care journey.

Dr. Jonathan Davidow, MD, FRCPC

Associate Clinical Professor, Department of Critical Care Medicine

Angie Grewal, RN, MN

ICU Nurse, Misericordia Community Hospital

PhD Student, Faculty of Nursing, University of Alberta



Humanitarian Work

Faculty members in the Department of Critical Care Medicine continue to be engaged in humanitarian efforts. These include work with **Médecins Sans Frontiers** (MSF) and the Canada-Ukraine Surgical Aid Program (CUSAP).

Dr. James Lee is an intensivist at the Royal Alexandra Hospital ICU and an active member with MSF. He is the recipient of this years 2025-26 Humanitarian Award in Critical Care Medicine.

Over the past academic year Dr. Lee was involved in many different projects:

- Ongoing work with Médecins Sans Frontières as the Intensive Care Advisor for Operational Centre Brussels and Operational Centre West and Central Africa
- Ongoing work as the leader of the MSF International Intensive & Critical Care Platform
- Field work as an Intensivist working at the MSF Trauma and Burns hospital in Port-au-Prince Haiti
- Field work as an Intensivist and advisor to the MSF Paediatric hospital in Sierra Leone
- Implementation of heated high flow humidified oxygen therapy and clinical coaching in the paediatric ICU
- Field work as an Intensivist and advisor to the MSF Obstetrical hospital in Sierra Leone. Clinical coaching in the obstetrical ICU.
- Faculty on the MSF Multidisciplinary Enhanced Deployment in Critical Surgical Care (MEDICS) course in Taipei, Taiwan. Teaching on Damage Control Resuscitation, Trauma Framework, Basic Intensive Care in Trauma and Obstetrics
- Faculty on the MSF Advanced Comprehensive Course for Obstetrics (MACCO) course in Dusseldorf, Germany. Teaching on IV Fluids, Oliguria, Acute Kidney Injury; Morbidity & Mortality Critically Ill Obstetrics case discussion

He was co-author on this publication in BMJ about critical care training in humanitarian contexts:

- Loos V, Binet A, **Lee JS**, Godard, A. **Critical care training enhances intensive care provision in low resource settings**. British Medical Journal 2026;393:s659 | doi: [10.1136/bmj.s659](https://doi.org/10.1136/bmj.s659)

Dr. Oleksa Rewa

Associate Professor, Department of Critical Care Medicine

Dr. James Lee

Assistant Clinical Professor, Department of Critical Care Medicine

Partnerships



Canadian Critical Care Trials Group (CCCTG)



Canadian Community ICU Research Network (CCIRNet)



Canadian Critical Care Translational Biology Group (CCCTBG)



Research Coordinators Group (CCCRCG)

Several members of the department engage and actively participate in CCCTG/CCCTBG activities. This partnership is also enabling research infrastructure to facilitate community hospital contributions to critical care research in the Edmonton Zone.



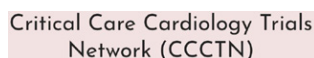
Canadian Vigour Centre (CVC)

Dr. Sean van Diepen and Dr. Fernando Zampieri serve as faculty members.



Canadian Cardiovascular Critical Care Society

Dr. Gurmeet Singh serves on the Executive as Vice-President.



Critical Care Cardiology Trials Network (CCCTN)

Dr. Sean van Diepen serves on the Executive Committee of this group.



Guidelines in Intensive Care Medicine, Development and Evaluation (GUIDE)

Dr. Elizabeth Wilcox is an active member of this group.



Intensive Care National Audit & Research Centre (ICNARC)

Dr. Elizabeth Wilcox works as a consultant with this group.



LOGIC – Linking of Global Intensive Care

Dr. Darren Hudson is the Medical Director of eCritical Alberta.



Canadian Sepsis Research Network

Dr. Kim Macala continues to play a leadership role in the Canadian Sepsis Research Network, in partnership with the CCCTBG.

AWARDS AND RECOGNITION

An abstract geometric pattern consisting of numerous thin, light-yellow lines that intersect to form a complex network of triangles and polygons across the bottom half of the page.

Awards and Recognition

2025-26 Internal Awards



Best Paper of the Year: Dr. Dennis Djogovic

This award honors physician members within DCCM for any published peer-reviewed paper (or accepted in press) by a member of the department (faculty must be first or last author; or trainee led paper) within the last academic calendar year (July 1, 2025-June 30, 2026).



Dr. Dan Stollery Award for Clinical Excellence in Critical Care Medicine: Dr. Wendy Sligl

This award is designed to acknowledge and recognize a Physician within DCCM whose exceptional contributions to clinical practice and commitment to excellence in critical care medicine goes above and beyond the norm.



Dr. Darren Markland Award for Community Engagement: Dr. Darren Markland

This award recognizes individuals (or groups) for leadership, volunteerism and dedication to building lasting, positive impacts within their community.



Dr. Richard Johnston Award for Distinguished Service to Critical Care Medicine: Dr. David Zygun

This award recognizes and acknowledges a physician whose vision, commitment and contributions have furthered the practice, organization, scholarship, and field of critical care medicine over the lifespan of their career.

**Humanitarian Award in Critical Care Medicine:****Dr. James Lee**

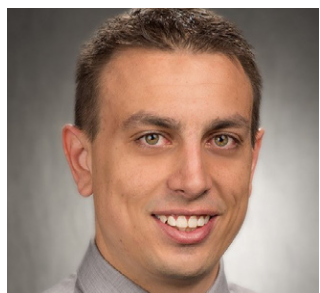
This award recognizes and acknowledges an individual who has made outstanding contributions to leadership, service and/or scholarship directed to advance the field, practice, and organization of critical care regionally, provincially, nationally, or internationally. This individual can be either a member of the Department or may also be external to the Department. The individual may be a physician, healthcare leaders, nurses, allied health professionals or patients, family members or a member of the lay public.

**Outstanding Mentor of the Year:****Dr. Brian Buchanan**

This award honors physician members within DCCM who have shown an outstanding commitment to mentoring, developing, and supporting DCCM educational or research trainees, junior faculty, or staff (AHS or FoMD).

**Patient Safety Champion Award in Critical Care Medicine:****Dr. Andrea Letourneau**

This award recognizes individuals (or teams) who demonstrate exceptional commitment to improving patient outcomes, fostering a culture of safety and preventing harm through proactive innovation, risk mitigation and leadership.

**Teacher of Year (Senior) Resident Award:****Dr. Jeff Odenbach**

This is an annual award recognizing a physician who has demonstrated commitment to high quality education for our senior critical care residents. The recipient of this award is chosen by our CCM trainees.

**Teacher of Year (Junior) Resident Award:****Dr. Arabesque Parker**

This is an annual award recognizing a physician who has demonstrated commitment to high quality education for our rotating residents. The recipient of this award is chosen by junior residents rotating through the ICUs at UAH and RAH.

Awards and Recognition

2025-26 External Awards

**Dr. Sarah Andersen****Arthur Dodek Lectureship in Medical Ethics and Professionalism**

This award from the Department of Medicine, Providence Health/University of British Columbia, was established through the generosity of Dr. Arthur Dodek to express gratitude for his clinical career and honours his dual legacy as a pioneering cardiologist at St. Paul's Hospital (since 1972) and a leader in bioethics, including his time as President of the College of Physicians and Surgeons of BC. The lecture series provides a prominent platform for medical academics and scientific experts to deliver presentations on critical themes relevant to the medical community, specifically focusing on medical ethics and clinical professionalism and includes a \$1500 honorarium.

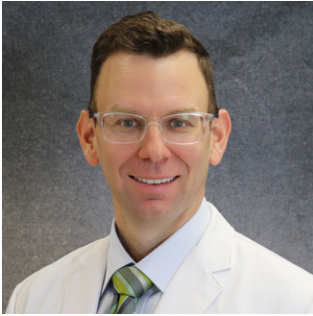
The lecture recordings are available here: https://www.youtube.com/watch?v=kXF_32_zCFI

**Dr. Warren Luksun****Alberta Health Services CARES Award**

Recognize staff, physicians, and volunteers who go above and beyond to exemplify the core values of Alberta Health Services: Compassion, Accountability, Respect, Excellence, and Safety. Award recipients are celebrated across zones for clinical leadership, quality improvement, and outstanding patient care.

**Dr. Nikita-Kiran Singh****Harvard Medical School Dean's Scholarship Award**

The Dean's Scholarship Award for Harvard Medical School Master's Students was established to fund students who have exhibited academic excellence, persistence, resilience, and a commitment to advancing the position of the underserved and underrepresented in their field of interest.



Dr. Sean van Diepen
2025-26 Teacher of the Year Award

Awarded by the Department of Medicine, Undergraduate Medical Education



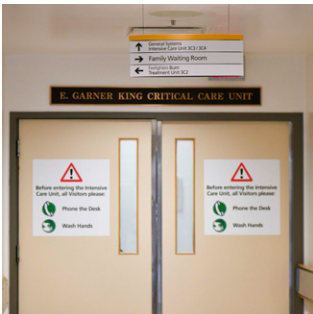
Dr. Sean van Diepen
2025 Highly Ranked Scholar

Awarded by Scholar GPS. #3 cardiogenic shock field and #4 in cardiac intensive care over last 5 years



Dr. Jack Yuan
2026 Certificate/Award of Merit

Presented as runner-up at Alberta Society of Intensive Care Physicians meeting 2026



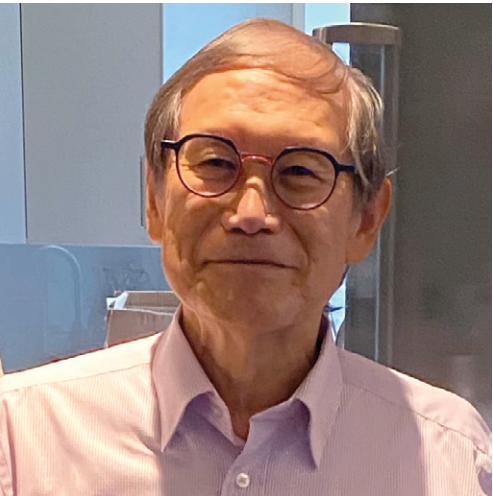
University of Alberta Hospital -
E. Garner King General Systems Intensive Care Unit
Best off-service rotation of the year

Awarded by Family Emergency Medicine Program. Across our cohort, the ICU was consistently identified as the rotation where we experienced the greatest growth as residents. The combination of high-acuity medicine, procedural opportunities, increasing autonomy, and excellent teaching created an environment that challenged us while providing the support needed to succeed.

We appreciated the strong multidisciplinary team, outstanding nursing support, and the opportunity to take ownership of complex patients. Many of us felt that the ICU significantly increased our confidence in managing critically ill patients and helped bridge the gap between knowledge and independent practice. Several residents commented that they would have gladly spent additional time on the service because of how valuable the experience was. Overall, the ICU provided an exceptional educational experience and had a lasting impact on our development as emergency physicians.

Awards and Recognition

Dr. Wu Dat Nin Chin Scholarship in Critical Care Medicine



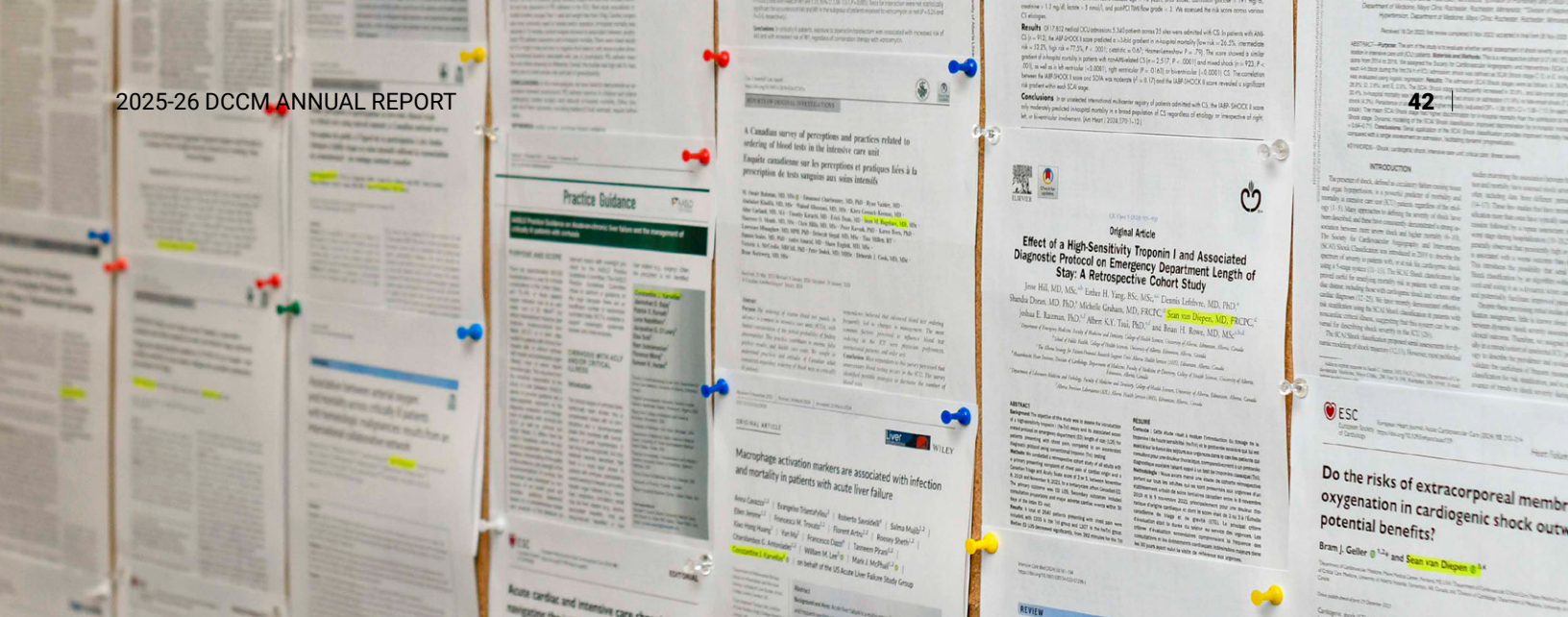
This scholarship aims to honor the legacy and the substantial contributions Dr. Wu Dat Nin Chin has made to education, research, and service in critical care medicine at the University of Alberta and in the Edmonton Zone; as well as his leadership in the development and recognition of the discipline of Critical Care Medicine in Canada.

Irman Hudda

Research Project: “Transpulmonary Assessment for Individualized Lung Optimization in patients living with Obesity Research - Positive End-Expiratory Pressure (TAILOR-PEEP Pilot)”

Supervisor: Dr. Fernando Zampieri





RESEARCH AND INNOVATION

Message from the Director

The 2025–26 academic year was another highly productive period for the department. We remained actively engaged in a range of research programs, leading and contributing to high-quality studies, advancing scholarly initiatives, collaborating with both national and international partners, and securing competitive research funding. You can read our [Researcher Profiles on our website](#).



Dr. Oleksa Rewa

Director, Research and Innovation
Associate Professor, Department of Critical Care Medicine

Department members organized and participated in numerous regional, national, and international conferences. This year, we successfully completed several major research projects and quality improvement initiatives. Our commitment to academic excellence was further demonstrated through continued publication in high-impact, peer-reviewed journals, with several members also serving on editorial boards.

Our faculty have continued to lead several large initiatives. The LIBERATE trial led by Dr. Rewa is ongoing and continuing to expand. This study is looking to evaluate the use of midodrine for the early liberation from vasopressor support in the ICU. This study has now enrolled participants in 10 sites across Alberta and Ontario. Dr. Sean Bagshaw has continued with the WISDOM trial, evaluating low-intensity dose vs. standard-dose in continuous renal replacement therapy in critically ill patients. TAILOR-PEEP has been initiated at the UAH GSICU, a study led by Dr. Fernando Zampieri, evaluating the use of esophageal balloons in intubated patients. We have several studies being developed by our investigators, including the DELDEX study by Dr. M. Elizabeth Wilcox, studying the use of dexmedetomidine for sleep in critically ill patients, KETOROLAC-ICU led by Dr. Vincent Lau, evaluating the use of ketorolac as an opioid sparing agent for ICU patients, and PROKET, led by Dr. Fernando Zampieri, evaluating the use of propofol vs. ketamine for rapid sequence intubation. We look forward to ongoing participant recruitment in our ongoing studies and the initiation of these three studies in the coming months.

Research Day



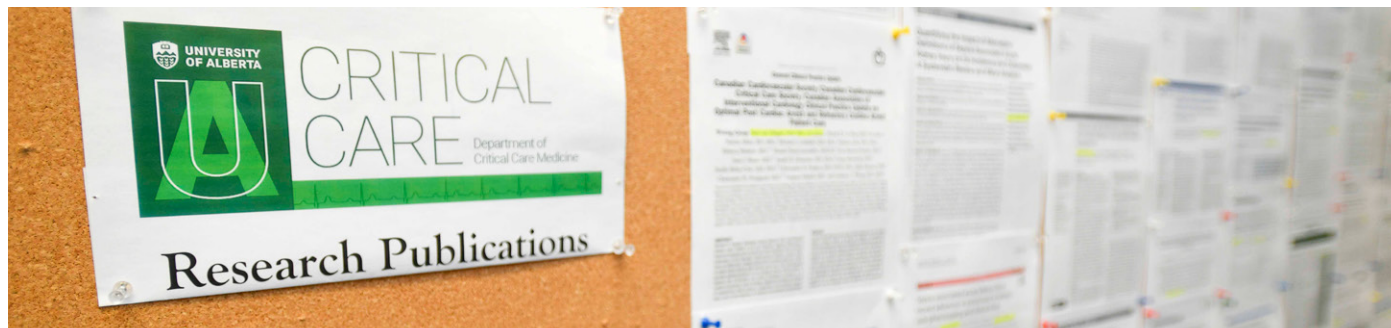
We held our annual combined Adult and Pediatric Critical Care Medicine Research Day on May 13th. This year, Research Day was held on the University of Alberta campus at the Room At the Top. The event took a new format this year, with Dr. Ken Parhar, the newly appointed Chair for Critical Care Medicine at the University of Calgary providing the keynote address on, 'Success and Failures in Research,' before an interactive panel discussion with Drs. Sarah Andersen, Sean Bagshaw, Jim Kutsogiannis and Janek Senaratne providing their perspectives on research in the medical landscape.

This year, our Research Competition included prizes for best oral and poster presentations. For oral presentation, Tiffany Yuen took first place with her work on, 'Hospital, Health Systems, and Resource Variables Associated with Survivals in Patients with Cardiogenic Shock – A Multi-Province Canadian Analysis.' In second place was Ryaan EL-Andari with his study, 'Renal Failure in Patients Undergoing Minimal Invasive Mitral Valve Surgery: A Systematic Review and Meta-Analysis.' And in third place, Jennie Vu on, 'Real-Time Assessment of Murine Cardiac Oxygenation Using Photoacoustic Imaging.'

For the poster competition, Sakirat Randhawa won first place on, 'How do healthcare professionals conceptualize a meaningful and sustainable work environment. A qualitative analysis of a pan-Canadian survey.' Marina Giovannoni took second place with, 'Summarizing current morbidity and mortality review practices in intensive care: a narrative review.' And in third was Abinash Saravanan with, 'Survey of families' PICU experience: Improvement opportunities.'

We thank Drs. Daniel Garros, Liz Wilcox and Nikita-Kiran Singh for serving as our guest judges. This is yet another fantastic collaboration between the two Departments where the multidisciplinary nature of our academic programs were highlighted, and we again look forward to our annual Critical Care Medicine Research Day in May 2027.

Research Publications



171

total publications

35

publications with
department faculty as
first or senior author

7

publication with
trainee as first author

34

publications in high
impact journals

Full list of research publications can be found on our [website](#)

Featured Publication

JAMA
Network | **Open**

Cost-Utility Analysis of Accelerated and Standard Strategies for Renal Replacement Therapy Initiation.

Round J, Akpınar I, Yan C, Patel N, van Katwyk S, Montgomery C, Wald R, **Bagshaw SM**; STARRT-AKI Investigators. Cost-Utility Analysis of Accelerated and Standard Strategies for Renal Replacement Therapy Initiation. JAMA Netw Open. 2025 Oct 1;8(10):e2535343. doi: 10.1001/jamanetworkopen.2025.35343. PMID: 41042508; PMCID: PMC12495491.

Research Grants

Total new funding:

\$3 748 889.84



Full list of research grants can be found
in the Appendix on page 66.

Featured Faculty Research Grant

Investigators: Dr. Sean van Diepen and Dr. Fernando Zampieri

Title: KETO-AHF: Ketone Ester for Treatment Of Acute Heart Failure: A vanguard randomized controlled

Funder: Kaye Foundation

Funding years: 2025-27

Award: \$250 000.00

KETO-AHF is a 60-patient, double-blind, placebo-controlled vanguard randomized trial evaluating ketone ester supplementation in adults hospitalized with acute heart failure. Participants are randomized 1:1 to receive oral ketone ester or matching placebo three times daily for up to five days, in addition to usual care. The trial is funded through competitive peer-reviewed research support by the Kaye foundation. Its purpose is to establish feasibility, safety, tolerability, and preliminary biological and clinical effects of ketone supplementation in acute heart failure. Outcomes include NT-proBNP, symptoms, echocardiographic measures, renal and metabolic biomarkers, clinical events, adherence, and 30-day outcomes. The study is designed as a vanguard trial to inform a larger definitive evaluation of ketone therapy within the HEART platform.

Visiting Speakers



The R.T. Noel Gibney Lecture in Critical Care Medicine

Dr. Karen Choong

From Restraint to Recovery: ICU Liberation as a model for Trauma-informed Critical Care | April 14, 2026

Dr. Karen Choong is a Professor in the Department of Pediatrics, Critical Care, and the Department of Health Research Methods, Evidence and Impact at McMaster University. She is a graduate of the Royal College of Surgeons in Ireland and completed fellowships in Neonatology as well as Pediatric Critical Care at the University of Toronto. Professor Choong's major research contributions are in the areas of PICU-based rehabilitation, patient-centered outcomes, and post-intensive care sequelae. Her list of publications is available on <https://orcid.org/0000-0002-4608-4508>



2026 Research Day Keynote Speaker

Dr. Ken Parhar
Professor, Cumming School of Medicine

Rejected – What people never see behind academic success | May 13, 2026

Dr. Parhar is an intensivist and professor with the Department of Critical Care Medicine and was appointed head of the department Feb. 1, 2026. Prior to this appointment, he served as the medical director of the Cardiovascular Intensive Care Unit at Foothills Medical Centre, where he led a large multidisciplinary team delivering complex, high-acuity care to some of the province's most critically ill patients. Dr. Parhar has received numerous teaching awards, published more than 75 peer-reviewed articles, and secured over \$2.5 million in research funding, while maintaining an active clinical practice in the general systems and post-cardiac surgery intensive care unit.

VP Grand Rounds



Dr. David Ross

Professor, Faculty of Medicine & Dentistry - Psychiatry Dept

An Introduction to Effective Scientific Communication to a Non-Scientific Audience
| September 9, 2025



Dr. Jennifer McCombe

Associate Professor, Faculty of Medicine & Dentistry - Medicine Dept

Autoimmune CNS disease in the ICU
| November 4, 2025



Dr. Kawmadi Abeytunge

Fellow, Faculty of Medicine & Dentistry - Pediatrics

Management of Pediatric and Adult Acute Liver Failure and the role of PLEX as a Bridge to Transplant | November 25, 2025



Dr. Chris Rose PhD

Professor, Université de Montréal

The Neurotoxicity of Hyperammonemia
| December 9, 2025



Dr. Mike Chu

Clinician Scientist, Cross Cancer Institute

T cell redirecting therapy for Cancer
| December 16, 2025



Dr. Stephanie Sibley MD, SM, FRCPC

Assistant Professor, Queens University

Atrial Fibrillation in Critically Ill Patients: Musings, ruminations, and a (hopefully) practical approach
| February 17, 2026



Dr. Kieran Halloran

Associate Professor, Faculty of Medicine & Dentistry - Medicine Dept

Lung transplant and the ICU: Critical care considerations | May 19, 2026



Dr. Harry Anzinger

Fellow, Faculty of Medicine & Dentistry - Pediatrics

There's a Fungus Among Us. Invasive Fungal Infections in the ICU – An Approach for Intensivists | June 9, 2026

EDUCATION

The lower half of the page features a vibrant yellow background. Overlaid on this background is a complex, abstract pattern of thin, light-yellow lines. These lines intersect at various angles, creating a series of irregular, overlapping triangles and polygons that resemble a network or a stylized map. The pattern is dense and covers the entire yellow area, adding a dynamic and modern feel to the design.

Message from the Program Director

The Critical Care Medicine program at the University of Alberta is a highly regarded subspecialty training program offering unrivaled breadth of exposure and training experiences along with unmatched educational financial support for our trainees.



Dr. Adam Romanovsky

Director, Education
Assistant Clinical Professor, Department of Critical Care Medicine

Residents see the full spectrum of critical illness as they rotate through five local Intensive Care Units which includes both general (University of Alberta Hospital, Royal Alexandra Hospital, Grey Nuns Community Hospital) and specialty (Cardiovascular ICU, Neurosciences ICU) critical care units.

Our four core CCM trainees successfully completed the program on June 30 and have transitioned to the next stage of their careers. Dr. Fawaz Alshammari is remaining with the DCCM as he pursues a fellowship in CVICU. Dr. Sunny Fong is spending the year at the University of Toronto where he is completing a fellowship in cardiovascular anesthesia and CVICU. Dr. Shannon Tang is staying in Edmonton as she has accepted a locum position at the Misericordia Hospital ICU. And finally, Dr. Jack Yuan is also staying on with the DCCM in a locum position at the E. Garner King GSICU while completing a Master of Health Administration. We are grateful to their contribution to the department and wish them the best of luck as they move forward with their careers.

As our former trainees move into the next stage of their careers the core program continues to grow and expand the academic curriculum to help ensure the success of our trainees as they begin their careers in critical care training. We welcome three new CCM subspecialty residents to fill all our CaRMS training positions: Dr. Muzxamil Jelani, Cardiology University of Alberta, Dr. Tony Mao, Cardiology, University of Alberta, Dr. Rishi Thakkar, Internal Medicine University of Saskatchewan.

Not to be forgotten is the continued success of our fellowship programs. Under the auspices of Dr. Rabia Kashur, Drs. Caroline Boily, Sam Ostad, and Erika Ouimet-Grenann all completed our nationally renowned Cardiology ICU fellowship. Looking to the future, we have already secured another one fellow for 2026-27 academic year and three for the 2027-28 academic year. Our CVICU fellowship graduated Dr. Mosa AlShabeeb who has now returned to Saudi Arabia to put his new skillset into action.

This year saw the formal introduction of Critical Care Medicine into the UGME curriculum with the creation of a 2-week core block of ICU or Anesthesia for fourth year medical students. Under the leadership of Dr. Vincent Lau, the department successfully welcomed 81 medical students in various units in the Edmonton zone. Importantly, the feedback from both students and faculty has been overwhelmingly positive.

In November of 2025 the CCM program underwent RCPSC accreditation in its regular eight-year cycle. Due to the hard work of the everyone involved with the program, the accreditation process was a resounding success with the program receiving full accreditation and no documented Areas for Improvement.

With the successful completion of accreditation, Dr. Adam Romanovsky stepped down as Program Director, CCM Residency Program and transitioned the role to Dr. Jocelyn Slemko who has hit the ground running, already looking for ways to improve the program. Dr. Romanovsky will stay on in the role of Director of Education to help manage the expanding educational portfolio of the department.

Our faculty and units were recognized for teaching both within and outside of our department. Three quarters of our teaching faculty at our two main teaching sites (University of Alberta and Royal Alexandra Hospitals) were nominated for departmental teaching awards, highlighting the broad impact of our clinician teachers. Some awards won by department members include:

- Critical Care Medicine Rotating Resident Teacher of the Year award – Dr. Arabesque Parker. Selected by rotating residents and awarded to a critical care physician in recognition of outstanding contribution to resident education
- Critical Care Medicine Senior Resident Teacher of the Year award – Dr. Jeff Odenbach. Selected by senior residents and awarded to a critical care physician in recognition of outstanding contribution to senior resident education
- Best off-service rotation, Family Medicine Emergency program – University of Alberta Hospital GSICU

Education Program Details

9

Adult critical care medicine
subspecialty residents

1

CVICU Fellow

4

CCM Cardiology Fellows

CaRMS: September 10, 2025



3

Matches

2025-26 Education Leadership

Adult Critical Care Residency Program

Dr. Adam Romanovsky – Program Director (until March 31, 2026)

Dr. Jocelyn Slemko – Program Director (starting April 1, 2026)

Critical Care Cardiology Clinical Fellowship

Dr. Rabia Kashur – Fellowship Director

Critical Care Cardiovascular Intensive Care Unit (CVICU) Fellowship

Dr. Aws Alherbish – Fellowship Director

Critical Care Neuroscience Intensive Care Unit (Neuro-ICU) Fellowship

This fellowship is not up and running currently

Critical Care Ultrasound (CCUS) Fellowship

Dr. Brian Buchanan - Fellowship Director

2025-26 Education Events

Academic Half Day:

- Cover 50 topics over the course of the academic year
- 6 Simulations
- Ventilation full day
- RRT Full Day
- Hemodynamics half day

Other Activities:

- CCM Year 1 Orientation Summer 2025
- N-ACES Course July 9-11, 2025
- BLS/ ACLS Courses July 19, 2025
- Canadian Critical Care Forum (CCCF) December 1-3, 2025
- ASICP January 21, 2025
- In Training Exams December 17, 2025, June 3, 2026
- Resident Wellness Days
- OSCE (Objective Structured Clinical Examination) May 6, 2026
- Research Day May 13, 2026
- Royal College of Physicians and Surgeons Critical Care Medicine Exam September 2025

CRITICAL CARE ULTRASOUND

Message from the Director

Critical Care Ultrasound (CCUS) is quickly becoming an essential standard of care for critically ill patients.



Dr. Brian Buchanan

Director, Critical Care Ultrasound

Associate Professor, Department of Critical Care Medicine

By bringing advanced ultrasonography directly to the bedside, we empower practitioners to rapidly detect and manage life-threatening conditions—from profound shock to severe respiratory failure. As we continue to invest heavily in CCUS education and research, we are forging exciting new pathways for clinical innovation and professional advancement. I am continually inspired by feedback from faculty and learners who recognize our CCUS educational program as one of the most mature, rigorous, and trailblazing in Canada—and perhaps the world.

Looking to the future, our absolute priority is the professionalization of CCUS across Alberta's critical care community. By demanding the highest practice standards, building out distributed leadership, and treating ultrasound findings with the same clinical weight as any other definitive diagnostic test, we are declaring its vital role. This professionalization is the crucial step that will pave the way for the routine, seamless integration of ultrasound images and reports directly into the official patient record, ensuring every critically ill patient benefits from this life-saving expertise.

Education Update

2025-26 was a busy academic year for the CCUS program. This year also saw the education of 21 rotators through the critical care ultrasound rotation and continuation of the monthly ABSono Ultrasound rounds. In a push to expand our educational leadership, we welcomed two additional learners who completed longer, consecutive learning periods of approximately three to six months to support point-of-care ultrasound (POCUS) advancement in general internal medicine and nephrology.

Furthermore, we were pleased to have a practicing attending ED physician complete the *Visiting Scholar Program in CCUS*. This individual not only gained valuable skills in ultrasound but will continue to receive mentorship in program design. We are looking to continue this program to attract physicians from around the world to demonstrate the skills and expertise of our local program and build future leaders.

We also continue to build our presence internationally. Jack Yuan, one of our senior ICU fellows, traveled to Australia as an Alberta Sono representative to help bring our learning resources to a new continent. We continue to provide support to New Zealand in delivering high quality CCUS education resources.

Looking ahead, we are thrilled to welcome Simon Veillette as our one-year critical care ultrasound fellow starting in August 2026. Simon is an FRCPC-credentialed intensivist who completed his ICU training in Montreal, followed by one year of dedicated training in ECMO and severe respiratory failure at Guy's and St Thomas' NHS Foundation Trust.

Research Update

In 2025–26, we continued to see publications emerge from years of work in practical applications and education in CCUS. We have notably advanced our research footprint in the realm of artificial intelligence, publishing further work on machine learning for estimating left ventricular ejection fraction from different acoustic windows (PMID: 39202209), alongside new insights into machine learning for lung ultrasound interpretation (PMID: 40941633).

We continue work on a Canadian survey in barriers, motivators, and facilitators in CCUS and a research project in teaching thoracentesis and paracentesis to rural family physicians. Both projects wrap up in summer 2026 and we will look to publish in fall 2026.

Conferences and Workshops

A special 1-day advanced echo workshop was held in lieu of CRUS West in 2025. This was held at the World Congress of Intensive Care in Vancouver in September 2025. We welcomed 15 faculty and 30 participants from around the world. Locally, we continue to provide high-level advanced echocardiography training in affiliation with the N-ACES program. In 2025, we hosted a 1-day echo training workshop in Winnipeg, Manitoba



SIMULATION

Message from the Director

The Department of Critical Care Medicine in conjunction with the Faculty of Medicine and Dentistry, University of Alberta, Alberta Health Services, and Covenant Health runs an interdisciplinary, interprofessional, and interhospital simulation program.



Dr. Janek Senaratne

Director, Simulation, Department of Critical Care Medicine
Associate Clinical Professor, Departments of Critical Care Medicine and Medicine

The simulation program is an integral part of the Department's clinical, educational, research, and quality improvement/assurance missions. The program continues to grow with several complementary arms that function at multiple levels including the Alberta Health Services and Covenant Health Hospital Systems, Undergraduate Medical Education (including preclinical and clinical medical students), and Postgraduate Medical Education (including junior residents, senior residents, and fellows).

Update for 2025-26

In the clinical sphere, simulation's penetration continues to increase throughout the zone and within multiple units. Regular full-team in-situ simulation is now performed in all units of the University of Alberta/Mazankowski Alberta Heart Institute including the General Systems Intensive Care Unit, Cardiac Intensive Care Unit, Cardiovascular Intensive Care Unit, and Neuroscience Intensive Care Unit. Penetration across the Zone has also increased with continued expansion at the Grey Nuns Hospital, Misericordia Community Hospital, and Royal Alexandra Hospital.

In the medical education sphere, Dr. Graham Mah and Dr. Lazar Milovanovic continue in their roles of medical student simulation leads supporting simulation for the first and second year medical students. Dr. Vincent Lau has taken on a new role in Undergraduate Medical Education with the Department of Critical Care Medicine now providing simulation experiences for third and fourth year medical students including at the Grande Prairie Medical School Campus. This expansion represents a large step forward in the Department of Critical Care Medicine's footprint within Undergraduate Medical Education. Regular senior resident led simulation continues each block for rotating junior residents at the University of Alberta General Systems Intensive Care Unit.

Dr. Yiming Huang has taken over as a lead for the Core Internal Medicine Simulation Program where both the Department of Medicine and the Department of Critical Care Medicine work collaboratively. Finally, for Critical Care Medicine senior residents and fellows, a robust simulation curriculum encompassing task-trainer simulations, bootcamps, and regular full-team in-situ simulations remains a strength of our Critical Care Medicine Residency Program with new innovations such as the deployment of SonoSIM and novel high-fidelity simulators being recent additions to the program.



QUALITY

METRICS

MEASURE	GOAL	AUG #	PRIOR #'S
Avoidable Days	0	83	21
Night Discharges	<10%.	2300 - 0700 18%.	24%
Unplanned ~~Extubation~~ CVC Removal	0	1/1	1/1

SAFETY AND QUALITY

Message from the Director

Over the past year, the Critical Care Medicine Edmonton Zone Quality Improvement and Patient Safety (QI/PS) Council achieved the objectives set out in the previous annual report.



Dr. Andrea Letourneau

Director, Safety and Quality
Clinical Lecturer, Department of Critical Care Medicine
Director, Edmonton Zone Quality Improvement and Patient Safety

Activity during the reporting period focused on establishing the infrastructure required to measure, communicate, and advance quality across the zone, and several of these initiatives have now progressed from development into initial implementation.

Key Performance Indicators

A principal achievement this year has been the development of a key performance indicator (KPI) dashboard in Tableau. The dashboard remains in active development and is now more than half complete. Once finalized, it will be deployed across the zone to allow KPIs to be reviewed at a glance, enabling problem areas to be identified efficiently and prioritized for more detailed analysis.

Quality Newsletter

The Council has also launched a quality newsletter. Each issue consolidates KPI data, updates on quality projects underway across the zone, recognition of notable quality work, quality improvement education, and curated external resources for those who wish to explore a topic in greater depth.

Quality Education

Progress has continued in quality education, including substantial updates to the quality improvement website. These enhancements broaden the resources available to physicians and allied health staff and reinforce a shared culture of safety across the zone. This work will continue in the coming year.

Priorities for the Coming Year

CRITICAL INCIDENT REVIEW

The Council intends to establish a process through which critical incidents are reviewed by an uninvolved party. Such a process will be particularly valuable for incidents that span multiple departments rather than arising solely within critical care, as independent review helps ensure that findings and recommendations remain objective and constructive for all departments involved.

GUIDELINE SUMMARIES

Building on the neuroprognostication after cardiac arrest infographic, the Council will continue to develop concise summaries of current critical care and adjacent guidelines. These summaries will provide learners and clinical teams with a single reference point for the major guidelines relevant to critical care, supporting a consistent baseline standard of care upon which individualized patient management can be built.

COLLABORATION

A central database of ongoing projects across the Edmonton Zone will be established, with a designated contact identified for each project. This resource will enable healthcare teams to locate potential collaborators working in areas of shared interest and to coordinate efforts more effectively across the zone.

CRITICAL CARE COMMUTE

Critical Care Commute



Since launching in 2022, we've now published 100 episodes and continue to grow as a recognized platform within the critical care community. Over the past year we've maintained a steady average of 2,000 downloads per month, with a 30-day audience of roughly 1,200 listeners, bringing our cumulative total since launch to 95,000 downloads.

We're now followed by 1,903 listeners on Spotify alone, a number that continues to grow at a consistent pace of about 30 new followers each month, with distribution across all major podcast platforms. Our website carries a companion blog post for every episode, and our top 10 episodes this year averaged roughly 1,500 downloads each, a good sign that our content continues to resonate with our audience.

This past year, we reached several milestones:

- We published our 100th episode, a genuine landmark for a project that is "off the side of our desks"
- We didn't make it to any conferences this year, instead we engaged with industry through educational grant support from Zandos and Pfizer.
- We significantly grew our social media presence, launching a structured advertising strategy that includes episode summary slides shared across X, Bluesky, Instagram, Threads, and LinkedIn.

Looking forward, we aim to:

- Partner with correspondents in the UK to produce a series on critical care topics from a different health system's perspective.
- Bring in local experts to expand our neurocritical care content, an area we haven't covered as deeply as we'd like.
- Explore a series on organ donation, engaging local expertise.
- We want to expand into the realm of videography, and as such, Dr Brindley has undertaken training in videography.

We're grateful to all our listeners for their engagement and feedback from around the world. We truly believe that this platform can contribute to the critical care conversation.



Dr. Leon Byker

Assistant Clinical Professor,
Department of Critical Care Medicine

Dr. Peter Brindley

Professor, Department of
Critical Care Medicine

APPENDIX



Department Grants

Department Grants 2025-2026

PI OR CO-PI	DESCRIPTION	AWARDS		FUNDS AVAILABLE BEFORE COMMITMENTS	SPONSOR
		START DATE	END DATE		
Khadaroo, Rachel (Co-A)	STRIVE before surgery trial: a pragmatic multicenter randomized trial of Structured TRaining to Improve fitness in a Virtual Environment before surgery	4/1/2026	3/31/2029	\$765,001	Canadian Institute of Health Research (CIHR) Program Grant
Rewa, Oleksa (PI)	Accelerating the implementation of evidence-based practices in Acute Kidney Injury and Acute Care Nephrology - the Canadian perspective	10/1/2025	9/30/2026	\$15,000	Canadian Institute of Health Research (CIHR)
Rewa, Oleksa (PI)	Accelerating the implementation of evidence-based practices in Acute Kidney Injury and Acute Care Nephrology - the Canadian perspective	10/1/2025	9/30/2026	\$15,000	Vantive
Rewa, Oleksa (PI)	Accelerating the implementation of evidence-based practices in Acute Kidney Injury and Acute Care Nephrology - the Canadian perspective	10/1/2025	9/30/2026	\$15,000	BioPorto
Rewa, Oleksa (PI)	SMART Dialysis – Scaling Machine Learning and Artificial Intelligence Algorithms to Optimize the Performance and Delivery of Acute DIALYSIS – Phase 1: Scientific Rationale	9/17/2025	TBD	\$360,000	Vantive
Rewa, Oleksa (PI)	Midodrine for the early liberation of vasopressor support in the ICU - the LIBERATE study	4/1/2025	3/31/2026	\$50,000	University of Alberta, FoMD
Rewa, Oleksa (Co-I)	Family-partnered delirium prevention, detection, and management in ICU: A stepped-wedge cluster randomized trial	4/1/2026	3/31/2029	\$825,590	Canadian Institute of Health Research (CIHR)
Rewa, Oleksa (Co-I)	Big Data, Quality Improvement, and Implementation Science in AKI and Critical Care Nephrology	10/1/2025	2026-01-32	\$22,000	BioPorto

Department Grants 2025-2026

PI OR CO-PI	DESCRIPTION	AWARDS		FUNDS AVAILABLE BEFORE COMMITMENTS	SPONSOR
		START DATE	END DATE		
van Diepen, Sean (PI)	Cardiac Critical Care Trials Network (CCCTN) Registry	11/1/2025	9/30/2020	\$162,099	University Hospital Foundation - Sir John A MacDonald Fund
van Diepen, Sean (Co-I), M Stickland (PI)	Cardiopulmonary complications of electronic cigarettes	5/1/2026	4/30/2031	\$979,200	Canadian Institute of Health Research (CIHR)
van Diepen, Sean (Co-I), M Tsang (PI)	OPTimal TIMing of Unloading with Micro-axial Flow Pump in Infarct Related Cardiogenic Shock (OPTIMUS) Project	4/1/2026	31/01/2028	\$200,000	Hamilton Academic Health Sciences Organization
van Diepen, S (Co-I) Zampieri, F (Co-I)	KETO-AHF: Ketone Ester for Treatment Of Acute Heart Failure: A vanguard randomized controlled	9/1/2025	8/31/2027	\$250,000	Kaye Foundation
Wilcox, Elizabeth (PI)	Reducing days delirious with a sleep chronobundle to reALIGN circadian rhythm and promote sleep in the Intensive Care Unit (ALIGN-ICU) - a pilot trial	6/1/2026	6/30/2027	\$40,000	University Hospital Foundation (CIHR Bridge funding)
Wilcox, Elizabeth (PI)	Reducing days delirious with dexmedetomidine as part of an intensive care unit sleep promotion bundle	1/1/2026	1/1/2026	\$50,000	Alberta Investigator-Initiated Research Competition
				\$3,748,889.84	Total

Department Members

Clinical Scholars



Nikita-Kiran Singh **Clinical Scholar**

Dr. Singh received a BSc in biological sciences with philosophy minor and MD at the University of Alberta before completing internal medicine and critical care training at the University of Toronto. She was the chief medical resident at Toronto Western Hospital from 2022-2023.

Nikita's scholarly work lies at the intersection between social advocacy, the health humanities, and medical education.

In Memoriam

Dr. Darren Markland (1971-2025)



It is with profound sadness that we recognize the passing of Dr. Darren Markland, a prominent critical care physician and nephrologist at the Royal Alexandra Hospital whose impact reached far beyond the walls of the intensive care unit. Dr. Markland was celebrated by his colleagues as a talented clinician who seamlessly combined clinical expertise with deep compassion, humor, and a calming presence during his patients' most difficult moments.

Dr. Markland's contributions to medicine were characterized by tireless dedication to patient care and as an enthusiastic educator. He was known for speaking plainly about the realities of the healthcare system, amplifying the voices of both patients and frontline healthcare professionals. During the COVID-19 pandemic, he became a central public voice, using his platform to describe the stark realities inside hospitals and push back against vaccine misinformation. Even when chronicling the struggles of treating those who denied the virus's seriousness, he remained a model of professional grace, ending his reflections with a promise to treat every person who walked through his door with empathy and respect.

Dr. Markland's dedication to his community was visible in his fearless advocacy for health equity and community engagement. He gained a following for his efforts to improve urban transit, famously transforming his commute into a "joyfully cumbersome" two-hour adventure he called "canoepooling." This unique journey involved hauling a canoe on bike wheels to the river, paddling downstream, and finishing with an uphill bike ride. He further built community as a weekly "handle barista" in Constable Ezio Faraone Park, where he served coffee brewed on his cargo bike.

Dr. Markland lived by a simple but powerful philosophy: "Life is short... You should make every day a little adventure." Whether he was outpacing friends on mountain bike trails, building an off-grid cabin, or sharing thoughtful reflections on social media, he inspired thousands with his humanity, spirit, and candour.

His commitment to care, his generosity of spirit, and his unwavering belief in the power of community have left an indelible mark on the medical field and the city of Edmonton. The Department of Critical Care Medicine extends its deepest condolences to his family, friends, and the patients whose lives he touched.

As a tribute to Dr. Markland's legacy, the Department has introduced a new award in his honor, the "Dr. Darren Markland Award for Community Engagement."

Current department members

Aws Alherbish

Associate Clinical Professor

Sarah Andersen

Assistant Professor

Co-chair of the Ethics Committee for the Canadian Critical Care Society

Sean Bagshaw

Professor

Department Chair

Canada Research Chair in Critical Care Outcomes and Systems Evaluation

Luc Benoit

Clinical Lecturer

Peter Brindley

Professor

Brian Buchanan

Associate Professor

Director, Critical Care Ultrasound Program

Assistant Program Director

Josh Butcher

Clinical Lecturer

Leonard Byker

Assistant Clinical Professor

Dominic Carney

Assistant Clinical Professor

Lawrence Cheung

Professor

Associate Dean, Post-Graduate Medical Education, Faculty of Medicine and Dentistry

Raiyan Chowdhury

Associate Clinical Professor

Michal Chwalek

Clinical Lecturer

Shaun Cowan

Clinical Lecturer

Medical Director, Sturgeon Community Hospital ICU

Andrea Davenport

Clinical Lecturer

Jonathan Davidow

Associate Clinical Professor

Dennis Djogovic

Clinical Professor

Medical Director, E.G. King General Systems ICU, University of Alberta Hospital

Medical Director, Give Life Alberta- North

Shelley Duggan

Clinical Professor

Past-President, Alberta Medical Association

Monica Henry

Assistant Clinical Professor

Yiming Huang

Clinical Lecturer

Darren Hudson

Assistant Clinical Professor

Medical Director, eCritical Alberta

Associate Medical Director, STARS

Michael Jacka

Associate Professor

Curtis Johnston

Clinical Professor Associate Chief Medical Officer,

Medical Leadership and Development, Alberta Health Services

Constantine (Dean) Karvellas

Professor

Brittany Kula

Clinical Lecturer

Demetrios (Jim) Kutsogiannis

Professor

Vincent Lau

Assistant Professor

Clerkship Coordinator, Critical Care Medicine, UGME

James Lee

Assistant Clinical Professor

Andrea Letourneau

Clinical Lecturer

Director of Quality and Safety

Warren Luksun

Assistant Clinical Professor
Lead Physician, Integrated Quality Management, Edmonton Corridor, AHS
Lead Physician, Anesthesia Care Teams, Edmonton Corridor,
Department of Anesthesia, AHS

Kimberly Macala

Associate Professor

Erika MacIntyre

Associate Clinical Professor

Graham Mah

Assistant Clinical Professor

Lazar Milovanovic

Assistant Clinical Professor

Roman Nepomuceno

Assistant Clinical Professor

Taylor Nikel

Clinical Lecturer

Anton Nikouline

Clinical Lecturer

Jeffrey Odenbach

Assistant Clinical Professor

Arabesque Parker

Assistant Clinical Professor
Medical Director – Royal Alexandra Hospital ICU

John Damian Paton-Gay

Assistant Clinical Professor

Oleksa Rewa

Associate Professor
Director of Research and Innovation

Andrea Robinson

Assistant Clinical Professor

Elizabeth (Ella) Rokosh

Associate Clinical Professor
Associate Chief Medical Officer, Urban Acute and Primary Care, Covenant Health

Adam Romanovsky

Assistant Clinical Professor
Director of Education

Michael Russell

Clinical Lecturer

Matthew Schroyens

Clinical Lecturer

Janek Senaratne

Associate Clinical Professor

Director of Simulation

Gurmeet Singh

Associate Clinical Professor

Medical Director, Adult ECMO Program

Medical Director Cardiovascular ICU, Mazankowski Alberta Heart Institute

Nikita-Kiran Singh

Clinical Lecturer

Jocelyn Slemko

Assistant Professor

Program Director, CCM Residency Program, PGME

Wendy Sligl

Professor

Senior Medical Lead - Critical Care Alberta

Tom Stelfox

Professor

Deputy Dean, Faculty of Medicine and Dentistry

Gabriel Suen

Assistant Clinical Professor

Edmonton Corridor Medical Lead

Derek Townsend

Clinical Professor

Facility Medical Director - University of Alberta Hospital,
Mazankowski Alberta Heart Institute, Kaye Medical Clinic

Sean van Diepen

Associate Professor

Co-Medical Director, Cardiac Intensive Care Unit, Mazankowski Alberta Heart Institute

Elizabeth (Liz) Wilcox

Associate Professor

Medical Director, Peter Allan Neurosciences ICU and High Intensity Unit (HIU),
University of Alberta Hospital

Fernando Zampieri

Assistant Professor

Mohamad Zibdawi

Assistant Clinical Professor

Corridor Clinical Department Lead, Cardiac Sciences, AHS

Adjunct Appointments

Nori Bradley

Adjunct Assistant Professor

Matthew Douma

Adjunct Assistant Professor

Adam Hall

Adjunct Assistant Professor

Rachel Khadaroo

Adjunct Professor

Michael Joon Kim

Adjunct Associate Professor

Tafirenyika Madzimure

Adjunct Assistant Professor

Sherif Mahmoud

Adjunct Professor

Associate Professor and Associate Dean, Student Academic Affairs,
Faculty of Pharmacy and Pharmaceutical Sciences

Sandy Widder

Adjunct Professor

Associate Dean, Professionalism, Faculty of Medicine and Dentistry

Retired from the University

David Zygun

Professor

Acting Chief Executive Officer – Health Quality Alberta

Department Personnel

Department Office

Lisa Cruwys – Academic Department Manager

Corrina Harrison – Department Operations Coordinator

Gerardette Mendita – Department Operations Support Assistant

Danielle Ikeda – Executive Assistant to the Chair

Kolby Hoffer – Executive Assistant to the Chair

Rosanne Prinsen – Internal Engagement Coordinator

Jenni Marshall – Team Lead, Medical Education

Marie Reinhart – Medical Education Program Administrator

Olivia Case – Medical Education Program Assistant

Department Research Office

Caylin Chadwick – Research Coordinator

Paige Hardy – Research Coordinator

Ryan Verbitsky – Research Coordinator

Sameera Zia – Research Coordinator

Fadi Hammal – Research Associate

Valry Kalinin – Research Assistant

Dawn Opgenorth – Project Manager

Grey Nuns Hospital Research Office

Janek Senaratne – Principal Investigator
Tammi Breymann – Research RT
Sharmila Chinnaraj – Research RN
Larissa Fedor-Turchenek – Research Pharmacist
Bernadette Fernando – Research Coordinator
Anushka Jayasekara – Research Manager
Shibi Nambichan Kudy Gero – Research Charge RN
Isabel Kwek – Research Pharmacist
Harpreet Lehal – Research Unit Clerk
Lazar Milovanovic – Sub-Investigator
Mehvash Qureshi – Research NP
Winston Bui – Research RN
Hafsa Choudhry – Research Coordinator
Sue Koshy – Research NP
Isumi DeSilva – Research Coordinator
Jennifer Dong – Research Assistant
Saniya Jiwani – Research RN
Vaninder Sidhu – Research Pharmacist
Taylor Kippen – Research RN

Royal Alexandra Hospital Research Office

Tayne Hewer – Research Coordinator
Patrica Thompson – Research Manager

Sturgeon Community Hospital Research Office

Bobby Guobadia – Research Coordinator

Grand Rounds

2025-2026 DCCM Grand Rounds

DATE	SPEAKER	TOPIC
2-Sep-25	Dr. Liz Wilcox and others	Advancing our learning forum: Survey findings, programming review and zone-wide innovation
9-Sep-25	Dr. David Ross	An Introduction to Effective Scientific Communication to a Non-Scientific Audience
16-Sep-25	Dr. Dan Niven	Don't Misuse My Blood: From Beginning to End and Beyond...
23-Sep-25	Dr. Rex Townsend	Normothermic Regional Perfusion in Donation After Cardiac Death - Improving Organ Viability and Transplant Outcomes
7-Oct-25	Dr. Gurmeet Singh	Rescue mechanical circulatory support for cardiogenic shock - pragmatic considerations
14-Oct-25	Dr. Vincent Lau	EXIT-ICU Study (results of national survey, provincial interviews and local retrospective observational study)
21-Oct-25	Dr. Jeff Singh	Mechanical Ventilation in Cervical SCI: Pulmonary Hygiene, PEEP and Pacing
28-Oct-25	Dr. Sean Wallace	Clinical Conundrum
4-Nov-25	Dr. Jennifer McCombe	Autoimmune CNS disease in the ICU
18-Nov-25	Drs. Parker, Rewa and others	Quality Rounds - Key quality initiatives across the zone
25-Nov-25	Dr. Kawmadi Abeytunge	Management of Pediatric and Adult Acute Liver Failure and the role of PLEX as a Bridge to Transplant
9-Dec-25	Dr. Chris Rose	The Neurotoxicity of Hyperammonemia
16-Dec-25	Dr. Mike Chu	T Cell redirecting therapy for Cancer
6-Jan-26	Dr. Aubree Worobetz	From Companion to Catastrophe: An Unusual Case of Gram-Negative Sepsis
13-Jan-26	Drs. Zampieri, Chwalek, Nikouline	Esophageal Balloon-Guided Ventilation in the ICU: Physiology, Evidence, and Clinical Application
20-Jan-26	Dr. Darren Hudson	Augmented Critical Care

2025-2026 DCCM Grand Rounds

DATE	SPEAKER	TOPIC
27-Jan-26	Dr. Tom Stelfox	From Flipping Trials to Reliable Practice: Making ICU Evidence Reproducible and Usable
3-Feb-25	Dr. Fernando Zampieri	Language Learning Models as a daily driver: Surviving technor- rentierism
17-Feb-26	Dr. Stephanie Sibley	Atrial Fibrillation In Critically Ill Patients - Musings, ruminations, and a (hopefully) practical approach
24-Feb-26	Dr. Laurance Lequier	Transport ECMO
3-Mar-26	Dr. Aws Alherbish	Acute RV Failure: Tips and Tricks in Management
17-Mar-26	Dr. Sherif Mahmoud	Mind the Difference: Pharmacotherapy Variability in Neurocritical Care and Precision Medicine
24-Mar-26	Drs. Chapur & Fong	Emergent Airway Management at UAH - Do we need a Difficult Airway Response Team?
7-Apr-26	Dr. Sunny Fong	Regional Anesthesia in the ICU
14-Apr-26	Dr. Karen Choong	2026 R.T. Noel Gibney Lecture in Critical Care Medicine
21-Apr-16	Dr. Sean Bagshaw	CRRT Dose-intensity: Time to revisit?
28-Apr-26	Dr. Nikita Singh	From Theory to Practice: Addressing Language Discordance in the ICU
5-May-26	Dr. Shannon Tang	Tri-valvular trauma: An unusual case of infective endocarditis
12-May-26	Drs. Slemko, Gamble & Wallace	Quality of Care Rounds
19-May-26	Dr. Kieran Halloran	Lung transplant and the ICU: Critical care considerations
26-May-26	Dr. Jack Yuan	Therapeutic Dilemmas in Intermediate-High Risk PE: 2026 AHA/ACC Pulmonary Embolism Guidelines
9-Jun-26	Dr. Harry Anzinger	There's a Fungus Among Us. Invasive Fungal Infections in the ICU – An Approach for Intensivists
16-Jun-26	Drs. Slemko, Tang, Worobetz & Yuan	Quality of Care Rounds
23-Jun-26	Dr. Fawaz Alshammari	Sleep in the ICU: Why closed eyes does not mean rest





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