

2021-22

ANNUAL REPORT

DEPARTMENT OF CRITICAL CARE MEDICINE



UNIVERSITY
OF ALBERTA



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MESSAGE FROM THE CHAIR AND DEPARTMENT HEAD

The 2021-2022 academic year continued to be heavily influenced by the global activity of the COVID-19 pandemic. Many of us are feeling the fatigue of unrelenting administrative and clinical service demands. We would first like to acknowledge and thank all our faculty for their contributions, perseverance and for the outstanding clinical care provided throughout this turbulent period in our careers. Critical care has undoubtedly played a leading role in navigating through the COVID-19 pandemic. While it is clear that COVID-19 is having a lingering toll on our critical care workforce and our role appeared “polarizing” at times, we should pause to acknowledge the incredible achievements made by our critical care community in the past two years.

As a department, we should also be proud of our having largely preserved our academic mission throughout this period. Despite these challenges, we did not suffer major disruption to our residency training program. This would not have been possible without the dedication, leadership, and massive contributions of our faculty. Similarly, despite early disruptions, the department responded and contributed substantially to the rapidly evolving research enterprise focused on our response to COVID-19.

With each new academic year, comes renewal within the department. We have welcomed many new clinical faculty to the department and we have also witnessed retirement. This year, Dr. Dat Chin, our most senior Professor of Critical Care Medicine, has retired. His clinical and academic contributions to the department, particularly to teaching and education, spans four decades. Dr. Chin was the first intensivist to bridge work in the cardiovascular surgical ICU and with the heart/lung transplantation program at the University of Alberta Hospital. He was a founding intensivist in the E. Garner King Critical Care Unit, later serving as the Medical Director. He also served as the Critical Care Training Program Director and was instrumental on the national stage to earn the field of Critical Care Medicine recognition as a distinct subspeciality within the Royal College of Physicians & Surgeons. Dr. Chin was recognized this year with inaugural *Dr. Richard Johnston Distinguished Service Award in Critical Care Medicine* and by the unveiling of a new scholarship fund “*Dr. Dat Chin Scholarship in Critical Care Medicine*” to honor his enduring legacy.

We hope the turbulence may be subsiding and we are looking forward to more “normalcy” in the weeks and months ahead. We hope for less “Zoom” and more “breaking bread” as we re-engage in activities that reinforce the strengths of our department and community.



Dr. Sean M Bagshaw, MD, MSc, FRCPC
Professor and Chair
Faculty of Medicine and Dentistry



Dr. Shelley Duggan, MD, FRCPC
Clinical Professor and Head,
Edmonton Zone, Alberta Health



THE DEPARTMENT OF CRITICAL CARE MEDICINE AND THE UNIVERSITY OF ALBERTA RESPECTFULLY ACKNOWLEDGES THAT WE ARE LOCATED ON TREATY 6 TERRITORY, A TRADITIONAL GATHERING PLACE FOR DIVERSE INDIGENOUS PEOPLES INCLUDING THE CREE, BLACKFOOT, MÉTIS, NAKOTA SIOUX, IRO-QUOIS, DENE, OJIBWAY/ SAULTEAUX/ANISHINAABE, INUIT, AND MANY OTHERS WHOSE HISTORIES, LANGUAGES, AND CULTURES CONTINUE TO INFLUENCE OUR VIBRANT COMMUNITY.

MISSION, VISION AND VALUES

OUR MISSION is to provide exemplary patient and family-centred care of 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 across the Edmonton Zone. These critical care units are where the most unstable and seriously ill patients are cared for. They 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 & 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.

OUR SITES

University of Alberta Hospital



E. Garner King General Systems Intensive Care Unit
Unit Type: mixed medical/surgical ICU | No. of Beds: 43
Site Medical Director: Dr. Dennis Djogovic

Edmonton Firefighter Burn Treatment Centre
Unit Type: Comprehensive Burn Unit | No. of Beds: 4
Site Medical Director: Dr. Dennis Djogovic

Neuroscience Intensive Care Unit
Unit Type: Neurosciences ICU | No. of Beds: 15
Site Medical Director: Dr. Dennis Djogovic

Mazankowski Alberta Heart Institute



Unit Type: Cardiac Surgical ICU | No. of Beds: 24
Site Medical Director: Dr. Mohamad Zibdawi

Royal Alexandra Hospital



Unit Type: mixed medical/surgical ICU | No. of Beds: 29
Site Medical Director: Dr. Jonathan Davidow

Grey Nuns Community Hospital



Unit Type: mixed medical/surgical ICU | No. of Beds: 10
Site Medical Director: Dr. Dominic Carney

Misericordia Community Hospital



Unit Type: mixed medical/surgical ICU | No. of Beds: 10
Site Medical Director: Dr. Clint Torok-Both

Sturgeon Community Hospital



Unit Type: mixed medical/surgical ICU | No. of Beds: 5
Site Medical Director: Dr. Oleksa Rewa

PARTNERSHIPS



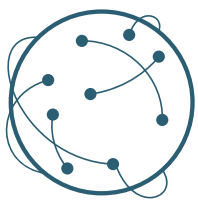
Critical Care Strategic
Clinical Network™

Critical Care Strategic Clinical Network™

The Critical Care Strategic Clinical Network™ (CC SCN) is a community of health care professionals, operational leaders and stakeholders from Alberta's adult, cardiovascular, neurosciences and pediatric critical care units.

Scientific Office of the Critical Care Strategic Clinical Network

The Scientific Office of the Critical Care Strategic Clinical Network was created to lead Alberta Health Services (AHS) in the promotion, adoption and diffusion of evidence-based innovation to drive decision-making in critical care medicine. As researchers and innovators, we lead research and partner with patients and their families, students, researchers and organizations in order to improve the health of Albertans through the development, execution, and implementation of research.



LOGIC

LINKING OF GLOBAL INTENSIVE CARE

LOGIC – Linking of Global Intensive Care

The department, through eCritical Alberta, has collaborated with the Linking of Global Intensive Care (LOGIC) initiative.

Quintairos A, Haniffa R, Dongelmans D, Salluh JIF; LOGIC (Linking of Global Intensive Care). [International Comparisons of ICU Performance: A Proposed Approach to Severity Scoring Systems](#). Crit Care Med. 2022 Nov 1;50(11):e799-e800. doi: 10.1097/CCM.0000000000005619. Epub 2022 Oct 13. PMID: 36227050.

DEPARTMENT LEADERSHIP

Dr. Sean Bagshaw	Scientific Director/Deputy Senior Medical Director, Critical Care Strategic Clinical Network, AHS
Dr. Dominic Carney	Site Medical Director, Grey Nuns Community Hospital ICU
Dr. Lawrence Cheung	Associate Dean, Post-Graduate Medical Education, FoMD, University of Alberta
Dr. Jonathan Davidow	Site Medical Director, Royal Alex Hospital ICU Deputy Clinical Department Head, Edmonton Zone
Dr. Dennis Djogovic	Site Medical Director, EG King General Systems Critical Care Unit, University of Alberta Hospital Site Medical Director, Leona and Kenneth Biggs and Dr. Peter Allen Neurosciences Intensive Care Unit, University of Alberta Hospital Medical Director, HOPE (Human Organ Procurement and Exchange) program
Dr. Noel Gibney	Deputy Facility Medical Director, New Edmonton Hospital Project
Dr. Rachel Khadaroo	Co-Scientific Director, AHS Surgery Strategic Clinical Network Co-Physician lead Provincial Prehabilitation Working Group Founder and Faculty Mentor/Advisor, Association of Women Surgeons, University of Alberta Chapter
Dr. Erika MacIntyre	Past President, Edmonton Zone Medical Staff Association
Dr. Arabesque Parker	Chair, Transfusion in Trauma working group Associate Director of Quality, Royal Alexandra Hospital Critical Care Quality Improvement Patient Safety Educational Lead, Department of Critical Care
Dr. Damian Paton-Gay	Trauma Section Chief, Edmonton Zone Co-Chair Alberta Trauma Services Core Leadership Team Co-Chair National Acute Critical Events Simulation Course
Dr. Oleksa Rewa	Site Medical Director, Sturgeon Community Hospital
Dr. Ella Rokosh	Co-Chair, Neuromuscular Chronic Ventilation Committee Medical Informatics lead, Edmonton Zone
Dr. Janek Senaratne	Critical Care Medicine Residency Program Simulations Leader
Dr. Clint Torok-Both	Site Medical Director, Misericordia Hospital
Dr. Derek Townsend	Facility Medical Director - University of Alberta Hospital, Mazankowski Heart Institute, Kaye Medical Clinic
Dr. Mohamad Zibdawi	Site Medical Director, Cardiovascular ICU
Dr. David Zygun	Medical Director, Edmonton Zone Acting Associate Chief Medical Officer, Strategic Clinical Networks



AWARDS AND RECOGNITION

2021-22 INTERNAL AWARDS



Mentor of the Year – Dr. Jonathan Davidow

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



Best Paper of the Year – Matthew Douma

This annual award recognizes physician members within the department 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 calendar year.



Teacher of the Year (Junior) Resident Award – Dr. Vincent Lau

This annual award recognizes physician members who have demonstrated commitment to high quality education for our rotating residents. The recipient of this award is chosen by junior residents rotating through the ICU's at UAH and RAH.



Teacher of the Year CCM (Senior) Resident Award – Dr. Janek Senaratne

This annual award recognizes physician members who have demonstrated commitment to high quality education for our senior critical care residents. The recipient of this award is selected by our CCM trainees.



Dr. Dan Stollery Award for Clinical Excellence - Dr. Dominic Carney

This annual award is designed to acknowledge and recognize a physician within the department whose exceptional contributions to clinical practice and commitment to excellence goes above and beyond the norm.



Dr. Richard Johnston Award for Distinguished Service to Critical Care Medicine - Dr. Dat Chin

This annual 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 - Mishaela Houle

This annual 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.

2021-22 EXTERNAL AWARDS



Dr. Sean Bagsahw

Tier I Canada Research Chair in Critical Care Outcomes and System Evaluation



Dr. Janek Senaratne

2021-2022 Mentor of the Year Award – Division of Cardiology, Department of Medicine, UofA



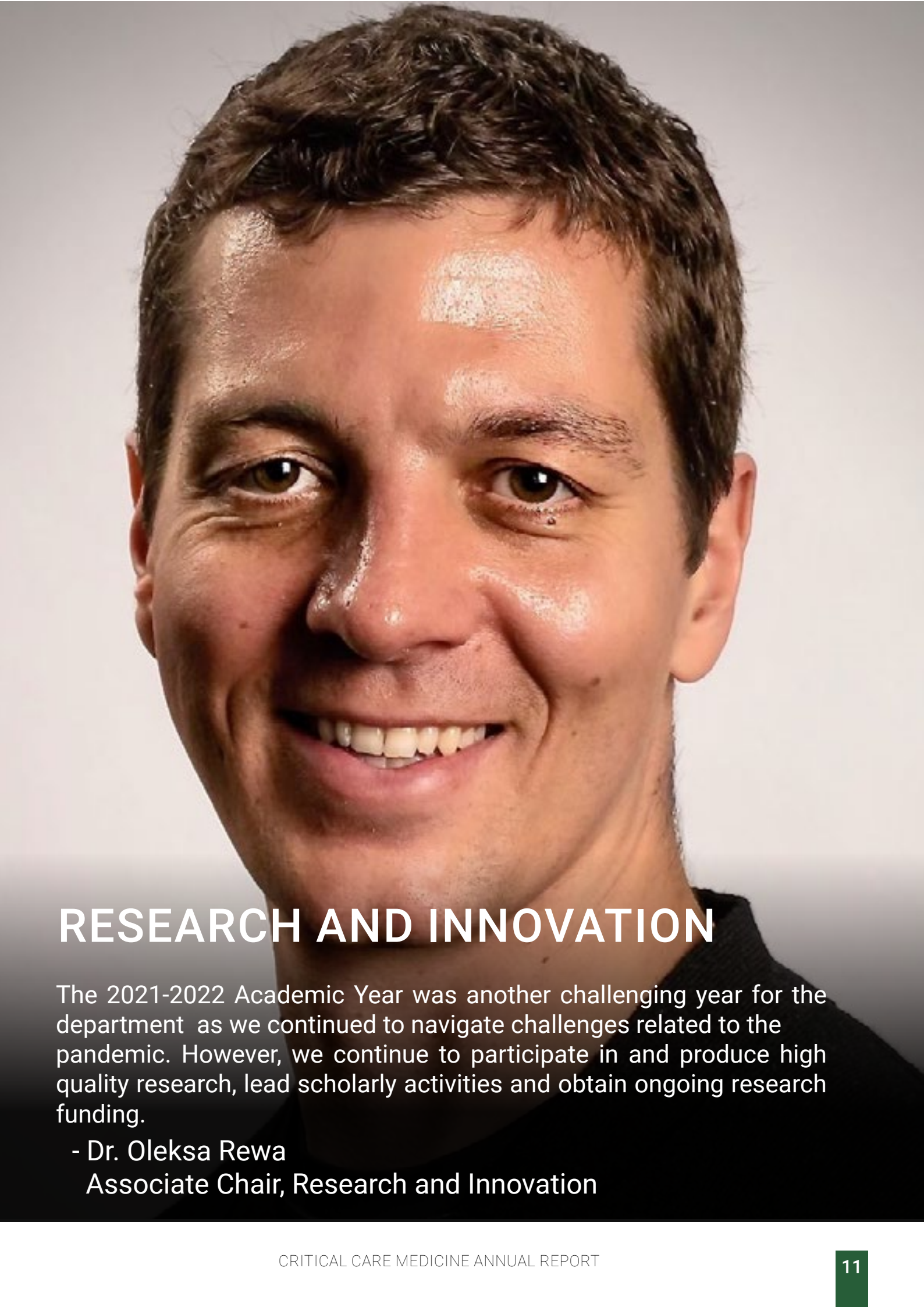
Dr. Rachel Khadaroo

2021-22 Association of Women Surgeons (AWS) Best International Chapter, AWS National Medical Student Committee



Dr. Derek (Rex) Townsend

2021-22 CCPE (Canadian Certified Physician Executive) accreditation



RESEARCH AND INNOVATION

The 2021-2022 Academic Year was another challenging year for the department as we continued to navigate challenges related to the pandemic. However, we continue to participate in and produce high quality research, lead scholarly activities and obtain ongoing research funding.

- Dr. Oleksa Rewa
Associate Chair, Research and Innovation

The department has been successful in several large scale provincial and national funding opportunities, and has continued to publish manuscripts in high impact peer reviewed journals.

We continued to build on infrastructure previously developed at our 7 ICUs. These include the following sites and associated research leads:

- University of Alberta Hospital General Systems ICU – Dr. Oleksa Rewa
- University of Alberta Hospital Neurosciences ICU – Dr. Jim Kutsogiannis
- Royal Alexandra Hospital ICU – Dr. Jim Kutsogiannis
- Grey Nuns Community Hospital ICU – Dr. Janek Senaratne
- Misericordia Community Hospital ICU – Dr. Erika MacIntyre
- Sturgeon Community Hospital ICU – Dr. Oleksa Rewa
- Mazankowski Heart Institute Cardiovascular ICU – Dr. Sean van Diepen
- Basic/Translational Sciences – Dr. Kimberly Macala

Specifically, the Grey Nuns Community Hospital and Misericordia Community Hospital have been able to build their research infrastructure, with the hiring of dedicated research staff and new participation in several multicenter initiatives.

DCCM RESEARCH DAY

Finally, we have again held a combined Pediatric and Adult Critical Care Medicine Research Day on May 18, 2022 with Dr. Fernando Zampieri presenting as a visiting professor on, 'Baseline fluid use and effect of balanced solutions: a secondary BaSICS analysis.'

This was a virtual event attended by over 50 trainees and faculty across the two departments. In the research competition, Dr. Graham Mah received first place for his work on the COVID SHUNT study, Dr. Lauren Ryan received second place for her work regarding Extracorporeal Life Support in Children and Dr. Matthew Douma received third place for his Quality Improvement Work in Cardiac Arrest Evaluation.

We are looking forward to repeating this event in 2023, and hopefully in person should restrictions permit.





RESEARCH PUBLICATIONS

160 total publications:

18 publications with department faculty as first or senior author

1 publication with trainee as first author

19 publications in high impact journals

Full list of research publications can be found in the Appendix on page 20.

FEATURED PUBLICATION



The NEW ENGLAND
JOURNAL of MEDICINE

Lamontagne F, Masse MH, Menard J, Sprague S, Pinto R, Heyland DK, Cook DJ, Battista MC, Day AG, Guyatt GH, Kanji S, Parke R, McGuinness SP, Tirupakuzhi Vijayaraghavan BK, Annane D, Cohen D, Arabi YM, Bolduc B, Marinoff N, Rochwerg B, Millen T, Meade MO, Hand L, Watpool I, Porteous R, Young PJ, D'Aragnon F, Belley-Cote EP, Carbonneau E, Clarke F, Maslove DM, Hunt M, Chassé M, Lebrasseur M, Lauzier F, Mehta S, Quiroz-Martinez H, Rewa OG, Charbonney E, Seely AJE, Kutsogiannis DJ, LeBlanc R, Mekontso-Dessap A, Mele TS, Turgeon AF, Wood G, Kohli SS, Shahin J, Twardowski P, Adhikari NKJ; LOVIT Investigators and the Canadian Critical Care Trials Group. [Intravenous Vitamin C in Adults with Sepsis in the Intensive Care Unit](#). N Engl J Med. 2022 Jun 23;386(25):2387-2398. doi: 10.1056/NEJMoa2200644. Epub 2022 Jun 15. PMID: 35704292.4.

RESEARCH GRANTS

19 grants total

15 grants with department faculty as PI

Total New Funding: \$ 3, 714, 358.63

Total Funding: \$ 3, 789, 358.63

Full list of research grants can be found in the Appendix on page 36.

FEATURED RESEARCH GRANT

Investigator: Dr. Oleksa Rewa (PI)

Title: REVIVE: Frailty, Rehabilitation, and Hospitalization Outcomes in Adult and Pediatric Survivors of COVID-19

Funder: CIHR

Funding Year: 2021

Award: \$738,000.00

VISITING SPEAKERS

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



Dr. Dale Needham - John Hopkins University School of Medicine
Title: Coral: The Petal Networks Observational Study
April 12, 2022

Dr. Dale Needham is a Professor of Medicine, the Medical Director of the Critical Care Physical Medicine and Rehabilitation Program and the Director of the Outcomes After Critical Illness and Surgery (OACIS) Group, at Johns Hopkins University School of Medicine. Dr. Needham received his MD from McMaster University in Hamilton, Canada, and completed residency in internal medicine and fellowship in critical care medicine at the University of Toronto. He obtained his PhD in Clinical Investigation from the Johns Hopkins Bloomberg School of Public Health. Dr. Needham has over 400 peer reviewed publications. His landmark contributions have focused on improving long-term survivorship outcomes after critical illness, including physical, psychological, and quality of life status.



2022 Research Day Keynote Speaker

Dr. Fernando Zampieri - University of São Paulo
Title: Baseline fluid use and effect of balanced solutions: A secondary BaSICS analysis
May 18, 2021

Dr. Zampieri is a Critical Care Physician, researcher at Academic Research Organization, Albert Einstein Hospital (São Paulo, Brazil), and an Adjunct Assistant Professor at the University of Alberta.

EDUCATION



Dr. Adam Romanovsky
Associate Chair, Education

Although the 2021-22 academic year was marred by continuing challenges presented by the COVID-19 pandemic, the department has continued to not only maintain an outstanding educational portfolio but has continued to grow over the past year.

In January the RCPSC CCM program underwent an Internal Review, the first since receiving full accreditation by External Review in 2017. The new format laid out by the RCPSC mandated an in-depth review of each element of the program and required extensive work by the Program Director, Residency Program Committee (RPC), and department faculty at large. The program was rewarded for its hard work with a stellar review without a single noted area for improvement (AFI). Despite such a successful review we used the opportunity to ensure we are truly offering the best possible training to our residents.

Ongoing in-person gathering restrictions initially dictated continued online format for educational activities: Academic Half day, Grand Rounds, Journal Club, and even

in-training exams. While this ensured that our trainees received an uninterrupted educational experience, we were all relieved to be able to make the transition back to in-person learning. After being forced to engage in remote learning, we are excited to be able to use it to our advantage and make educational activities accessible to residents away on elective rotations. None of this could have been accomplished without incredibly engaged faculty members who continued to prioritize learner education despite a significant increase in clinical workload. This is highlighted by the fact that at no point during any wave of the COVID-19 pandemic were critical care subspecialty residents redeployed from other rotations to provide clinical service in the ICU.

June 30, 2022 marked the successful completion of our second cohort of residents training in the Competence by Design framework to which we transitioned in 2018. This concludes a successful transition to the new platform which has also helped us bolster our educational activities in areas such as crisis resource management and high-fidelity simulation. Based on trainee feedback we also bolstered our academic program with our first full ventilation simulation day and full day renal replacement therapy educational symposium.

The last year has also seen growth in our post-residency fellowship programs. We saw our re-imagined Cardiology ICU fellowship hit the ground running, recruiting its first fellow in over 5 years. The success of this updated fellowship is apparent with fellows already registered for the next two academic years. We witnessed continued solidification of our Critical Care Ultrasound fellowship, successfully training our fourth candidate who has accepted a position at hospitals in the Edmonton zone where he will continue to drive ultrasound-related education in the department. We also continued our training program in Cardiovascular ICU, graduating a fellow for the fifth straight year since initiating the program.

Our faculty 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.



AWARDS WON BY MEMBERS INCLUDE:

Critical Care Medicine Rotating Resident Teacher of the Year award

– Dr. Vincent Lau. 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. Janek Senaratne. Selected by senior residents and awarded to a critical care physician in recognition of outstanding contribution to senior resident education.

Off-service Rotation of the Year award

– University of Alberta Hospital E. Garner King ICU. Selected by residents in the Family Medicine-Emergency Medicine program to recognize the off-service rotation with the highest educational value.

2022 Canadian Federation of Medical Students (CFMS) Culture Changers Campaign

– Dr. Phillip Gregoire. Nominated as a champion by a medical student for his positive impact on the training environment.

EDUCATION LEADERSHIP

Adult Critical Care Residency Program

Dr. Adam Romanovsky - Program Director

Critical Ultrasound (CCUS) Clinical Fellowship

Dr. Brian Buchanan - Clinical Supervisor

Critical Care Cardiology Fellowship

Dr. Janek Senaratne - Clinical Supervisor

Cardiovascular Intensive Care (CVICU) Fellowship

Dr. Aws Alherbish - Clinical Supervisor

Neuroscience Intensive Care Unit (Neuro-ICU) Fellowship

Dr. Monica Henry - Clinical Supervisor

CRITICAL CARE TRAUMA CLUB

The Department Trauma Club was running again for 2021-22 as Dr. Djogovic passed the oversight of the club to Dr. Lau.

Lectures via Zoom provided by Drs. Dennis Djogovic and Vincent Lau included:

- (1) Orientation to the ICU for medical students
- (2) Introduction to toxicology and trauma

Other events included:

(1) An intensivist panel, including adult and pediatric intensivists, tertiary alongside community physicians, academic and clinical faculty (researchers, administrators, educators), showcasing our diversity and inclusiveness within our department.

(2) An in-person hands-on skills night, teaching medical students about vascular access, point-of-care ultrasound and airway management.

Thanks to all the faculty and the medical students who made this year a success. We are looking to build on this success for next year.



6 Adult Critical
Care Residents

1 CCUS
Fellow

1 CVICU
Fellow

1 Cardiology
Fellow

CaRMS 2021

30

APPLICANTS

23

INTERVIEWS

3

MATCHES

2021-22 EDUCATION EVENTS

Academic Half Day (including simulations)

Covering 70 topics over the course of the academic year

Other Activities:

- CCM Year One Orientation - July 2
- N-ACES Course - July 8-9
- Simulations - July 14, 21 November 10 February 16 and May 4
- BLS/ACLS - Course July 17
- CRUS West Course - Aug 12-13
- Resident Wellness Day - Aug 25 and Feb 23
- CaRMS - Sept 16
- Royal College of Physicians and Surgeons Critical Care Medicine Exam - Sep 23-24
- Journal Club - Sept 14, Dec 7, Feb 22 and May 24
- International Applicant Interviews - Oct 9
- Critical Care Canada Forum - Dec 5-8
- In Training Exam - Dec 5 and June 1
- ASICP - Jan 22
- Multidisciplinary Critical Care Knowledge Assessment Program - March 9
- Objective Structured clinical Examination - May 11
- Research Day - May 18

ULTRASOUND AND SIMULATION

Faculty Education

2021-2022 was a busy academic year for the Critical Care Ultrasound (CCUS) program. In fall 2021, we celebrated two graduates from the CCUS fellowship program (2020-2021) who successfully completed their Examination of Special Competence in Critical Care Echocardiography. Both graduates have went on to

fulfill attending roles in critical care in the Edmonton Zone. Moreover, we welcomed a new CCUS fellow, Laz Milovanovic, to the program in 2021.

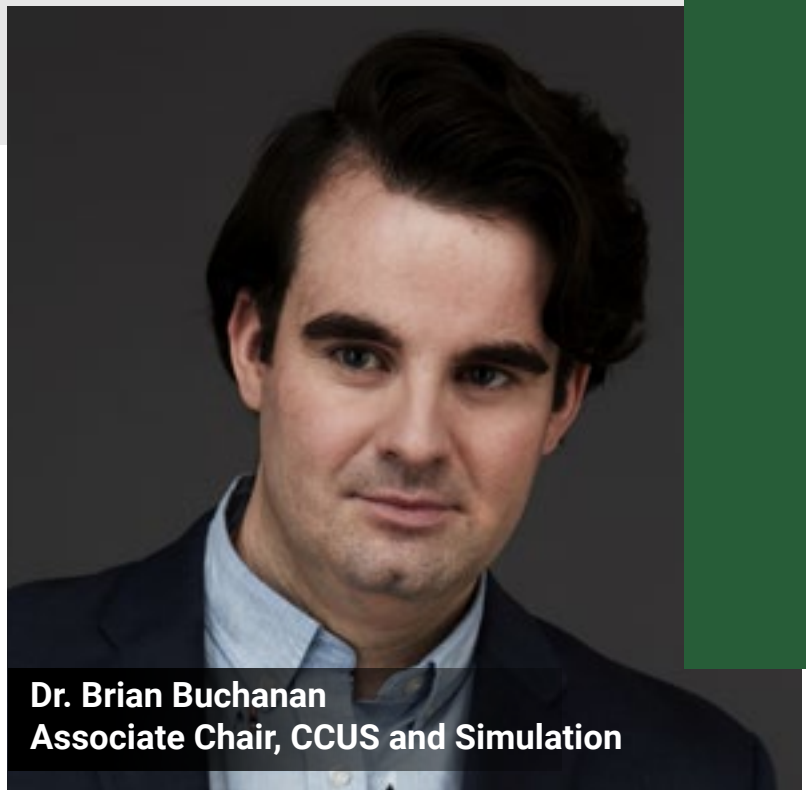
Next, much work was done to move online CCUS education to a high-quality learning management system through www.AlbertaSono.ca. This year also saw the education of 20 rotators through the acute care ultrasound rotation and continuation of the monthly ABSono Ultrasound rounds. Finally, we hit a key milestone in CCUS education: we are delighted to announce that every hospital with an intensive care unit in the Edmonton Zone has at least 1-2 ICU physicians trained in CCUS, a huge boost to ensuring access to this expertise.

Research

In 2021, we saw the initiation and completion of several research projects. The Covid-Shunt prospective observational trial, conducted across the Edmonton Zone, saw the participation of over 200 patients in a first-of-its kind point-of-care study for shunt interrogation, led by Dr. Vincent Lau. This will be published in tandem with a systematic review examining the prevalence of shunt in hypoxic respiratory failure. We also saw the publication of a national survey on curriculum development and implementation of CCUS across Canada, led by Dr. Jocelyn Slemko. Finally, the General System ICU became a participant in an international registry of trans-esophageal echocardiography in acute care.

Canadian Resuscitative Ultrasound Course (West)

In 2021, we restarted in-person hosting of the Canadian Resuscitative Ultrasound Course (CRUS) West. A brief hiatus due to Covid-19, we welcomed 20 faculty and residents to Western Canada's biggest course in acute care ultrasound training. The course received outstanding reviews and will be held again in 2022.



Dr. Brian Buchanan
Associate Chair, CCUS and Simulation



APPENDIX

RESEARCH PUBLICATIONS

Publication Summary:

160 total publications

18 publications with department faculty as first or senior author

2 publications with trainee as first author (*italics*)

Publications in High Impact Journals

5 publications in BMJ [IF 93]

4 publications in JAMA [IF 157]

7 publications in Intensive Care Medicine [IF 40]

3 publications in NEJM [IF 176]

COVID-19 Publications highlighted with a



1. ATTACC Investigators; ACTIV-4a Investigators; **REMAP-CAP Investigators**, Lawler PR, Goligher EC, Berger JS, Neal MD, McVerry BJ, Nicolau JC, Gong MN, Carrier M, Rosenson RS, Reynolds HR, Turgeon AF, Escobedo J, Huang DT, Bradbury CA, Houston BL, Kornblith LZ, Kumar A, Kahn SR, Cushman M, McQuilten Z, Slutsky AS, Kim KS, Gordon AC, Kirwan BA, Brooks MM, Higgins AM, Lewis RJ, Lorenzi E, Berry SM, Berry LR, Aday AW, Al-Beidh F, Annane D, Arabi YM, Aryal D, Baumann Kreuziger L, Beane A, Bhimani Z, Bihari S, Billett HH, Bond L, Bonten M, Brunkhorst F, Buxton M, Buzgau A, Castellucci LA, Chekuri S, Chen JT, Cheng AC, Chkhikvadze T, Coiffard B, Costantini TW, de Brouwer S, Derde LPG, Detry MA, Duggal A, Džavík V, Efron MB, Estcourt LJ, Everett BM, Fergusson DA, Fitzgerald M, Fowler RA, Galanaud JP, Galen BT, Gandotra S, García-Madrona S, Girard TD, Godoy LC, Goodman AL, Goossens H, Green C, Greenstein YY, Gross PL, Hamburg NM, Haniffa R, Hanna G, Hanna N, Hegde SM, Hendrickson CM, Hite RD, Hindenburg AA, Hope AA, Horowitz JM, Horvat CM, Hudock K, Hunt BJ, Husain M, Hyzy RC, Iyer VN, Jacobson JR, Jayakumar D, Keller NM, Khan A, Kim Y, Kindzelski AL, King AJ, Knudson MM, Kornblith AE, Krishnan V, Kutcher ME, Laffan MA, Lamontagne F, Le Gal G, Leeper CM, Leifer ES, Lim G, Lima FG, Linstrum K, Litton E, Lopez-Sendon J, Lopez-Sendon Moreno JL, Lotter SA, Malhotra S, Marcos M, Saud Marinez A, Marshall JC, Marten N, Matthay MA, McAuley DF, McDonald EG, McGlothlin A, McGuinness SP, Middeldorp S, Montgomery SK, Moore SC, Morillo Guerrero R, Mouncey PR, Murthy S, Nair GB, Nair R, Nichol AD, Nunez-Garcia B, Pandey A, Park PK, Parke RL, Parker JC, Parnia S, Paul JD, Pérez González YS, Pompilio M, Prekker ME, Quigley JG, Rost NS, Rowan K, Santos FO, Santos M, Olombrada Santos M, Satterwhite L, Saunders CT, Schutgens REG, Seymour CW, Siegal DM, Silva DG Jr, Shankar-Hari M, Sheehan JP, Singhal AB, Solvason D, Stanworth SJ, Tritschler T, Turner AM, van Bentum-Puijk W, van de Veerdonk FL, **Van diepen S**, Vazquez-Grande G, Wahid L, Wareham V, Wells BJ, Widmer RJ, Wilson JG, Yuriditsky E, Zampieri FG, Angus DC, McArthur CJ, Webb SA, Farkouh ME, Hochman JS, Zarychanski R. Therapeutic Anticoagulation with Heparin in Noncritically Ill Patients with Covid-19. *N Engl J Med*. 2021 Aug 26;385(9):790-802. doi: 10.1056/NEJMoa2105911. Epub 2021 Aug 4. PMID: 34351721; PMCID: PMC8362594.





2. **REMAP-CAP Investigators**; ACTIV-4a Investigators; ATTACC Investigators, Goligher EC, Bradbury CA, McVerry BJ, Lawler PR, Berger JS, Gong MN, Carrier M, Reynolds HR, Kumar A, Turgeon AF, Kornblith LZ, Kahn SR, Marshall JC, Kim KS, Houston BL, Derde LPG, Cushman M, Tritschler T, Angus DC, Godoy LC, McQuilten Z, Kirwan BA, Farkouh ME, Brooks MM, Lewis RJ, Berry LR, Lorenzi E, Gordon AC, Ahuja T, Al-Beidh F, Annane D, Arabi YM, Aryal D, Baumann Kreuziger L, Beane A, Bhimani Z, Bihari S, Billett HH, Bond L, Bonten M, Brunkhorst F, Buxton M, Buzgau A, Castellucci LA, Chekuri S, Chen JT, Cheng AC, Chkhikvadze T, Coiffard B, Contreras A, Costantini TW, de Brouwer S, Detry MA, Duggal A, Džavík V, Efron MB, Eng HF, Escobedo J, Estcourt LJ, Everett BM, Fergusson DA, Fitzgerald M, Fowler RA, Froess JD, Fu Z, Galanaud JP, Galen BT, Gandotra S, Girard TD, Goodman AL, Goossens H, Green C, Greenstein YY, Gross PL, Haniffa R, Hegde SM, Hendrickson CM, Higgins AM, Hindenburg AA, Hope AA, Horowitz JM, Horvat CM, Huang DT, Hudock K, Hunt BJ, Husain M, Hyzy RC, Jacobson JR, Jayakumar D, Keller NM, Khan A, Kim Y, Kindzelski A, King AJ, Knudson MM,


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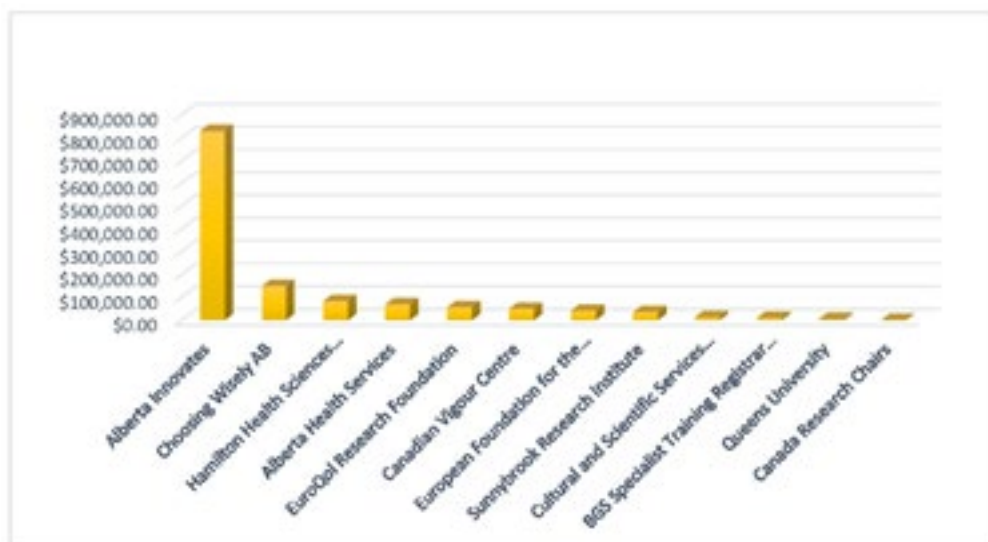
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156. Math N, Hegazi S, Richards T, Kommu S, **Senaratne J**. A novel innovative technique in the management of bilateral critical limb ischaemia: delayed saphenous vein autologous graft. *Ann R Coll Surg Engl.* 2022 Jun;104(6):e177-e179. doi: 10.1308/rcsann.2021.0248. Epub 2022 Feb 9. PMID: 35138964.
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159. Guttman, M., Haas, B., **Kim, M.**, Mador, B., Nathens, A.B., Ahmed, N., Wheeler, S., Gottlieb Conn, L., Innovative curriculum is needed to address residents' attitudes toward older adults: the case of geriatric trauma. *BMC Medical Education.* 2022 Feb 26; 22):130. DOI:10.1186/s12909-022-03196-y. PMID: 35219294.
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DEPARTMENT GRANTS



INVESTIGATOR	FUNDER	TITLE	START	END	TOTAL
Bagshaw, Sean (PI)	Alberta Health Services	Critical Care SCN Studentship	2021 Nov	2022 Dec	\$15,000.00
Bagshaw, Sean (PI)	Alberta Health Services	Critical Care Strategic Clinical Network (CC SCN) - Knowledge Translation Strategy	2021 Sept	2023 Sept	\$10,000.00
Bagshaw, Sean (PI)	Alberta Health Services	Critical Care Strategic Clinical Network - Priority Projects	2021 Sept	2023 Sept	\$45,000.00
Bagshaw, Sean (PI)	Canada Research Chairs	Canada Research Chair (Tier 1)	2021 Oct	2028 Sept	\$164,710.00
Bagshaw, Sean (PI)	Canada Research Chairs	Canada Research Chair (Tier 1)	2021 Oct	2028 Sept	\$1,235,290.00
Jacka, Michael (PI)	Hamilton Health Sciences Corporation	HIP Fracture Accelerated Surgical Care and Treatment trACK) 2 (HIP ATTACK-2)	2022 Mar	2025 Sept	\$84,000.00
Karvellas, Constantine (PI)	European Foundation for the Study of Chronic Liver Failure	A Prospective Non-Interventional and Observational Study Aimed at Understanding the Role of Liver Transplantation in Patients with Severe ACLF (CHANCE Study)	2022 May	2025 May	\$41,901.81

INVESTIGATOR	FUNDER	TITLE	START	END	TOTAL
Khadaroo, Rachel (PI)	Cultural and Scientific Services French Embassy in Canada, France Canada Research Fund	Novel biomarkers to diagnose acute mesenteric ischemia	2021	2023	\$13,398.00
Khadaroo, Rachel (Co-PI)	BGS Specialist Training Registrar Grant	A multicentre survey to determine the ability and attitudes towards frailty scoring of healthcare professionals working in surgical acute care settings	2021	2021	\$10,000.00
Lau, Vincent (PI)	EuroQol Research Foundation	Health-Related Quality-of-Life & Health-Utility Integration in Critical Care: EQ-5D-5L Validation (QUICC)	2021 Sept	2023 Aug	\$56,913.02
Lau, Vincent (PI)	CIHR	A Multi-centre, Adaptive, Randomized, Open-label, Controlled Clinical Trial of the Safety and Efficacy of Investigational Therapeutics for the Treatment of COVID-19 in Hospitalized Patients	2022 Apr	2022 Dec	\$12,500.00
Parker, Arabesque (PI)	Choosing Wisely AB	Choosing Wisely: Reducing the Overuse of Sedatives and Analgesics in Critical Care	2021 Jun	2023 Jun	\$75,000.00
Rewa, Oleksa (PI)	CIHR	REVIVE: Frailty, Rehabilitation, and Hospitalization Outcomes in Adult and Pediatric Survivors of COVID-19	2021	2024	\$738,000.00
Rewa, Oleksa (PI)	Alberta Innovates	Dialyzing Wisely	2021	2024	\$830,000.00

INVESTIGATOR	FUNDER	TITLE	START	END	TOTAL
Rewa, Oleksa (Co-PI)	CIHR	Feeding EPA and DHA Improves Clinical Symptoms Associated with COVID-19 Infection	2021	2022	\$344,250.00
Rewa, Oleksa (Co-PI)	Choosing Wisely AB	Choosing Wisely: Reducing the Overuse of Sedatives and Analgesics in Critical Care	2021	2023	\$75,000.00
Rewa, Oleksa (PI)	Queens University	Furosemide as Supportive Therapy for COVID-19 (FaST for COVID)	2021 Oct	2022 Dec	\$5,297.61
Senaratne, Janek (PI)	Sunnybrook Research Institute	Canadian Critical Care Trials Group Network of Clinical Trial Networks Research Grant	2022 Mar	2023 Mar	\$35,000.00
van Diepen, Sean (PI)	Canadian Vigour Centre	De-Adoption beta-Blockers in patients with stable ischemic heart disease without REduced LV ejection fraction, ongoing Ischemia, or Arrhythmias: a pragmaTic randomizEd trial: The AβBREVIAATE Trial	2021 Jul	2023 Jun	\$50,000.00

TOTAL \$3,789,358.63

DEPARTMENT MEMBERS

RETIRED FROM THE DEPARTMENT IN 2021-22

Chin, Dat Professor

Murtha, William Associate Clinical Professor

NEW TO THE DEPARTMENT IN 2021-22

Zampieri, Fernando Adjunct Assistant Professor

ACADEMIC MEMBERS

ASSISTANT PROFESSOR

Buchanan, Brian *Critical Care Medicine*

Chowdhury, Raiyan *Critical Care Medicine*

Lau, Vincent *Critical Care Medicine*

Macala, Kim *Critical Care Medicine*

Rewa, Oleksa *Critical Care Medicine*

ASSOCIATE PROFESSOR

Jacka, Michael *Critical Care Medicine*

van Diepen, Sean *Critical Care Medicine*

PROFESSOR

Bagshaw, Sean *Critical Care Medicine*

Chin, Wu *Critical Care Medicine*

Sligl, Wendy *Critical Care Medicine*

Brindley, Peter *Critical Care Medicine*

Kutsogiannis, Demetrios (Jim) *Critical Care Medicine*

Zygun, David *Critical Care Medicine*

ADJUNCT ASSISTANT PROFESSOR

Bowker, Samantha *Critical Care Medicine*

Douma, Matthew *Critical Care Medicine*

Hall, Adam *Critical Care Medicine*

Kim, Michael Joon *Surgery*

Madzimure, Tafirenyika *Critical Care Medicine*

Zampieri, Fernando *Critical Care Medicine*

ADJUNCT ASSOCIATE PROFESSOR

Cheung, Lawrence *Medicine*

Karvellas, Constantine (Dean) *Medicine*

Widder, Sandy *Surgery*

ADJUNCT PROFESSOR

Khadaroo, Rachel *Surgery*

Tredget, Edward *Surgery*

CLINICAL MEMBERS

ASSISTANT CLINICAL PROFESSOR

Alherbish, Aws *Critical Care Medicine*
Carney, Dominic *Critical Care Medicine*
Henry, Monica *Critical Care Medicine*
Hudson, Darren *Critical Care Medicine*
Liu, Allen *Critical Care Medicine*
Luksun, Warren *Critical Care Medicine*
MacIntyre, Erika *Critical Care Medicine*
Marcushamer, Samuel *Critical Care Medicine*

Markland, Darren *Critical Care Medicine*
Parker, Arabesque *Critical Care Medicine*
Rokosh, Ella *Critical Care Medicine*
Romanovsky, Adam *Critical Care Medicine*
Skoretz, Stacey *Critical Care Medicine*
Suen, Gabriel *Critical Care Medicine*
Torok-Both, Clinton *Critical Care Medicine*
Zibdawi, Mohamad *Critical Care Medicine*

ASSOCIATE CLINICAL PROFESSOR

Davidow, Jonathan *Critical Care Medicine*
Heule, Mark *Critical Care Medicine*
Murtha, William *Critical Care Medicine*

Singh, Gurmeet *Critical Care Medicine*
Sobey, Alan *Critical Care Medicine*

CLINICAL PROFESSOR

Duggan, Shelley *Critical Care Medicine*
Djogovic, Dennis *Critical Care Medicine*
Johnston, Curtis *Critical Care Medicine*
Johnston, Richard *Critical Care Medicine*

Meier, Michael *Critical Care Medicine*
Stollery, Daniel *Critical Care Medicine*
Townsend, Derek *Critical Care Medicine*

SECONDARY CLINICAL MEMBERS

CLINICAL LECTURER

Russell, Michael *Medicine*

ASSISTANT CLINICAL PROFESSOR

Matheson, Douglas *Critical Care Medicine*
Norris, Sean *Critical Care Medicine*
Paton-Gay, John Damian *Surgery*
Senaratne, Janek *Surgery*

ASSOCIATE CLINICAL PROFESSOR

Simmonds, Matthew *Anesthesiology and Pain Medicine*

CLINICAL PROFESSOR

Gibson, Neil *Medicine*
Stephens, Mary *Surgery*

DEPARTMENT PERSONNEL

Lisa Cruywels
Academic Department Manager

DEPARTMENT OFFICE (UAH)

Lorraine Nowak
Department Admin Assistant to the Chair
Susan Biesel
HR/Financial Assistant
Rosanne Prinsen
Department Communications Coordinator
Ana Wigger
Medical Education Program Assistant

RESEARCH OFFICE

Nadia Baig
Research Manager
Lily Guan
Research Assistant
Teresa Lawrence
Research Admin
Dawn Opgenorth
Project Manager

CONFERENCES

ASICP/CC SCN Research Symposium January 22, 2022

The annual ASICP/CC SCN Research Symposium was held virtually, due to COVID, on January 22, 2022. The goal of the Alberta Society of Intensive Care Physicians (ASICP) research symposium is to build research capacity for scientific work among early career clinical and research trainees in the Alberta critical care medicine community.

This year, there were 10 very high-quality oral abstract presentations from the University of Alberta and University of Calgary. We look forward to hosting this Annual Research Symposium once again in person at the Post Hotel in beautiful Lake Louise in January 2023.

CRIT/ER - Critical Care in the Emergency Room October 2-3, 2021

If you work in the ER on a full time, part time or casual basis and find yourself called upon to treat the sickest of patients at a moment's notice, then this CRIT/ER conference is for you! Join Directors Dennis Djogovic and Matt Inwood and the University of Alberta, Department of Critical Care Medicine, as they present a weekend of medical education with a healthy dose of mountain air!

The rapid fire lectures with heavy "real life" clinical emphasis make for an enjoyable and entertaining learning experience.

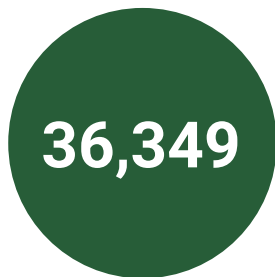
2021 Conference Speakers:

- Dr. Janek Senaratne - Cardiologist, Intensivist, Grey Nuns Hospital, UofA Hospital
- Dr. Dominic Carney- Pulmonologist, Intensivist, Grey Nuns Hospital
- Dr. Shaun Cowan - Paramedic, Senior Instructor CTOMS, Chief Resident General Surgery, UofA
- Dr. Matthew Inwood - UofA ED, Trauma Team Leader, STARS Director Grande Prairie
- Dr. Dennis Djogovic - UofA ED, Trauma Team Leader, Intensivist

VIRTUALLY SPEAKING.....

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1

Critical Care Units

Every critical care unit is staffed with a multi-disciplinary team of nurses, respiratory therapists, physicians and pharmacists. Each individual has taken specialized training to care for critically ill patients and to work as part of this team.

2

Homepage

The Department is part of the Faculty of Medicine at the University of Alberta. We are committed to providing excellence in patient care, research and education.

3

Fellowship Training

For those interested in continuing their Critical Care Medicine training into specialty areas we offer fellowship training opportunities in both clinical and research environments.

4

Department Members

Our faculty members are divided by their academic appointments with the University. Our faculty are located throughout the Edmonton area in order to deliver the very best patient care to the city and its surrounding areas.

5

Postgraduate Residency Program

Our program offers trainees a unique and comprehensive experience, preparing you not only to be excellent clinicians, but leaders in the field of Critical Care Medicine.

TWITTER

Total # of Tweets

58

Total # Profile Visits

Number of times users visited our profile page

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Total # New followers

177

Total # of Impressions

A total tally of all the times tweets have been seen

54,735





GRAND ROUNDS

DATE	PRESENTER	TITLE
Sept 7th	Dr. Noel Gibney Dr. Sean Bagshaw	Pandemic COVID-19 Public Health Measures and Reduction in Critical Care Utilization/Health Advocacy in a Time of Chaos
Sept 28th	Dr. Peter Brindley	Culture change: A 12 step program??
Oct 5th	Dr. Naheed Rajabali	Perioperative management strategies in a heterogenous critical care patient demographic: Tailoring care across the fit and frail spectrum
Oct 12th	Dr. Vincent Lau	Health-Related Quality-of-Life Measurements in Critical Care Research: Validation of EQ-5D Patient & Proxy Tools
Oct 26th	Dr. Dean Karvellas	Current evidence for extracorporeal liver support in acute and acute on chronic liver failure
Nov 2nd	Dr. Shelley Duggan	Leadership Lecture: Increasing Diversity in Critical Care
Nov 9th	Dr. Lynn Jacoby	MIS-C and MIS-A: An Overview
Nov 16th	Dr. Phillip Gregoire	Climate Change and the Future of ICU
Nov 23rd	Dr. Ayush Lacoul	Hemophagocytic Lymphohistiocytosis (HLH) : A diagnostic dilemma
Nov 30th	Dr. Philip Gregoire, Dr. Nicholas Quigley, Dr. Sanam Verma	Quality Rounds
Dec 14th	Dr. Madeleine Bohrer	Transport of Critically Ill Children
Jan 4th	Dr. Jocelyn Slemko	Choosing Wisely: Reducing the Use of Sedatives and Analgesics in Critical Care
Jan 11th	Dr. Hameid Alenazy	ECMO for COVID-19
Jan 25th	Dr. Curtis Johnston	Leadership Lecture: Anti-Racism in Alberta Healthcare
Feb 1st	Dr. Oleksa Rewa	The Science of Implementing Evidence into Practice
Feb 8th	Dr. Brian Buchanan	Beyond conjecture - How TEE can resolve the unknowable
Mar 1st	Dr. Janek Senaratne	Shock teams: heart failure to cardiogenic shock to MCS
Mar 8th	Dr. Rachel Khadaroo	Can Elder-friendly Care Improve ICU Survival?
Mar 22nd	Dr Mark Sanderson	Substance use disorders: ICU Management
Apr 5th	Dr. Claire McNiven	ECPR: Adults vs. Pediatrics
Apr 12th	Dr. Dale Needham	Post-Intensive Care Syndrome (PICS): Understanding the Long-Term Complications After ICU
Apr 19th	D. Sanam Verma	Post-stroke cardiovascular complications and neurogenic cardiac injury
Apr 26th	Dr. Graham Mah	Reflections on Critical Care in the "Post COVID" Era
May 3rd	Dr. Thomas Roston	Beyond ACLS: ICU Considerations after Unexplained Sudden Cardiac Arrest in the Young
May 10th	Dr. Brittany Kula, Dr. Mark Sanderson, Dr. Sanam Verma	Quality Rounds
May 31st	Dr. Nicholas Quigley	Death and dying in the ICU
June 7th	Dr. Brittany Kula	From contaminant to CAPA and in between: Aspergillus in the ICU
June 14th	Dr. Lazar Milovanovic	Looking in the mirror - post-intensive care syndrome in Edmonton



UNIVERSITY OF ALBERTA

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