



2020-21

ANNUAL REPORT

DEPARTMENT OF CRITICAL CARE MEDICINE



UNIVERSITY
OF ALBERTA



MESSAGE FROM THE CHAIR AND DEPARTMENT HEAD

Welcome to the Department of Critical Care Medicine.

This past year has been both incredibly challenging and also uniquely rewarding, as we have navigated critical care and our health system through successive waves of the global COVID pandemic.

While the COVID pandemic has shined a spotlight on critical care, it remains apparent that the mainstream media and the general public still have some misconceptions of who we are, what we do and how scarce and fragile our critical care resources are.

There is no doubt that the COVID pandemic has contributed to substantial disruption to the status quo; however, crisis can create opportunity. We recognize that our people are our greatest resource. Over the last year, members of our Department have calmly and consistently taken up arms to lead our local and provincial battle against COVID – at the bedside, in the lab, and in the (virtual) boardroom.

We have tirelessly enabled grossly expanded and sustained ICU surge capacity in our commitment to patient care, alongside our critical care teams of likewise devoted nurses, respiratory therapists, dietitians, physiotherapists, pharmacists, social workers and ICU support personnel. We have engaged on new and innovative local, national and international research to understand and guide best practices to care for patients stricken with SARS-CoV-2. We have led the surge capacity planning and implementation and the development and preparation of provincial pandemic triage protocols. Others have advocated through leadership in provincial and national task forces, contributions to the literature, appealing and educating the public through mainstream media and raising awareness on social media platforms.

There is no doubt the COVID pandemic is taking a toll, however, upon taking a deep breath and surveying our critical care landscape, we can only conclude how extraordinary, resilient, and innovative our people have been during this unprecedented period.

We remain proud and thankful to you and look forward to breaking bread again very soon.

CONTENT

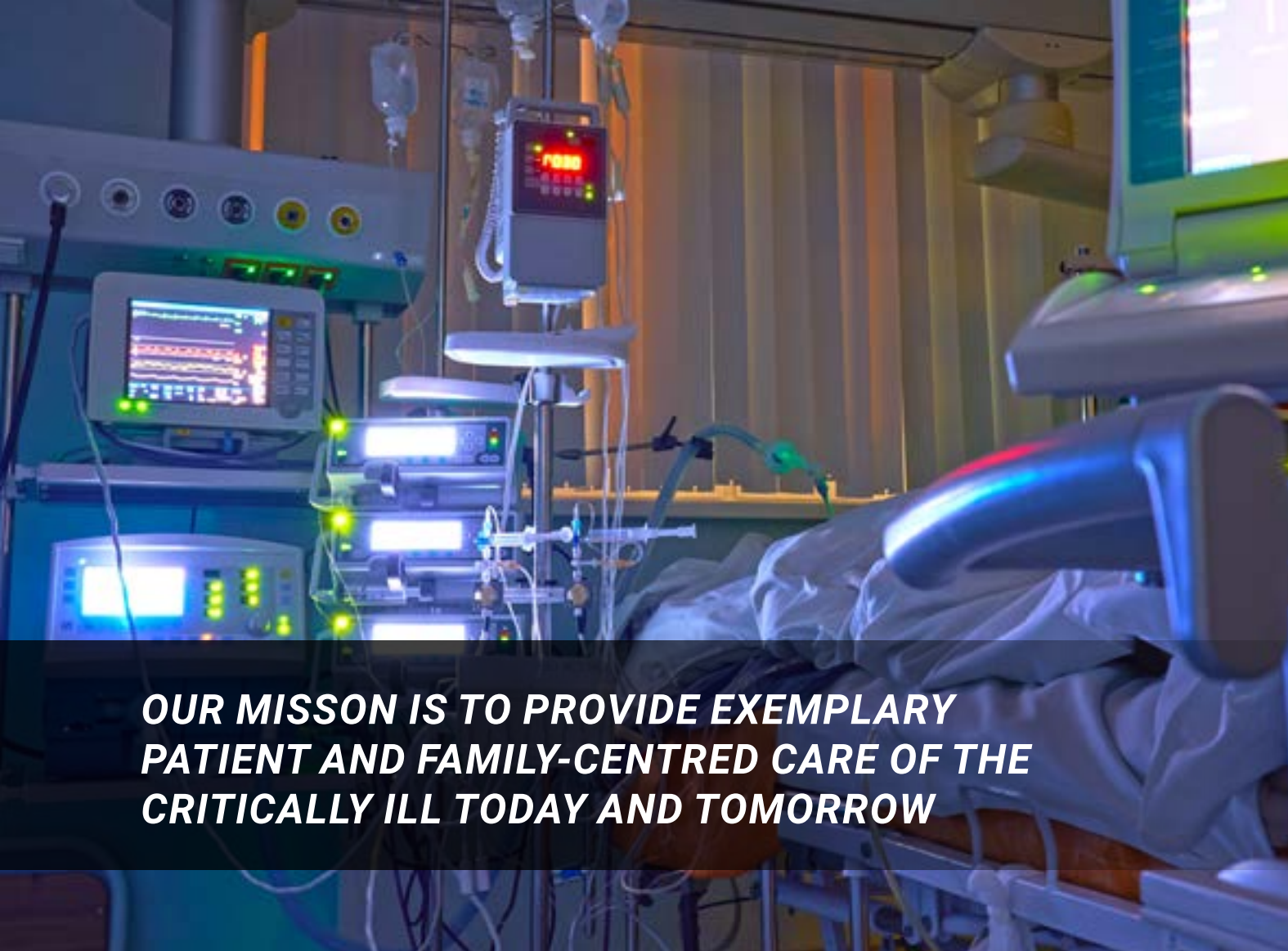
DEPARTMENT MESSAGE	3
OUR SITES	5
PARTNERSHIPS	6
LEADERSHIP	7
AWARDS & RECOGNITION	8
RESEARCH & INNOVATION	10
EDUCATION	14
APPENDIX	18



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



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 FoMD and AHS 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: 28
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: 25
Site Medical Director: Dr. Jonathan Davidow



Grey Nuns Community Hospital

Unit Type: mixed medical/surgical ICU | No. of Beds: 8
Site Medical Director: Dr. Dominic Carney



Misericordia Community Hospital

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



Sturgeon Community Hospital

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



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.



HOSPITAL SÍRIO-LIBANÊS

Hospital Sírio-Libanês (HSL)

The Hospital Sírio-Libanês (HSL) is a major tertiary and private philanthropic hospital located at São Paulo, Brazil. HSL has 700 beds and is certified by major international hospital accreditation entities. In 2018 a memorandum-of-understanding (MOU) was signed that established the framework through which our respective Departments can foster and develop a collaborative relationship.



LOGIC – Linking of Global Intensive Care

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

DCCM LEADERSHIP

Dr. Sean Bagshaw	Scientific 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 Director, Royal Alex Hospital ICU Deputy Clinical Department Head, Edmonton Zone
Dr. Dennis Djogovic	Medical Director, EG King General Systems Critical Care Unit, University of Alberta Hospital 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	Co-Chair, Strategic Pandemic Committee, Edmonton Zone Medical Staff Association
Dr. Mike Jacka	Deputy Director, General Systems ICU
Dr. Rachel Khadaroo	Founder and Faculty Mentor/Advisor- Association of Women Surgeons, University of Alberta Chapter Co-Scientific Director, AHS Surgery Strategic Clinical Network
Dr. Erika Macintyre	President, Edmonton Zone Medical Staff Association
Dr. Arabesque Parker	Chair, Transfusion in Trauma working group
Dr. Damian Paton-Gay	Facility Section Head, Trauma, Royal Alexandra Hospital 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	Site Medical Director and ACOG, Misericordia Community Hospital Connect Care Medical Informatics Lead - Critical Care Edmonton Zone Connect Care Provincial Physician Trainer Critical Care
Dr. Janek Senaratne	Critical Care Medicine Residency Program Simulations Leader
Dr. Gabriel Suen	Site Medical Director, Sturgeon Community Hospital
Dr. Clint Torok-Both	Site Medical Director, Misericordia Hospital
Dr. Derek Townsend	Deputy 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, AHS



AWARDS AND RECOGNITION

2020-21 INTERNAL AWARDS



Mentor of the Year – Dr. Adam Romanovsky

This annual award recognizes 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).



Best Paper of the Year – Dr. Sean Bagshaw

This annual award recognizes 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 calendar year.



Teacher of the Year Junior Resident Award – Dr. Wendy Sligl

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. Arabesque Parker

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.

2020-21 EXTERNAL AWARDS



Dr. Janek Senaratne

Adult Cardiology 2021 Residency Program - Most Innovative Teacher Award
 Adult Cardiology 2021 Residency Program - Resident Advocate of the Year Award 2021 - Runner-up



Dr. Mary Stephens

Dr. Charles Burn Trauma Association of Canada Award
 Award is for somebody who on a consistent basis, exemplifies the characteristics of Dr. Burns by demonstrating outstanding leadership, endless passion, a spirit of volunteerism and who is considered a visionary and innovator in the field of trauma care by their colleagues.'



Dr. Sean vanDiepen

Adult Cardiology 2021 Residency Program - Excellence in Clinical Teaching Award - Honorable Mention 2021



Dr. Dustin Anderson

Neurosciences ICU Scholarship 2021



Dr. Brian Buchanan

2020 Top 40 under 40 Edify Magazine



Dr. Arabesque Parker

Emergency Medicine Outstanding Off-Service Teacher Award 2021

A portrait of Dr. Oleksa Rewa, a man with short brown hair, wearing a blue and purple patterned shirt, looking slightly to the left. The background is a light-colored stone wall.

RESEARCH AND INNOVATION

The 2020-2021 Academic Year was a challenging yet productive year for the University of Alberta DCCM. Many specific research activities were suspended or deferred as our ICUs focused on clinical care during the pandemic. We did, however, continue to participate in both COVID-19 specific research initiatives, as well as selective other research programs while building research infrastructure across the Edmonton Zone.

- Dr. Oleksa Rewa
Associate Chair, Research and Innovation

Previously, there existed two research groups that operated within the Department of Critical Care Medicine. This last year, standalone research groups have developed at each of the city's 5 ICUs with the following research leads:

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

In addition to building site specific research groups, the Edmonton Zone Critical Care Research Council was created across the Edmonton Zone to promote excellence and collaboration for research programs within the city's critical care settings. Further, it had specific duties and functions to:

1. To develop, implement and evaluate standards of practice related to CC research
2. To provide a forum for discussion of issues related to CC research.
3. Act as a resource in the development, conduct and development of standards for critical care research
4. To provide a forum for dissemination of information related to ongoing and potential CC research activities for the EZ.
5. To assist in the development of individual ICU specific research programs
6. To develop a rigorous and innovative 'bench-to-bedside' research stream
7. To aid in the development of additional avenues of research in the EZ Department of Critical Care Medicine

Membership to this EZ CC RC included the DCCM Academic Chair, Associate Chair for Research & Innovation, ICU site specific leads.

DCCM RESEARCH DAY

Finally, after a pause in 2020, the Department of Critical Care Medicine held a combined Pediatric & Adult Research Day May 19th, 2021, with Dr. Srinivas Murthy presenting as a Visiting Professor on his 'Experiences with Research and Academic Pursuits during the COVID-19 Pandemic.' This was a virtual event attended by over 50 trainees and faculty across the two Departments.

Dr. Andrew Macdonald received first place for his work on MARS in Liver Failure, while Dr. Sanam Verma received second place for his work on 'Predictors and Outcomes in Mechanical Circulatory Support,' and Nicholas Griffin third places for their work on, 'Impact of Early Surgical Correction of Congenital Heart Defects in Viral Respiratory Tract Infections'.



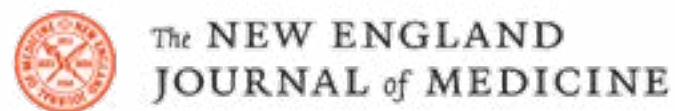
VISITING SPEAKERS

RESEARCH PUBLICATIONS

- 198 total publications
- 24 publications with Department Faculty as first or senior author
- 7 publications with trainee as first author
- 10 publications in NEJM, Lancet, and JAMA Network journals

Full list of research publications can be found in the Appendix

FEATURED PUBLICATION



The STARRT-AKI Investigators (Bagshaw SM and Wald R – Principal Investigators). Timing of Initiation of Renal-Replacement Therapy in Acute Kidney Injury. *New Engl J Med* 2020; 383(3):240-251 (PMID: 32668114).

RESEARCH GRANTS

- 22 grants
- 10 grants with DCCM Faculty as PI
- Total New Funding: \$951,139
- Total Funding: \$4,268,588

Full list of research grants can be found in the Appendix

FEATURED RESEARCH GRANT

Investigator: Dr. Oleksa Rewa (PI)

Title: Dializing Wisely

Funder: Partnership for Research and Innovation in the Health System (PRIHS)

Funding Year: 2020

Award: \$830,225



The R.T. Noel Gibney Lecture in Critical Care Medicine
Dr. Catherine (Terri) Hough (OHSU Portland Oregon)
Title: Coral: The Petal Networks Observational Study
April 20th, 2021

Dr. Catherine L. “Terri” Hough is a graduate of the University of California, Berkeley and UCSF. She trained in internal medicine at the University of Pennsylvania, returning west to train in Pulmonary and Critical Care Medicine at the University of Washington. Her research has focused on interventions in ARDS, through her leadership within the ARDS Network and PETAL Network, prolonged mechanical ventilation and long-term psychological and functional outcomes after critical care. She moved to OHSU to become the Division Chief in July 2020.



Dr. John Marshall – University Of Toronto
Title: Pandemic Research: Lessons from COVID-19
September 15th, 2020

Dr. Marshall is a Professor of Surgery at the University of Toronto. He is an attending Surgeon and Intensivist at St. Michael’s Hospital.



Dr. Fernando Zampieri - University of São Paulo
Title: Nosocomial Sepsis Attributable Mortality
May 18th, 2021

Dr. Zampieri is an Intensive Care Physician. He is a graduate of the University of São Paulo. He is the HCor Critical Care Research Coordinator and Intensivist at Federal University of São Paulo and a BRICNet Scientific Committee Member.

EDUCATION



Despite the 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-person gathering restrictions dictated innovative solutions to providing educational experiences. By pivoting to an online format for Academic Half-day, Grand Rounds, Journal Club, and even in-training exams, our trainees received an uninterrupted educational experience. We further took advantage of the virtual platform to run simulation-based learning for remote consultative care. 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 were critical care subspecialty residents redeployed from other rotations to provide clinical service in the ICU.

June 30, 2020 marked the successful completion of our first 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. All three residents in this cohort were successful in their recent RCPSC critical care medicine certification examination.

The last year has also seen growth in our post-residency fellowship programs. We saw our inaugural Neuro-Critical Care trainee successfully complete his fellowship and pave the way for growth of this fellowship moving forward. We witnessed the solidification of our Critical Care Ultrasound fellowship, successfully training our second and third candidates who have both accepted positions at hospitals in the Edmonton zone where they will continue to drive ultrasound-related education in their respective units. We also continued our training program in Cardiovascular ICU, graduating a fellow for the fourth straight year since initiating the program. In addition, all three graduating critical care residents have joined the department for further training; two as clinical scholars and the other as a critical care ultrasound fellow.

Our faculty were recognized for teaching both within and outside of our department. Two thirds 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 DCCM faculty include:

- Critical Care Medicine Rotating Resident Teacher of the Year award – Dr. Wendy Sligl. 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. Arabesque Parker. Selected by senior residents and awarded to a critical care physician in recognition of outstanding contribution to senior resident education
- Critical Care Medicine Mentor of the Year award – Dr. Adam Romanovsky. Nominated by critical care medicine residents in recognition of outstanding mentorship to critical care trainees.



- Emergency Medicine Off-Service Teacher of the Year award – Dr. Arabesque Parker. Selected by residents in the FRCPC Emergency Medicine program to recognize the most impactful teacher on an off-service rotation.
- 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 in to recognize the off-service rotation with the highest educational value.

- Dr. Adam Romanovsky
Associate Chair, Education

EDUCATION LEADERSHIP

Adult Critical Care Residency Program

Dr. Adam Romanovsky - Program Director

Critical Ultrasound (CCUS) Clinical Fellowship

Dr. Brian Buchanan -Fellowship Director

Cardiovascular Intensive Care (CVICU) Fellowship

Dr. Aws Alherbish -Fellowship Director

Neuroscience Intensive Care Unit (Neuro-ICU) Fellowship

Dr. Monica Henry -Fellowship Director

7 Adult Critical Care Residents

2 CCUS Fellows

1 CVICU Fellow

1 Neuro ICU Fellow



CaRMS 2020

27
APPLICANTS

22
INTERVIEWS

3
MATCHES

2020-21 EDUCATION EVENTS

Academic Half Day

Covering 70 topics over the course of the academic year

Other Activities:

- CaRMS - September 16
- Journal Club - September 29
- International Applicant Interviews - October 9
- Journal Club - December 1
- In Training Exam - December 16 and June 2
- Journal Club - February 23,
- Resident Wellness Day - February 24,
- Multidisciplinary Critical Care Knowledge Assessment Program - March 10
- Objective Structured clinical Examination - May 5
- Research Day - May 19
- Journal Club - May 25
- Simulations - October 14, December 2, and February 10, March 17, May 26

ULTRASOUND AND SIMULATION

Faculty Education

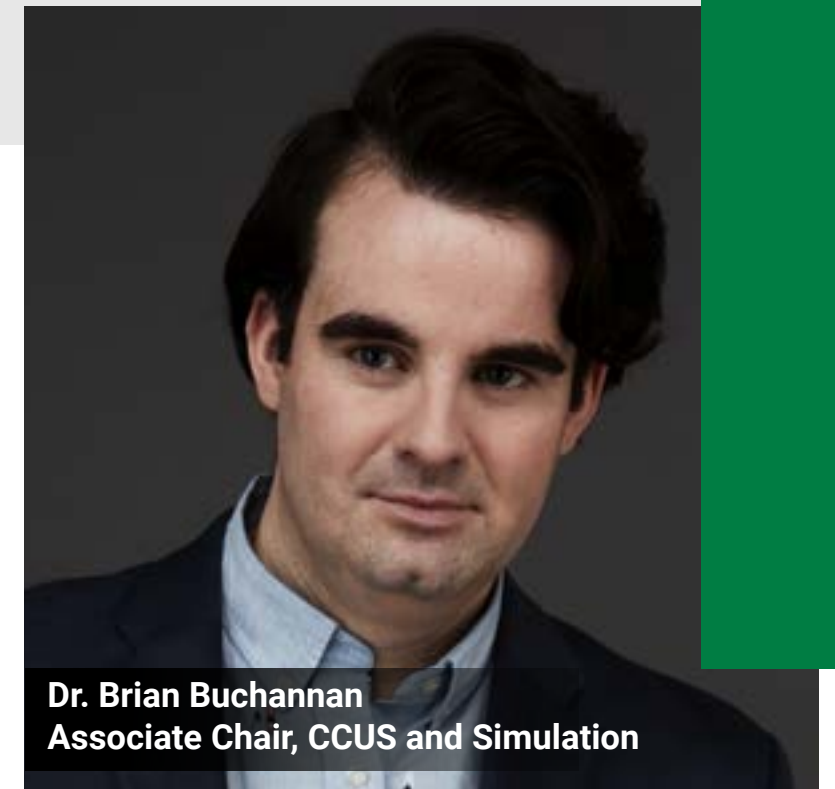
2020 was the first year to see dedicated faculty and nurse practitioner training in critical care ultrasonography as part of a comprehensive curriculum research study. Yielding much success and enthusiasm, this program will continue in 2021 with an explicit focus on increasing access to this training throughout the Edmonton zone.

Research

In 2020, we welcomed the addition of a new clinician-researcher team member, Dr. Vincent Lau. In addition to his focus on health economics, Dr. Lau has also played a key role in developing a new research initiative, "covid-shunt", or the investigation of shunt in patients with severe covid-related respiratory failure in patient on mechanical ventilation. In addition to this research, there are 3 new and/or ongoing studies employing ultrasound in the critically ill, including multi-organ sonography in acute kidney injury, machine learning in lung ultrasound in Covid-19, and neurological ultrasound in fulminant hepatic failure.

Canadian Resuscitative Ultrasound Course (West)

2020 was a challenging year for gathering. Ultimately, due to covid-restrictions, we could not host the Canadian Resuscitative Ultrasound Course. However, this year, on August 12th and 13th, we will invite an array of faculty, fellows, and nurse practitioners back for the second time in Edmonton, to Western Canada's biggest course in acute care ultrasound training.



Dr. Brian Buchannan
Associate Chair, CCUS and Simulation




APPENDIX

RESEARCH PUBLICATIONS

Publication Summary (Trainees underlined):

197 total publications
24 publications with Department Faculty as first or senior author
7 publications with trainee as first author
10 publications in NEJM, Lancet, and JAMA Network journals

COVID-19 Publications highlighted with a

-  1. Fiest KM, Krewulak KD, Hiploylee C, **Bagshaw SM**, Burns KEA, Cook DJ, Fowler RA, Kredentser MS, Niven DJ, Olafson K, Parhar KKS, Patten SB, Fox-Robichaud AE, **Rewa OG**, Rochweg B, Spence KL, Straus SE, Spence S, West A, Stelfox HT, Parsons Leigh J; Canadian Critical Care Trials Group. An environmental scan of visitation policies in Canadian intensive care units during the first wave of the COVID-19 pandemic. *Can J Anaesth*. 2021 Jun 30;1–11. doi:10.1007/s12630-021-02049-4. Epub ahead of print. PMID: 34195922; PMCID: PMC8244673.
-  2. ISARIC Clinical Characterisation Group. COVID-19 symptoms at hospital admission vary with age and sex: results from the ISARIC prospective multinational observational study. *Infection*. 2021 Jun 25;1–17. doi: 10.1007/s15010-021-01599-5. Epub ahead of print. PMID: 34170486; PMCID: PMC8231091
3. Keenan S, Kramer A, Healey A, Weiss MJ, Dhanani S, Beed S, **Djogovic D**, Sullivan K, Shemie SD. The variable impact of the overdose crisis on organ donation among five Canadian provinces: a retrospective study. *Can J Anaesth*. 2021 Jun;68(6):846-854. English. doi: 10.1007/s12630-021-01945-z. Epub 2021 Feb 9. PMID: 33564994.
4. **Douma MJ**, Graham TAD, Bone A, Ali S, Dennett L, **Brindley PG**, Kroll T, Fraser K. What are the care needs of families experiencing cardiac arrest care? A survivor and family-performed systematic review and qualitative meta-synthesis protocol. *International Journal of Qualitative Methods*. Publication pending 2021
5. Beed M, Adair J, **Brindley PG**. A six-year thematic review of reported incidents associated with cardiopulmonary resuscitation calls in a United Kingdom hospital. *J Patient Safety*. Publication Pending 2021
-  6. Paterson I, Ramanathan K, Aurora R, Bewick D, Chow CM, Clarke B, Cowan S, Ducharme A, Gin K, Graham M, Gupta A, Jassal DS, Kazmi M, Krahn A, Lamarche Y, Marelli A, Roifman I, Ruel M, **Singh G**, Sterns L, Turgeon R, Virani S, Wong KK, Zieroth S. Long COVID-19: A Primer for Cardiovascular Health Professionals On Behalf of the CCS Rapid Response Team. *Can J Cardiol*. 2021 Jun 3:S0828-282X(21)00287-7. doi: 10.1016/j.cjca.2021.05.011. Online ahead of print. PMID: 34090980
7. Desy, J., Noble, V. E., Liteplo, A. S., Olszynski, P., **Buchanan, B.**, Dversdal, R., Arishenkoff, S., Liu, G., Dumoulin, E., & Ma, I. W. Y. (2021). Minimal Criteria for Lung Ultrasonography in Internal Medicine. *Canadian Journal of General Internal Medicine*, 16(2), 6–13. <https://doi.org/10.22374/cjgim.v16i2.507>
8. Beaubien-Souligny W, Yang Y, Burns KEA, Friedrich JO, Meraz-Muñoz A, Clark EG, Adhikari NK, **Bagshaw SM**, Wald R. Intra-dialytic hypotension following the transition from continuous to intermittent renal replacement therapy. *Ann Intensive Care*. 2021 Jun 19;11(1):96. doi: 10.1186/s13613-021-00885-7. PMID: 34146164; PMCID: PMC8214642.
9. Damluji AA, **van Diepen S**, Katz JN, Menon V, Tamis-Holland JE, Bakitas M, Cohen MG, Balsam LB, Chikwe J; American Heart Association Council on Clinical Cardiology; Council on Arteriosclerosis,

Thrombosis and Vascular Biology; Council on Cardiovascular Surgery and Anesthesia; and Council on Cardiovascular and Stroke Nursing. Mechanical Complications of Acute Myocardial Infarction: A Scientific Statement From the American Heart Association. *Circulation*. 2021 Jul 13;144(2):e16-e35. doi: 10.1161/CIR.0000000000000985. Epub 2021 Jun 15. PMID:34126755.

10. Bhullar A, Rivas-Serna I, Anoveros-Barrera A, Dunichand-Hoedl A, Bigam D, **Khadaroo RG**, McMullen T, Bathe O, Putman CT, Baracos V, Clandinin MT, Mazurak, V. Depletion of essential fatty acids in muscle is associated with shorter survival of cancer patients undergoing surgery-preliminary report. *Scientific Reports* (Submitted June 2021).
11. Saravana-Bawan B, Goplen M, Alghamdi M, **Khadaroo RG**. The Relationship Between Visceral Obesity and Post-operative Complications: A Meta-analysis. *J Surg Res*. 2021 Jun 12;267:71-81. doi: 10.1016/j.jss.2021.04.034. Epub ahead of print. PMID: 34130241.
12. Khan R, Kaul P, Islam S, Savu A, Bagai A, **van Diepen S**, Baine KR, Welsh RC, Goodman SG. Drug Adherence and Long-Term Outcomes in Non-Revascularized Patients Following Acute Myocardial Infarction. *Am J Cardiol*. 2021 Aug 1;152:49-56. doi:10.1016/j.amjcard.2021.04.031. Epub 2021 Jun 11. PMID: 34120704.
13. Zhang M, Montroy J, Sharma R, Fergusson DA, Mendelson AA, **Macala KF**, Bourque SL, Schlechte JM, Eng MK, McDonald B, Gill SE, Fiest KM, Liaw PC, Fox-Robichaud A, Lalu MM. The Effects of Biological Sex on Sepsis Treatments in Animal Models: A Systematic Review and a Narrative Elaboration on Sex- and Gender-Dependent Differences in Sepsis. *Crit Care Explor*. 2021 Jun 14;3(6):e0433. doi:10.1097/CCE.0000000000000433. PMID: 34151276; PMCID:PMC8205191.
14. Scott BNV, Kramer AH, Nguyen R, Wong CHY, Jenne CN, Ruddell S, Wong J, Tse M, Winston BW, Soo A, Doig CJ, **Zygun DA**, Kubes P. Exploratory Evaluation of the Relationship Between iNKT Cells and Systemic Cytokine Profiles of Critically Ill Patients with Neurological Injury. *Neurocrit Care*. 2021 Jun 1. doi:10.1007/s12028-021-01234-z. Epub ahead of print. PMID:34061312.
15. **Bagshaw SM**, Al-Khafaji A, Artigas A, Davison D, Haase M, Lissauer M, Zacharowski K, Chawla LS, Kwan T, Kampf JP, McPherson P, Kellum JA. External validation of urinary C-C motif chemokine ligand 14 (CCL14) for prediction of persistent acute kidney injury. *Crit Care*. 2021 May 31;25(1):185. doi:10.1186/s13054-021-03618-1. PMID: 34059102; PMCID: PMC8166095.
16. Jahandideh F, Panahi S, Gragasin F, **Khadaroo RG**, **Macala K**, Bourque S. Characterization of Systemic and Regional Hemodynamics and Vascular Dysfunction in Mice with Fecal Induced Peritonitis, *Cardiovascular Research* (Submitted May 2021).
17. Jentzer JC, **van Diepen S**, Henry TD, Baran DA, Barsness GW, Holmes DR Jr. Influence of intra-aortic balloon pump on mortality as a function of cardiogenic shock severity. *Catheter Cardiovasc Interv*. 2021 May 28. doi: 10.1002/ccd.29800. Epub ahead of print. PMID: 34047486.
18. **Bagshaw SM**, Hoste EA, Wald R. When should we start renal-replacement therapy in critically ill patients with acute kidney injury: do we finally have the answer? *Crit Care*. 2021 May 26;25(1):179. doi: 10.1186/s13054-021-03600-x. PMID:34039373; PMCID: PMC8152190.
19. Jentzer JC, Kashani KB, Wiley BM, Patel PC, Baran DA, Barsness GW, Henry TD, **Van Diepen S**. Laboratory Markers of Acidosis and Mortality in Cardiogenic Shock: Developing a Definition of Hemometabolic Shock. *Shock*. 2021 May 13. doi:10.1097/SHK.0000000000001812. Epub ahead of print. PMID: 33988540.
20. White A, **Singh G**, Moon MC, Zheng B, Turner SR. Current status of simulation usage in Canadian cardiac surgery training programs. *Can J Cardiol*. 2021 May 5:S0828-282X(21)00235-X. doi: 10.1016/j.cjca.2021.04.020. Online ahead of print. PMID: 33964369
21. Shahbaz S, Xu L, Osman M, **Sligl W**, Shields J, Joyce M, Tyrrell DL, Oyegbami O, Elahi S. Erythroid

- precursors and progenitors suppress adaptive immunity and get invaded by SARS-CoV-2. *Stem Cell Reports*. 2021 May 11;16(5):1165-1181. doi: 10.1016/j.stemcr.2021.04.001. PMID: 33979601; PMCID: PMC8111797.
22. Prowle JR, Forni LG, Bell M, Chew MS, Edwards M, Grams ME, Grocott MPW, Liu KD, McIlroy D, Murray PT, Ostermann M, Zarbock A, **Bagshaw SM**, Bartz R, Bell S, Bihorac A, Gan TJ, Hobson CE, Joannidis M, Koyner JL, Levett DZH, Mehta RL, Miller TE, Mythen MG, Nadim MK, Pearse RM, Rimmel T, Ronco C, Shaw AD, Kellum JA. Postoperative acute kidney injury in adult non-cardiac surgery: joint consensus report of the Acute Disease Quality Initiative and PeriOperative Quality Initiative. *Nat Rev Nephrol*. 2021 May 11. doi:10.1038/s41581-021-00418-2. Epub ahead of print. PMID: 33976395.
 23. Dong V, Nadim MK, **Karvellas CJ**. Post-Liver Transplant Acute Kidney Injury. *Liver Transpl*. 2021 May 8. doi: 10.1002/lt.26094. Epub ahead of print. PMID:33963666.
 24. Bozorgmehr N, Mashhour S, Perez Rosero E, Xu L, Shahbaz S, **Sligl W**, Osman M, **Kutsogiannis DJ**, MacIntyre E, O'Neil CR, Elahi S. Galectin-9, a Player in Cytokine Release Syndrome and a Surrogate Diagnostic Biomarker in SARS-CoV-2 Infection. *mBio*. 2021 May 4;12(3):e00384-21. doi: 10.1128/mBio.00384-21. PMID: 33947753; PMCID: PMC8262904.
 25. Wald R, **Bagshaw SM**; STARRT-AKI Investigators. Integration of Equipoise into Eligibility Criteria in the STARRT-AKI Trial. *Am J Respir Crit Care Med*. 2021 May 3. doi:10.1164/rccm.202009-3425LE. Epub ahead of print. PMID: 33939598.
 26. Ye Z, Wang Y, Ge L, Guyatt GH, Collister D, Alhazzani W, **Bagshaw SM**, Belley-Cote EP, Fang F, Hou L, Kolb P, Lamontagne F, Oczkowski S, Pyne L, Rabbat C, Scaum M, Najafabadi BT, Tangamornsuksan W, Wald R, Wang Q, Walsh M, Yao L, Zeng L, Algarni AM, Couban RJ, Alexander PE, Rochweg B. Comparing Renal Replacement Therapy Modalities in Critically Ill Patients With Acute Kidney Injury: A Systematic Review and Network Meta-Analysis. *Crit Care Explor*. 2021 May 12;3(5):e0399. doi: 10.1097/CCE.0000000000000399. PMID: 34079944; PMCID:PMC8162503.
 27. Curran JD, Major P, Tang K, **Bagshaw SM**, Dionne JC, Menon K, Rochweg B. Comparison of Balanced Crystalloid Solutions: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Crit Care Explor*. 2021 May 14;3(5):e0398. doi: 10.1097/CCE.0000000000000398. PMID: 34036269; PMCID:PMC8133105.
 28. Meraz-Muñoz AY, **Bagshaw SM**, Wald R. Timing of kidney replacement therapy initiation in acute kidney injury. *Curr Opin Nephrol Hypertens*. 2021 May 1;30(3):332-338. doi: 10.1097/MNH.0000000000000707. PMID: 33767061.
 29. Saravana-Bawan B, Warkentin LM, Ohinmaa A, Wagg AS, Holroyd-Leduc J, Padwal RS, Clement F, **Khadaroo RG**. Patient reported outcomes in an elder-friendly surgical environment: Prospective, controlled before-after study. *Ann Med Surg (Lond)*. 2021 Apr 29;65:102368. doi: 10.1016/j.amsu.2021.102368. PMID: 34026101;PMCID: PMC8120860.
 30. Sutherland SM, Kaddourah A, Gillespie SE, Soranno DE, Woroniecki RP, Basu RK, Zappitelli M; Assessment of the Worldwide Acute Kidney Injury, Renal Angina and Epidemiology (AWARE) Investigators. Cumulative Application of Creatinine and Urine Output Staging Optimizes the Kidney Disease: Improving Global Outcomes Definition and Identifies Increased Mortality Risk in Hospitalized Patients With Acute Kidney Injury. *Crit Care Med*. 2021 Apr 28. doi: 10.1097/CCM.00000000000005073. Epub ahead of print. PMID: 33938717.
 31. Hayanga JWA, Likosky DS, **van Diepen S**, Holst K, Whitson BA, Whitman G, Arkley J, Dunning J, Arora RC. 2020 in review. *J Thorac Cardiovasc Surg*. 2021 Aug; 162(2):628-632. doi: 10.1016/j.jtcvs.2021.04.049. Epub 2021 Apr 24. PMID:34024612.
 32. Aletreby W, Alharthy A, **Brindley PG**, **Kutsogiannis DJ**, Faqih F, Alzayer W, Balhahmar A, Soliman I, Hamido H, Alqahtani SA, Karakitsos D, Blaivas M. Optic Nerve Sheath Diameter Ultrasound for Raised Intracranial Pressure: A Literature Review and Meta-analysis of its Diagnostic Accuracy. *J Ultrasound Med*. 2021 Apr 24. doi: 10.1002/jum.15732. Epub ahead of print. PMID: 33893746.
 33. Tyler JM, Brown C, Jentzer JC, Baran DA, **van Diepen S**, Kapur NK, Garberich RF, Garcia S, Sharkey SW, Henry TD. Variability in reporting of key outcome predictors in acute myocardial infarction cardiogenic shock trials. *Catheter Cardiovasc Interv*. 2021 Apr 19. doi: 10.1002/ccd.29710. Epub ahead of print. PMID: 33871159.
 34. Wijesundera DN, **Khadaroo RG** (invited expert). Surgery after a previous SARS-CoV-19 infection: data, answers, and questions, Anaesthesia. 2021 Jun;76(6):731-735. doi: 10.1111/anae.15490. Epub 2021 Apr 17. PMID: 33864692
 35. Wijesundera DN, **Khadaroo RG**. Surgery after a previous SARS-CoV-2 infection: data, answers and questions. *Anaesthesia*. 2021 Jun;76(6):731-735. doi: 10.1111/anae.15490. Epub 2021 Apr 17. PMID: 33864692; PMCID: PMC8251085.
 36. Tavabie OD, **Karvellas CJ**, Salehi S, Speiser JL, Rose CF, Menon K, Prachalias A, Heneghan MA, Agarwal K, Lee WM, McPhail MJW, Aluvihare VR; United States Acute Liver Failure Study Group. A novel microRNA-based prognostic model outperforms standard prognostic models in patients with acetaminophen-induced acute liver failure. *J Hepatol*. 2021 Aug;75(2):424-434. doi: 10.1016/j.jhep.2021.03.013. Epub 2021 Apr 12. PMID: 33857547.
 37. Faqih F, Alharthy A, Abdulaziz S, Balhamar A, Alomari A, AlAseri Z, Tamim H, Alqahtani SA, **Kutsogiannis DJ**, **Brindley PG**, Karakitsos D, Memish ZA. Therapeutic plasma exchange in patients with life-threatening COVID-19: a randomised controlled clinical trial. *Int J Antimicrob Agents*. 2021 May;57(5):106334. doi: 10.1016/j.ijantimicag.2021.106334. Epub 2021 Apr 7. PMID:33838224; PMCID: PMC8024223.
 38. Lee T, Cau A, Cheng MP, Levin A, Lee TC, Vinh DC, Lamontagne F, Singer J, Walley KR, Murthy S, Patrick D, **Rewa OG**, Winston BW, Marshall J, Boyd J, Tran K, Kalil AC, Mcculloh R, Fowler R, Luther JM, Russell JA; ARBs CORONA. Angiotensin Receptor Blockers and Angiotensin-Converting Enzyme Inhibitors in COVID-19: Meta-analysis/Meta-regression Adjusted for Confounding Factors. *CJC Open*. 2021 Jul;3(7):965-975. doi: 10.1016/j.cjco.2021.03.001. Epub 2021 Apr 6. PMID: 33842874; PMCID: PMC8023793.
 39. Padkins M, Breen T, **Van Diepen S**, Barsness G, Kashani K, Jentzer JC. Incidence and outcomes of acute kidney injury stratified by cardiogenic shock severity. *Catheter Cardiovasc Interv*. 2021 Aug 1;98(2):330-340. doi:10.1002/ccd.29692. Epub 2021 Apr 6. PMID: 33825337.
 40. Labeau SO, Afonso E, Benbenishty J, Blackwood B, Boulanger C, Brett SJ, Calvino-Gunther S, Chaboyer W, Coyer F, Deschepper M, François G, Honore PM, Jankovic R, Khanna AK, Llaurodo-Serra M, Lin F, Rose L, Rubulotta F, Saager L, Williams G, Blot SI; DecubICUs Study Team; European Society of Intensive Care Medicine (ESICM) Trials Group Collaborators. Correction to: Prevalence, associated factors and outcomes of pressure injuries in adult intensive care unit patients: the DecubICUs study. *Intensive Care Med*. 2021 Apr;47(4):503-520. doi: 10.1007/s00134-020-06327-5. Erratum for: *Intensive Care Med*. 2021 Feb;47(2):160-169. PMID: 33635356; PMCID: PMC8035092.
 41. Lau VI, Xie F, Basmaji J, Cook DJ, Fowler R, Kiflen M, Sirotich E, Iansavichene A, **Bagshaw SM**, Wilcox ME, Lamontagne F, Ferguson N, Rochweg B. Health-Related Quality-of-Life and Cost Utility Analyses in Critical Care: A Systematic Review. *Crit Care Med*. 2021 Apr 1;49(4):575-588. doi:10.1097/CCM.0000000000004851. PMID: 33591013.
 42. EPPPIC Group. Evaluating Progestogens for Preventing Preterm birth International Collaborative (EPPPIC): meta-analysis of individual participant data from randomised controlled trials. *Lancet*. 2021 Mar 27;397(10280):1183-1194. doi: 10.1016/S0140-6736(21)00217-8. Erratum in: *Lancet*.2021 Apr 17;397(10283):1446. PMID: 33773630.

43. Tyler J, Brown C, Jentzer JC, Baran D, **van Diepen S**, Kapur N, Garberich R, Garcia S, Sharkey SW, Henry TD. Underreporting of key outcome predictors in cardiogenic shock trials. *Catheterization and Cardiovascular Interventions* 202; 2021 April DOI: 10.1002/ccd.29710
44. **Montgomery CL**, Hopkin G, **Bagshaw SM**, Hessey E, Rolfson DB. Frailty inclusive care in acute and community-based settings: a systematic review protocol. *Syst Rev*. 2021 Mar 26;10(1):83. doi: 10.1186/s13643-021-01638-0. PMID: 33771224; PMCID: PMC8004471.
45. Mendelson AA, Lansdell C, Fox-Robichaud AE, Liaw P, Arora J, Cailhier JF, Cepinskas G, Charbonney E, Dos Santos C, Dwivedi D, Ellis CG, Fergusson D, Fiest K, Gill SE, Hendrick K, Hunniford VT, Kowalewska PM, Krewulak K, Lehmann C, **Macala K**, Marshall JC, Mawdsley L, McDonald B, McDonald E, Medeiros SK, Muniz VS, Osuchowski M, Presseau J, Sharma N, Sohrabipour S, Sunohara-Neilson J, Vázquez-Grande G, Veldhuizen RAW, Welsh D, Winston BW, Zarychanski R, Zhang H, Zhou J, Lalu MM; Sepsis Canada's National Preclinical Sepsis Platform. National Preclinical Sepsis Platform: developing a framework for accelerating innovation in Canadian sepsis research. *Intensive Care Med Exp*. 2021 Mar 19;9(1):14. doi: 10.1186/s40635-020-00366-4. PMID: 33738642; PMCID: PMC7973346.
46. Chu R, van Eeden C, Suresh S, **Sligl WI**, Osman M, Cohen Tervaert JW. Do COVID-19 Infections Result in a Different Form of Secondary Hemophagocytic Lymphohistiocytosis. *Int J Mol Sci*. 2021 Mar 15;22(6):2967. doi:10.3390/ijms22062967. PMID: 33803997; PMCID: PMC8001312.
47. Schwartz GG, Szarek M, Bittner VA, Bhatt DL, Diaz R, Goodman SG, Jukema JW, Loy M, Manvelian G, Porly R, White HD, Steg PG; ODYSSEY OUTCOMES Committees and Investigators. Relation of Lipoprotein(a) Levels to Incident Type 2 Diabetes and Modification by Alirocumab Treatment. *Diabetes Care*. 2021 May;44(5):1219-1227. doi: 10.2337/dc20-2842. Epub 2021 Mar 15. PMID: 33722880; PMCID: PMC8132323.
48. Roberts DJ, Bobrovitz N, **Zygun DA**, Kirkpatrick AW, Ball CG, Faris PD, Stelfox HT; for the Indications for Trauma Damage Control Surgery International Study Group. Evidence for use of damage control surgery and damage control interventions in civilian trauma patients: a systematic review. *World J Emerg Surg*. 2021 Mar 11;16(1):10. doi: 10.1186/s13017-021-00352-5. PMID: 33706763; PMCID: PMC7951941.
49. Dezfulian C, Orkin AM, Maron BA, Elmer J, Girotra S, Gladwin MT, Merchant RM, Panchal AR, Perman SM, Starks MA, **van Diepen S**, Lavonas EJ; American Heart Association Council on Cardiopulmonary, Critical Care, Perioperative and Resuscitation; Council on Arteriosclerosis, Thrombosis and Vascular Biology; Council on Cardiovascular and Stroke Nursing; Council on Quality of Care and Outcomes Research; and Council on Clinical Cardiology. Opioid-Associated Out-of-Hospital Cardiac Arrest: Distinctive Clinical Features and Implications for Health Care and Public Responses: A Scientific Statement From the American Heart Association. *Circulation*. 2021 Apr 20;143(16):e836-e870. doi:10.1161/CIR.0000000000000958. Epub 2021 Mar 8. PMID: 33682423.
50. **van Diepen S**, Morrow DA. Potential growth in cardiogenic shock research through an international registry collaboration: the merits and challenges of a Hub-of-Spokes model. *Eur Heart J Acute Cardiovasc Care*. 2021 Mar 5;10(1):3-5. doi: 10.1093/ehjacc/zuaa038. PMID: 33580781.
51. Gupta AK, **Senaratne JM**. Type A aortic intramural hematoma. *BMJ Case Rep*. 2021 Mar 1;14(3):e240650. doi: 10.1136/bcr-2020-240650. PMID: 33649027; PMCID:PMC7929871.
52. Joos E, de Jong N, Ball CG, Quigley S, Trottier V, Massé M, Engels PT, Rao J, Gillman LM, Visser R, **Widder S**, Hameed MS, Vogt KN; Canadian Collaborative on Urgent Care Surgery (CANUCS). Time to operating room matters in modern management of pancreatic injuries: A national review on the management of adult pancreatic injury at Canadian level 1 trauma centers. *J Trauma Acute Care Surg*. 2021 Mar 1;90(3):434-440. doi: 10.1097/TA.0000000000003025. PMID: 33617195.
53. **van Diepen S**, Armstrong PW. Learning whether to subtract beta-blockers: it's about time. *Eur Heart J*. 2021 Mar 1;42(9):915-918. doi: 10.1093/eurheartj/ehaa1033. PMID: 33428708.
54. Dong V, **Karvellas CJ**. Using technology to assess nutritional status and optimize nutrition therapy in critically ill patients. *Curr Opin Clin Nutr Metab Care*. 2021 Mar 1;24(2):189-194. doi: 10.1097/MCO.0000000000000721. PMID:33284200.
55. Lucini FR, Krewulak KD, Fiest KM, **Bagshaw SM**, Zuege DJ, Lee J, Stelfox HT. Natural language processing to measure the frequency and mode of communication between healthcare professionals and family members of critically ill patients. *J Am Med Inform Assoc*. 2021 Mar 1;28(3):541-548. doi: 10.1093/jamia/ocaa263. PMID: 33201981; PMCID: MC7936522.
56. Stravitz RT, Fontana RJ, Meinzer C, Durkalski V, Hanje AJ, Olson J, Koch D, Hamid B, Schilsky ML, McGuire B, Ganger D, Liou I, **Karvellas CJ**, Rule JA, Lisman T, Clasen K, Reuben A, Cripps MW, Lee WM; ALF Study Group. Coagulopathy, Bleeding Events and Outcome According to Rotational Thromboelastometry in Patients with Acute Liver Injury/Failure. *Hepatology*. 2021 Feb 26. doi: 10.1002/hep.31767. Epub ahead of print. PMID: 33636020.
57. Beaubien-Souligny W, Yang A, Lebovic G, Wald R, **Bagshaw SM**. Frailty status among older critically ill patients with severe acute kidney injury. *Crit Care*. 2021 Feb 25;25(1):84. doi: 10.1186/s13054-021-03510-y. PMID: 33632288; PMCID: PMC7908639.
58. REMAP-CAP Investigators, Gordon AC, Mouncey PR, Al-Beidh F, Rowan KM, Nichol AD, Arabi YM, Annane D, Beane A, van Bentum-Puijk W, Berry LR, Bhimani Z, Bonten MJM, Bradbury CA, Brunkhorst FM, Buzgau A, Cheng AC, Detry MA, Duffy EJ, Estcourt LJ, Fitzgerald M, Goossens H, Haniffa R, Higgins AM, Hills TE, Horvat CM, Lamontagne F, Lawler PR, Leavis HL, Linstrum KM, Litton E, Lorenzi E, Marshall JC, Mayr FB, McAuley DF, McGlothlin A, McGuinness SP, McVerry BJ, Montgomery SK, Morpeth SC, Murthy S, Orr K, Parke RL, Parker JC, Patanwala AE, Pettilä V, Rademaker E, Santos MS, Saunders CT, Seymour CW, Shankar-Hari M, **Sligl WI**, Turgeon AF, Turner AM, van de Veerdonk FL, Zarychanski R, Green C, Lewis RJ, Angus DC, McArthur CJ, Berry S, Webb SA, Derde LPG. Interleukin-6 Receptor Antagonists in Critically Ill Patients with Covid-19. *N Engl J Med*. 2021 Apr 22;384(16):1491-1502. doi: 10.1056/NEJMoa2100433. Epub 2021 Feb 25. PMID: 33631065; PMCID: PMC7953461.
59. **Hall A**, Wang X, Zuege DJ, Opgenorth D, Scales DC, Stelfox HT, **Bagshaw SM**. Association Between Afterhours Discharge From the Intensive Care Unit and Hospital Mortality: A Multi-Center Retrospective Cohort Study. *J Intensive Care Med*. 2021 Feb 25;885066620981902. doi: 10.1177/0885066620981902. Epub ahead of print. PMID: 33626957.
60. Coccolini F, Kluger Y, Moore EE, Maier RV, Coimbra R, Ordoñez C, Ivatury R, Kirkpatrick AW, Biffl W, Sartelli M, Hecker A, Ansaloni L, Leppaniemi A, Reva V, Civil I, Vega F, Chiarugi M, Chichom-Mefire A, Sakakushev B, Peitzman A, Chiara O, Abu-Zidan F, Maegele M, Miccoli M, Chirica M, Khokha V, Sugrue M, Fraga GP, Otomo Y, Baiocchi GL, Catena F; and the WSES Trauma Quality Indicators Expert Panel. Trauma quality indicators: internationally approved core factors for trauma management quality evaluation. *World J Emerg Surg*. 2021 Feb 23;16(1):6. doi: 10.1186/s13017-021-00350-7. PMID: 33622373; PMCID: PMC7901006.
61. **Bagshaw SM**, Wald R. Starting Kidney Replacement Therapy in Critically Ill Patients with Acute Kidney Injury. *Crit Care Clin*. 2021 Apr;37(2):409-432. doi: 10.1016/j.ccc.2020.11.005. Epub 2021 Feb 13. PMID: 33752864.
62. Saleh Z, Koshy S, Sidhu V, Opgenorth A, **Senaratne J**. Spontaneous coronary artery dissection in association with cabergoline therapy. *BMJ Case Rep*. 2021 Feb 9;14(2):e240022. doi: 10.1136/bcr-2020-240022. PMID: 33563672; PMCID:PMC7875262.
63. Miller PE, **van Diepen S**, Metkus TS, Alviar CL, Rayner-Hartley E, Rathwell S, Katz JN, Ezekowitz J, Desai NR, Ahmad T. Association between Respiratory Failure and Clinical Outcomes in Patients with Acute Heart Failure: Analysis of 5 Pooled Clinical Trials. *J Card Fail*. 2021 May;27(5):602-606. doi: 10.1016/j.cardfail.2021.01.018. Epub 2021 Feb 5. PMID: 3556546.
64. Basu RK, Hackbarth R, Gillespie S, Akcan-Arikan A, Brophy P, **Bagshaw S**, Alobaidi R, Goldstein SL.

Clinical phenotypes of acute kidney injury are associated with unique outcomes in critically ill septic children. *Pediatr Res*. 2021 Feb 2;1–8. doi: 10.1038/s41390-021-01363-3. Epub ahead of print. PMID: 33531676; PMID: PMC7852056.

65. **van Diepen S**, Henry TD. Risk stratifying patients with out-of-hospital cardiac arrest: The case for dynamic predictions models. *Catheter Cardiovasc Interv*. 2021 Feb 1;97(2):235-236. doi: 10.1002/ccd.29476. PMID: 33587800.
66. **Deschamps J**, Gilbertson J, Straube S, Dong K, MacMaster FP, Korownyk C, Montgomery L, Mahaffey R, Downar J, Clarke H, Muscedere J, Rittenbach K, Featherstone R, Sebastianski M, Vandermeer B, Lynam D, Magnussen R, **Bagshaw SM**, **Rewa OG**. Association between supportive interventions and healthcare utilization and outcomes in patients on long-term prescribed opioid therapy presenting to acute healthcare settings: a systematic review and meta-analysis. *BMC Emerg Med*. 2021 Jan 29;21(1):17. doi: 10.1186/s12873-020-00398-9. PMID: 33514325; PMID: PMC7845034.
67. Dhanani S, Hornby L, van Beinum A, Scales NB, Hogue M, Baker A, Beed S, Boyd JG, Chandler JA, Chassé M, D'Aragon F, Dezfulian C, Doig CJ, Duska F, Friedrich JO, Gardiner D, Gofton T, Harvey D, Herry C, Isac G, Kramer AH, **Kutsogiannis DJ**, Maslove DM, Meade M, Mehta S, Munshi L, Norton L, Pagliarello G, Ramsay T, Rusinova K, Scales D, Schmidt M, Seely A, Shahin J, Slessarev M, So D, Talbot H, van Mook WNKA, Waldauf P, Weiss M, Wind JT, Shemie SD; Canadian Critical Care Trials Group; Canadian Donation and Transplantation Research Program. Resumption of Cardiac Activity after Withdrawal of Life-Sustaining Measures. *N Engl J Med*. 2021 Jan 28;384(4):345-352. doi: 10.1056/NEJMoa2022713. PMID: 33503343.
68. Phillips DB, Brotto AR, Ross BA, Bryan TL, Wong EYL, Meah VL, Fuhr DP, van Diepen S, Stickland MK; Canadian Respiratory Research Network. Inhaled nitric oxide improves ventilatory efficiency and exercise capacity in patients with mild COPD: A randomized-control cross-over trial. *J Physiol*. 2021 Mar;599(5):1665-1683. doi: 10.1113/JP280913. Epub 2021 Jan 25. PMID: 33428233.
69. Elhenawy AM, Meyer SR, **Bagshaw SM**, MacArthur RG, Carroll LJ. Role of preoperative intravenous iron therapy to correct anemia before major surgery: a systematic review and meta-analysis. *Syst Rev*. 2021 Jan 23;10(1):36. doi:10.1186/s13643-021-01579-8. PMID: 33485392; PMID: PMC7824930.
70. Jentzer JC, Burstein B, **van Diepen S**, Murphy J, Holmes DR, Bell MR, Barsness GW, Henry TD, Menon V, Rihal CS, Naidu SS, Baran DA. Defining shock and pre-shock for mortality risk stratification in Cardiac Intensive Care Unit patients. *Circulation: Heart Failure* 19 January 2021; 14:e007678. DOI: 10.1161/CIRCHEARTFAILURE.120.007678
71. Moghaddam N, **van Diepen S**, So D, Lawler PR, Fordyce CB. Cardiogenic shock teams and centres: a contemporary review of multidisciplinary care for cardiogenic shock. *ESC Heart Fail*. 2021 Apr;8(2):988-998. doi: 10.1002/ehf2.13180. Epub 2021 Jan 16. PMID: 33452763; PMID: PMC8006679.
72. **Milovanovic L**, Hessey E, Sebastianski M, Keto-Lambert D, Vandermeer B, **Bagshaw SM**, Rewa O. Epidemiology, clinical characteristics and treatment of critically ill patients with COVID-19): a protocol for a living systematic review. *BMJ Open*. 2021 Jan 5;11(1):e042008. doi: 10.1136/bmjopen-2020-042008. PMID: 33402406; PMID: PMC7786544.
73. Sun LY, Rodger J, Duffett L, Tulloch H, Crean AM, Chong AY, Rubens FD, MacPhee E, Mesana TG, Lee DS, **van Diepen S**, Beanlands RS, Ruel M, Julien AM, Bilodeau J. Derivation of Patient-Defined Adverse Cardiovascular and Noncardiovascular Events Through a Modified Delphi Process. *JAMA Netw Open*. 2021 Jan 4;4(1):e2032095. doi: 10.1001/jamanetworkopen.2020.32095. PMID: 33394003; PMID: PMC7783543.
74. Aletreby WT, **Brindley PG**, Balshi AN, Huwait BM, Alharthy AM, Madi AF, Ramadan OE, Noor ASN, Alzayer WS, Alodat MA, Hamido HM, Mumtaz SA, Balahmar A, Vasillios P, Mhawish H, Karakitsos D. Delayed intensive care unit admission from the emergency department: impact on patient outcomes.

A retrospective study. *Rev Bras Ter Intensiva*. 2021 Jan-Mar;33(1):125-137. doi: 10.5935/0103-507X.20210014. PMID: 33886862; PMID: PMC8075331.

75. Hessey E, Melhem N, Alobaidi R, Ulrich E, Morgan C, **Bagshaw SM**, Sinha MD. Acute Kidney Injury in Critically Ill Children Is Not all Acute: Lessons Over the Last 5 Years. *Front Pediatr*. 2021 Mar 15;9:648587. doi:10.3389/fped.2021.648587. PMID: 33791260; PMID: PMC8005629.
76. Murthy S, Archambault PM, Atique A, Carrier FM, Cheng MP, Codan C, Daneman N, Dechert W, Douglas S, Fiest KM, Fowler R, Goco G, Gu Y, Guerguerian AM, Hall R, Hsu JM, Joffe A, Jovet P, Kelly L, Kho ME, Kruisselbrink RJ, Kumar D, **Kutsogiannis DJ**, Lamontagne F, Lee TC, Menon K, O'Grady H, O'Hearn K, Ovakim DH, Pharand SG, Pitre T, Reel R, Reeve B, **Rewa O**, Richardson D, Rishu A, Sandhu G, Sarfo-Mensah S, Shadowitz E, **Sligl W**, Solomon J, Stelfox HT, Swanson A, Tessier- Grenier H, Tsang JLY, Wood G; SPRINT-SARI Canada Investigators and the Canadian Critical Care Trials Group. Characteristics and outcomes of patients with COVID-19 admitted to hospital and intensive care in the first phase of the pandemic in Canada: a national cohort study. *CMAJ Open*. 2021 Mar 8;9(1):E181-E188. doi: 10.9778/cmajo.20200250. PMID: 3688026; PMID: PMC8034299.
77. Jentzer JC, Burstein B, **van Diepen S**, Murphy J, Holmes DR Jr, Bell MR, Barsness GW, Henry TD, Menon V, Rihal CS, Naidu SS, Baran DA. Defining Shock and Preshock for Mortality Risk Stratification in Cardiac Intensive Care Unit Patients. *Circ Heart Fail*. 2021 Jan;14(1):e007678. doi:10.1161/CIRCHEARTFAILURE.120.007678. Epub 2021 Jan 19. PMID: 33464952.
78. Busch SA, **van Diepen S**, Roberts R, Steele AR, Berthelsen LF, Smorschok MP, Bourgoin C, Steinback CD. Short-term hypoxia does not promote arrhythmia during voluntary apnea. *Physiol Rep*. 2021 Jan;9(1):e14703. doi: 10.14814/phy2.14703. PMID: 33426815; PMID: PMC7797307.
79. Nanayakkara G., Rai R., Kirincic L., Lightfoot R., **Senaratne J.**, Senaratne M. Differences in clinical measures and outcomes in South Asians versus Caucasians attending cardiac rehabilitation. *Canadian Journal of Cardiology Open* 2021. doi:10.1016/j/cjco/2021/03.014.
80. Alhumaid W., Yogasundaram H., **Senaratne J.** Slow bidirectional ventricular tachycardia as a manifestation of immune checkpoint inhibitor myocarditis. *European Heart Journal* 2021. doi:10.1093/eurheart/ehab219.
81. Yogasundaram H., Alhumaid W., Chen J., Church M., Alhulaimi N., Kimber S., Paterson D., **Senaratne J.** Plasma exchange for immune checkpoint inhibitor-induced myocarditis. *Canadian Journal of Cardiology Open* 2021;3:379-382.
82. Saleh Z., Koshy S., Sidhu V., Opgenorth A., **Senaratne J.** Spontaneous coronary artery dissection in association with cabergoline therapy. *BMJ Case Reports* 2021;14(2):e240022.
83. Gouda P., Sivakumaran S., **Senaratne J.** Electrical organization of torsades de pointes into monomorphic ventricular tachycardia. *European Heart Journal Case Reports* 2020;4:1-2.
84. Alharthy A, Bakirova GH, Bakheet H, Balhamar A, **Brindley PG**, Alqahtani SA, Memish ZA, Karakitsos D. COVID-19 with spontaneous pneumothorax, pneumomediastinum, and subcutaneous emphysema in the intensive care unit: Two case reports. *J Infect Public Health*. 2021 Mar;14(3):290-292. doi: 10.1016/j.jiph.2020.12.019. Epub 2020 Dec 29. PMID: 33610937; PMID: PMC7771902.
85. Alharthy A, Faqih F, Memish ZA, Balhamar A, Nasim N, Shahzad A, Tamim H, Alqahtani SA, **Brindley PG**, Karakitsos D. Continuous renal replacement therapy with the addition of CytoSorb cartridge in critically ill patients with COVID-19 plus acute kidney injury: A case-series. *Artif Organs*. 2021 May;45(5):E101-E112. doi: 10.1111/aor.13864. Epub 2020 Dec 26. PMID: 33190288; PMID: PMC7753655.
86. Parhar KKS, Zuege DJ, Shariff K, Knight G, **Bagshaw SM**. Prone positioning for ARDS patients-tips for preparation and use during the COVID-19 pandemic. *Can J Anaesth*. 2021 Apr;68(4):541-545. doi:

10.1007/s12630-020-01885-0. Epub 2020 Dec 24. PMID: 33367994; PMCID: PMC7759020.

87. Khemichian S, Francoz C, Durand F, **Karvellas CJ**, Nadim MK. Hepatorenal Syndrome. *Crit Care Clin*. 2021 Apr;37(2):321-334. doi: 10.1016/j.ccc.2020.11.011. Epub 2020 Dec 15. PMID: 33752858.
88. Eksteen A, O'Dochartaigh D, Odenbach J, Douma MJ, O'Neill K, Anantha R, Bradley NL, Gauri A, **Widder S**. A gap analysis of the potential use of resuscitative endovascular balloon occlusion of the aorta (REBOA) in trauma at two major Canadian trauma centers. *CJEM*. 2021 Jan;23(1):36-44. doi: 10.1007/s43678-020-00007-5. Epub 2020 Dec 15. PMID: 33683614.
89. Buzo BF, Preiksaitis JK, Halloran K, Nagendran J, **Townsend DR**, Zelyas N, **Sligl WI**. Association between Mycoplasma and Ureaplasma airway positivity, ammonia levels, and outcomes post-lung transplantation: A prospective surveillance study. *Am J Transplant*. 2021 Jun;21(6):2123-2131. doi: 10.1111/ajt.16394. Epub 2020 Dec 10. PMID: 33179447.
90. **Khadaroo RG**, Bhullar AS, Tandon P, Baracos VE, Al-Khathiri O, Salim SY. Response Regarding: Thigh Ultrasound Used to Identify Frail Elderly Patients With Sarcopenia Undergoing Surgery: A Pilot Study. *J Surg Res*. 2021 Apr;260:522-523. doi: 10.1016/j.jss.2020.11.082. Epub 2020 Dec 9. PMID:33308827.
91. **Douma MJ**, Picard C, O'Dochartaigh D, **Brindley PG**. Prone mechanical cardiopulmonary resuscitation (CPR): Optimal supine chest compression metrics can be achieved in the prone position. *Resuscitation*. 2021 Feb;159:172-173. doi: 10.1016/j.resuscitation.2020.11.036. Epub 2020 Dec 7. PMID: 33301888; PMCID: PMC7721356.
92. Al Assil R, Singer J, Fordyce CB, Scheuermeyer F, **van Diepen S**, Wong G, Sekhon M, Stenstorm R, Christenson J, Grunau B. The Association and Test Performance of pH Values During the First 24 Hours to Predict Futility Among Patients With Out-of-Hospital-Cardiac-Arrest. *Resuscitation* 2020; February 2021 DOI: 10.1016/j.resuscitation.2020.12.017
93. Xu J, Xie J, Du B, Tong Z, Qiu H, **Bagshaw SM**. Clinical Characteristics and Outcomes of Patients With Severe COVID-19 Induced Acute Kidney Injury. *J Intensive Care Med*. 2021 Mar;36(3):319-326. doi: 10.1177/0885066620970858. Epub 2020 Dec 3. PMID: 33267722.
94. Cardoso FS, Pereira R, Moreno R, **Karvellas CJ**, Germano N. Optic Nerve Sheath Diameter in Acute Liver Failure: A Prospective Cohort Study. *GE Port J Gastroenterol*. 2021 Apr;28(3):170-178. doi: 10.1159/000511646. Epub 2020 Dec 2. PMID: 34056039; PMCID: PMC8138150.
95. Gouda P, Sivakumaran S, **Senaratne J**. Electrical organization of torsades de pointes into monomorphic ventricular tachycardia. *Eur Heart J Case Rep*. 2020 Dec 12;4(6):1-2. doi: 10.1093/ehjcr/ytaa487. PMID: 33447721; PMCID: PMC7793232.
96. Jentzer JC, Lawler PR, **van Diepen S**, Henry TD, Menon V, Baran DA, Džavík V, Barsness GW, Holmes DR Jr, Kashani KB. Systemic Inflammatory Response Syndrome Is Associated With Increased Mortality Across the Spectrum of Shock Severity in Cardiac Intensive Care Patients. *Circ Cardiovasc Qual Outcomes*. 2020 Dec;13(12):e006956. doi: 10.1161/CIRCOUTCOMES.120.006956. Epub 2020 Dec 7. PMID: 33280435.
97. Maratta C, Hutchison K, Moore GP, **Bagshaw SM**, Granton J, Kirpalani H, Stelfox HT, Ferguson N, Cook D, Parshuram CS. In-House, Overnight Physician Staffing: A Cross-Sectional Survey of Canadian Adult ICUs. *Crit Care Med*. 2020 Dec;48(12):e1203-e1210. doi: 10.1097/CCM.0000000000004598. PMID: 33031147.
98. Wong J, Montague S, Wallace P, Negishi K, Liteplo A, Ringrose J, Dversdal R, **Buchanan B**, Desy J, Ma IWY. Barriers to learning and using point-of-care ultrasound: a survey of practicing internists in six North American institutions. *Ultrasound J*. 2020 Apr 19;12(1):19. doi: 10.1186/s13089-020-00167-6. PMID: 32307598; PMCID: PMC7167384.

99. Lau A, **Sligl W**, Sun K, Barrie J, Long R. Incidence and significance of venous thromboembolism in critically ill pulmonary tuberculosis patients. *Eur Respir J*. 2020 Dec 24;56(6):2001753. doi: 10.1183/13993003.01753-2020. PMID: 32586889.
100. **van Diepen S**. Routine Unloading in Patients Treated With Extracorporeal Membrane Oxygenation for Cardiogenic Shock: Mixed Outcomes Set the Stage for Future Trials. *Circulation*. 2020 Dec;142(22):2107-2109. doi: 10.1161/CIRCULATIONAHA.120.050847. Epub 2020 Nov 30. PMID: 33252999.
101. Harvey AK, Burns KEA, McArthur E, Adhikari NKJ, Li D, Kitchlu A, Meraz-Munõz A, Garg AX, Nash DM, Perez-Sanchez A, Beaubien-Souligny W, **Bagshaw SM**, Friedrich JO, Silver SA, Wald R. Short-and long-term outcomes of sustained low efficiency dialysis vs continuous renal replacement therapy in critically ill patients with acute kidney injury. *J Crit Care*. 2021 Apr;62:76-81. doi: 10.1016/j.jcrc.2020.11.003. Epub 2020 Nov 22. PMID: 33290929.
102. Lester ELW, Dvorak JE, Maluso PJ, Tatebe LC, **Widder S**, Bokhari F. The Impact of the Affordable Care Act on Trauma Outcomes in At Risk Groups: An Interrupted Time Series Analysis with Control Group. *Ann Surg*. 2020 Nov 17. doi: 10.1097/SLA.0000000000004635. Epub ahead of print. PMID: 33214468.
103. Yogasundaram H, Alhumaid W, Chen JW, Church M, Alhulaimi N, Kimber S, Paterson DI, **Senaratne JM**. Plasma Exchange for Immune Checkpoint Inhibitor- Induced Myocarditis. *CJC Open*. 2020 Nov 14;3(3):379-382. doi:10.1016/j.cjco.2020.11.004. PMID: 33778457; PMCID: PMC7984993.
104. Grunau B, Shemie SD, Wilson LC, Dainty KN, Nagpal D, Hornby L, Lamarche Y, **van Diepen S**, Kanji HD, Gould J, Saczkowski R, Brooks SC. Current Use, Capacity, and Perceived Barriers to the Use of Extracorporeal Cardiopulmonary Resuscitation for Out-of-Hospital Cardiac Arrest in Canada. *CJC Open*. 2020 Nov 13;3(3):327-336. doi: 10.1016/j.cjco.2020.11.005. PMID: 33778449; PMCID:PMC7985000.
105. Alharthy A, Abuhamdah M, Balhamar A, Faqihi F, Nasim N, Ahmad S, Noor A, Tamim H, Alqahtani SA, Abdulaziz Al Saud AAASB, **Kutsogiannis DJ**, **Brindley PG**, Memish ZA, Karakitsos D, Blaivas M. Residual Lung Injury in Patients Recovering From COVID-19 Critical Illness: A Prospective Longitudinal Point-of-Care Lung Ultrasound Study. *J Ultrasound Med*. 2020 Nov 13. doi: 10.1002/jum.15563. Epub ahead of print. PMID: 33185316.
106. Raslan IR, Ross HJ, Fowler RA, Scales DC, Stelfox HT, Mak S, Tu JV, Farkouh ME, Stukel TA, Wang X, **van Diepen S**, Wunsch H, Austin PC, Lee DS. The associations between direct and delayed critical care unit admission with mortality and readmissions among patients with heart failure. *Am Heart J*. 2021 Mar;233:20-38. doi: 10.1016/j.ahj.2020.11.002. Epub 2020 Nov 6. PMID: 33166518.
107. Bjornstad EC, Krallman KA, Askenazi D, Zappitelli M, Goldstein SL, Basu RK; SPARC Investigators. Preliminary Assessment of Acute Kidney Injury in Critically Ill Children Associated with SARS-CoV-2 Infection: A Multicenter Cross-Sectional Analysis. *Clin J Am Soc Nephrol*. 2021 Mar 8;16(3):446-448. doi: 10.2215/CJN.11470720. Epub 2020 Nov 3. PMID: 33144276; PMCID: PMC8011012.
108. **Brindley PG**, **Byker L**, Carley S, Thoma B. Assessing on-line medical education resources: A primer for acute care medical professionals and others. *JICS* Mar 2021. <https://doi.org/10.1177/1751143721999949>.
109. Burstein B, Bibas L, Rayner-Hatley, E, Jentzer JC, **van Diepen S**, Goldfarb M. National inter-hospital transfer practices for patients with acute cardiovascular conditions. *Canadian Journal of Cardiology Open* November 2020; DOI: 10.1016/j.cjco.2020.07.003
110. Fordyce CB, Katz JN, Alviar CL, Arslanian-Engoren C, Bohula EA, Geller BJ, Hollenberg SM, Jentzer JC, Sims DB, Washam JB, **van Diepen S**; American Heart Association Council on Clinical Cardiology; Council on Arteriosclerosis, Thrombosis and Vascular Biology; Council on Cardiovascular and Stroke Nursing; Council on Cardiopulmonary, Critical Care, Perioperative and Resuscitation; and Stroke

Council. Prevention of Complications in the Cardiac Intensive Care Unit: A Scientific Statement From the American Heart Association. *Circulation*. 2020 Dec;142(22):e379-e406. doi: 10.1161/CIR.0000000000000909. Epub 2020 Oct 29. PMID: 33115261.

111. Wald R, **Bagshaw SM**; STARRT-AKI Investigators. Timing of Initiation of Renal-Replacement Therapy in Acute Kidney Injury. Reply. *N Engl J Med*. 2020 Oct 29;383(18):1797-1798. doi: 10.1056/NEJMc2027489. PMID: 33113308.
112. Miller PE, Thomas A, Breen TJ, Chouairi F, Kunitomo Y, Aslam F, Damluji AA, Anavekar NS, Murphy JG, **van Diepen S**, Barsness GW, Brennan J, Jentzer J. Prevalence of Noncardiac Multimorbidity in Patients Admitted to Two Cardiac Intensive Care Units and Their Association with Mortality. *Am J Med*. 2021 May;134(5):653-661.e5. doi: 10.1016/j.amjmed.2020.09.035. Epub 2020 Oct 28. PMID: 33129785; PMCID: PMC8079541.
113. Jawitz OK, Stebbins AS, Raman V, Alhanti B, **van Diepen S**, Heringlake M, Fremes S, Whitlock R, Meyer SR, Mehta RH, Stafford-Smith M, Goodman SG, Alexander JH, Lopes RD. Association between levosimendan, postoperative AKI, and mortality in cardiac surgery: Insights from the LEVO-CTS trial. *Am Heart J*. 2021 Jan;231:18-24. doi: 10.1016/j.ahj.2020.10.066. Epub 2020 Oct 28. PMID: 33127531; PMCID: PMC7755750.
114. Wald R, **Bagshaw SM**. COVID-19-Associated Acute Kidney Injury: Learning from the First Wave. *J Am Soc Nephrol*. 2021 Jan;32(1):4-6. doi:10.1681/ASN.2020101401. Epub 2020 Oct 28. PMID: 33115918; PMCID: PMC7894658.
115. Zarbock A, Küllmar M, Kindgen-Milles D, Wempe C, Gerss J, Brandenburger T, Dimski T, Tyczynski B, Jahn M, Mülling N, Mehrländer M, Rosenberger P, Marx G, Simon TP, Jaschinski U, Deetjen P, Putensen C, Schewe JC, Kluge S, Jarczak D, Slowinski T, Bodenstein M, Meybohm P, Wirtz S, Moerer O, Kortgen A, Simon P, **Bagshaw SM**, Kellum JA, Meersch M; RICH Investigators and the Sepnet Trial Group. Effect of Regional Citrate Anticoagulation vs Systemic Heparin Anticoagulation During Continuous Kidney Replacement Therapy on Dialysis Filter Life Span and Mortality Among Critically Ill Patients With Acute Kidney Injury: A Randomized Clinical Trial. *JAMA*. 2020 Oct 27;324(16):1629-1639. doi: 10.1001/jama.2020.18618. PMID: 33095849; PMCID: PMC7585036.
116. Osman M, Faridi RM, **Sligl W**, Shabani-Rad MT, Dharmani-Khan P, Parker A, Kalra A, Tripathi MB, Storek J, Cohen Tervaert JW, Khan FM. Impaired natural killer cell counts and cytolytic activity in patients with severe COVID-19. *Blood Adv*. 2020 Oct 27;4(20):5035-5039. doi: 10.1182/bloodadvances.2020002650. PMID: 33075136; PMCID: PMC7594380.
117. Allen L, Vogt K, Joos E, van Heest R, Saleh F, **Widder S**, Hameed M, Parry NG, Minor S, Murphy P. Impact of interhospital transfer on patient outcomes in emergency general surgery. *Surgery*. 2021 Feb;169(2):455-459. doi:10.1016/j.surg.2020.08.032. Epub 2020 Oct 23. PMID: 33268072.
118. Ma IWY, Noble VE, Mints G, Wong T, Tonelli AC, Hussain A, Liu RB, Hergott CA, Dumoulin E, Chee A, Miller DJ, Walker B, **Buchanan B**, Wagner M, Arishenkoff S, Liteplo AS. On Recommending Specific Lung Ultrasound Protocols in the Assessment of Medical Inpatients with Known or Suspected Coronavirus Disease-19 Reply. *J Ultrasound Med*. 2021 Feb 8;10.1002/jum.15650. doi: 10.1002/jum.15650. Epub ahead of print. PMID: 33555607; PMCID: PMC8013807.
119. Hampton LA, **Brindley P.G.**, Kirkpatrick A, Mckee J, Regehr J, Matrin D, Laporta A, Park J, Vergis A, Gillman LM. Enhancing Telementoring in Acute Care Coordination Using Standardized Communication Telemedicine. *Can J Surg* 2020 publication pending
120. **Buchanan BM, Brindley PG, Bagshaw SM, Alherbish A**, Daniels VJ. Development of a critical care ultrasound curriculum using a mixed-methods needs assessment and engagement of frontline healthcare professionals. *Can J Anaesth*. 2021 Jan;68(1):71-80. English. doi: 10.1007/s12630-020-01829-8. Epub 2020 Oct 21. PMID: 33089414.

121. Fanaroff AC, Chen AY, **van Diepen S**, Mylod D, Peterson ED, Wang TY. Association between intensive care unit utilization for patients with non-ST-segment elevation myocardial infarction and patient experience. *Am Heart J*. 2021 Jan;231:32-35. doi: 10.1016/j.ahj.2020.09.014. Epub 2020 Oct 10. PMID: 33045223.
122. Ma IWY, Hussain A, Wagner M, Walker B, Chee A, Arishenkoff S, **Buchanan B**, Liu RB, Mints G, Wong T, Noble V, Tonelli AC, Dumoulin E, Miller DJ, Hergott CA, Liteplo AS. Canadian Internal Medicine Ultrasound (CIMUS) Expert Consensus Statement on the Use of Lung Ultrasound for the Assessment of Medical Inpatients With Known or Suspected Coronavirus Disease 2019. *J Ultrasound Med*. 2020 Dec 4. doi: 10.1002/jum.15571. Epub ahead of print. PMID: 33274782.
123. Labeau SO, Afonso E, Benbenishty J, Blackwood B, Boulanger C, Brett SJ, Calvino-Gunther S, Chaboyer W, Coyer F, Deschepper M, François G, Honore PM, Jankovic R, Khanna AK, Llaurodo-Serra M, Lin F, Rose L, Rubulotta F, Saager L, Williams G, Blot SI; DecubiCUs Study Team; European Society of Intensive Care Medicine (ESICM) Trials Group Collaborators. Prevalence, associated factors and outcomes of pressure injuries in adult intensive care unit patients: the DecubiCUs study. *Intensive Care Med*. 2021 Feb;47(2):160-169. doi: 10.1007/s00134-020-06234-9. Epub 2020 Oct 9. Erratum in: *Intensive Care Med*. 2021 Apr;47(4):503-520. PMID: 33034686; PMCID: PMC7880913.
124. Faqih F, Alharthy A, Memish ZA, **Kutsogiannis DJ, Brindley PG**, Karakitsos D. Peripheral neuropathy in severe COVID-19 resolved with therapeutic plasma exchange. *Clin Case Rep*. 2020 Oct 7;8(12):3234-9. doi: 10.1002/ccr3.3397. Epub ahead of print. PMID: 33230414; PMCID: PMC7675564.
125. REMAP-CAP Investigators, the Canadian Critical Care Trials Group. **Bagshaw SM, Rewa O, Sligl W**. Effect of hydrocortisone on Mortality and Organ Support in Patients With Severe COVID-19: The REMAP-CAP COVID-19 Corticosteroid Domain Randomized Clinical Trial. *JAMA*. 2020 Oct 6;324(13):1317-1329. doi: 10.1001/jama.2020.17022. PMID: 32876697; PMCID: PMC7489418.
126. Schwartz IS, Friedman DZP, Zapernick L, Dingle TC, Lee N, **Sligl W**, Zelyas N, Smith SW. High Rates of Influenza-Associated Invasive Pulmonary Aspergillosis May Not Be Universal: A Retrospective Cohort Study from Alberta, Canada. *Clin Infect Dis*. 2020 Oct 23;71(7):1760-1763. doi: 10.1093/cid/ciaa007. PMID: 31905235.
127. Cardoso FS, Pereira R, Laranjo A, Gamelas V, Bagulho L, Germano N, **Karvellas CJ**. Positive fluid balance was associated with mortality in patients with acute-on-chronic liver failure: A cohort study. *J Crit Care*. 2021 Jun;63:238-242. doi: 10.1016/j.jcrc.2020.09.012. Epub 2020 Sep 20. PMID: 32988683.
128. **Montgomery CL**, Thanh NX, Stelfox HT, Norris CM, Rolfson DB, Meyer SR, **Zibdawi MA, Bagshaw SM**. The Impact of Preoperative Frailty on the Clinical and Cost Outcomes of Adult Cardiac Surgery in Alberta, Canada: A Cohort Study. *CJC Open*. 2020 Sep 14;3(1):54-61. doi: 10.1016/j.cjco.2020.09.009. PMID: 33458633; PMCID: PMC7801203.
129. MacDonald AJ, Speiser JL, Ganger DR, Nilles KM, Orandi BJ, Larson AM, Lee WM, **Karvellas CJ**; US Acute Liver Failure Study Group. Clinical and Neurologic Outcomes in Acetaminophen-Induced Acute Liver Failure: A 21-Year Multicenter Cohort Study. *Clin Gastroenterol Hepatol*. 2020 Sep 10:S1542-3565(20)31273-8. doi: 10.1016/j.cgh.2020.09.016. Epub ahead of print. PMID: 32920216.
130. Padkins M, Breen T, Anavekar N, **van Diepen S**, Henry TD, Baran DA, Barsness GW, Kashani K, Holmes DR Jr, Jentzer JC. Age and shock severity predict mortality in cardiac intensive care unit patients with and without heart failure. *ESC Heart Fail*. 2020 Sep 10;7(6):3971-82. doi: 10.1002/ehf2.12995. Epub ahead of print. PMID: 32909377; PMCID: PMC7754759.
131. Andersen SK, **Montgomery CL, Bagshaw SM**. Early mortality in critical illness- A descriptive analysis of patients who died within 24 hours of ICU admission. *J Crit Care*. 2020 Dec;60:279-284. doi: 10.1016/j.jcrc.2020.08.024. Epub 2020 Sep 3. PMID: 32942163.

132. Metkus TS, Miller PE, Alviar CL, Baird-Zars VM, Bohula EA, Cremer PC, Gerber DA, Jentzer JC, Keeley EC, Kontos MC, Menon V, Park JG, Roswell RO, Schulman SP, Solomon MA, **van Diepen S**, Katz JN, Morrow DA. Advanced Respiratory Support in the Contemporary Cardiac ICU. *Crit Care Explor*. 2020 Sep 17;2(9):e0182. doi: 10.1097/CCE.000000000000182. PMID: 33235999; PMCID: PMC7678799.
133. Vogt KN, Allen L, Murphy PB, van Heest R, Saleh F, **Widder S**, Minor S, Engels PT, Joos E, Nenshi R, Meschino MT, Laane C, Lacoul A, Parry NG, Ball CG, Hameed SM. Patterns of complex emergency general surgery in Canada. *Can J Surg*. 2020 Sep-Oct;63(5):E435-E441. doi: 10.1503/cjs.011219. PMID: 33009902; PMCID: PMC7608705.
134. Alharthy A, Faqih F, Noor A, Soliman I, **Brindley PG**, Karakitsos D, Memish ZA. Helmet Continuous Positive Airway Pressure in the Treatment of COVID-19 Patients with Acute Respiratory Failure could be an Effective Strategy: A Feasibility Study. *J Epidemiol Glob Health*. 2020 Sep;10(3):201-203. doi: 10.2991/jegh.k.200817.001. PMID: 32954709; PMCID: PMC7509101.
135. Surkan M, Rajabali N, **Bagshaw SM**, Wang X, Rolfson D. Interrater Reliability of the Clinical Frailty Scale by Geriatrician and Intensivist in Patients Admitted to the Intensive Care Unit. *Can Geriatr J*. 2020 Sep 1;23(3):235-241. doi: 10.5770/cgj.23.398. PMID: 32904800; PMCID: PMC7458598.
136. Jentzer JC, Bihorac A, Brusca SB, Del Rio-Pertuz G, Kashani K, Kazory A, Kellum JA, Mao M, Moriyama B, Morrow DA, Patel HN, Rali AS, **van Diepen S**, Solomon MA; Critical Care Cardiology Working Group of the Heart Failure and Transplant Section Leadership Council. Contemporary Management of Severe Acute Kidney Injury and Refractory Cardiorenal Syndrome: JACC Council Perspectives. *J Am Coll Cardiol*. 2020 Sep 1;76(9):1084-1101. doi: 10.1016/j.jacc.2020.06.070. Erratum in: *J Am Coll Cardiol*. 2021 Jan 5;77(1):107-109. PMID: 32854844.
137. Nanchal R, Subramanian R, **Karvellas CJ**, Al-Hazzani W. The authors reply. *Crit Care Med*. 2020 Sep;48(9):e843. doi: 10.1097/CCM.0000000000004485. PMID: 32826500.
138. Jentzer JC, **van Diepen S**, Henry TD. How Cardiac Arrest Complicates the Analysis of Trials of Cardiogenic Shock. *Circulation Cardiovascular Quality and Outcomes* September 2020 DOI: 10.1161/CIRCOUTCOMES.120.006692
139. Jentzer JC, **van Diepen S**, Henry TD. Understanding How Cardiac Arrest Complicates the Analysis of Clinical Trials of Cardiogenic Shock. *Circ Cardiovasc Qual Outcomes*. 2020 Sep;13(9):e006692. doi: 10.1161/CIRCOUTCOMES.120.006692. Epub 2020 Aug 31. PMID: 32862695.
140. Jiang HY, MacLean A, Yoon J, Hughes S, Kim MJ, Anantha RV, **Widder SL**; Edmonton Zone Trauma and Acute Care Collaborative (EZ-TRACC). Evaluation of trauma resources in rural northern Alberta identifies opportunities for improvement. *Can J Surg*. 2020 Aug 28;63(5):E383-E390. doi: 10.1503/cjs.007119. PMID: 32856887; PMCID: PMC7608714.
141. Faqih F, Alharthy A, Alshaya R, Papanikolaou J, **Kutsogiannis DJ, Brindley PG**, Karakitsos D. Reverse takotsubo cardiomyopathy in fulminant COVID-19 associated with cytokine release syndrome and resolution following therapeutic plasma exchange: a case-report. *BMC Cardiovasc Disord*. 2020 Aug 26;20(1):389. doi: 10.1186/s12872-020-01665-0. PMID: 32842957; PMCID: PMC7447602.
142. Sundaram V, Mahmud N, Perricone G, Katarey D, Wong RJ, **Karvellas CJ**, Fortune BE, Rahimi RS, Maddur H, Jou JH, Kriss M, Stein LL, Lee M, Jalan R; Multi-Organ Dysfunction, Evaluation for Liver Transplantation (MODEL) Consortium. Longterm Outcomes of Patients Undergoing Liver Transplantation for acute-on-Chronic Liver Failure. *Liver Transpl*. 2020 Dec;26(12):1594-1602. doi: 10.1002/lt.25831. Epub 2020 Aug 25. PMID: 32574423.
143. Alharthy A, Faqih F, Abuhamdah M, Noor A, Naseem N, Balhamar A, Al Saud AAASBA, **Brindley PG**, Memish ZA, Karakitsos D, Blaivas M. Prospective Longitudinal Evaluation of Point-of-Care Lung Ultrasound in Critically Ill Patients With Severe COVID-19 Pneumonia. *J Ultrasound Med*. 2021 Mar;40(3):443-456. doi: 10.1002/jum.15417. Epub 2020 Aug 14. PMID: 32797661; PMCID:

PMC7436430.

144. O'Brien A, **Karvellas CJ**. Acute-on-chronic liver failure: The challenge of PREDICTing who and when. *J Hepatol*. 2020 Oct;73(4):755-756. doi: 10.1016/j.jhep.2020.07.029. Epub 2020 Aug 13. PMID: 32800351.
145. Casault C, Couillard P, Kromm J, Rosenthal E, Kramer A, **Brindley P**. Multimodal brain monitoring following traumatic brain injury: A primer for intensive care practitioners. *Journal of the Intensive Care Society*. December 2020. doi:10.1177/1751143720980273
146. **Bagshaw SM**, Tran DT, Opgenorth D, Wang X, Zuege DJ, Ingolfsson A, Stelfox HT, Thanh NX. Assessment of Costs of Avoidable Delays in Intensive Care Unit Discharge. *JAMA Netw Open*. 2020 Aug 3;3(8):e2013913. doi: 10.1001/jamanetworkopen.2020.13913. PMID: 32822492; PMCID: PMC7439109.
147. **van Diepen S**, Hochman JS, Stebbins A, Alviar CL, Alexander JH, Lopes RD. Association Between Delays in Mechanical Ventilation Initiation and Mortality in Patients With Refractory Cardiogenic Shock. *JAMA Cardiol*. 2020 Aug 1;5(8):965-967. doi: 10.1001/jamacardio.2020.1274. PMID: 32432650; PMCID: PMC7240630.
148. Faqih F, Alharthy A, Alodat M, **Kutsogiannis DJ, Brindley PG**, Karakitsos D. Therapeutic plasma exchange in adult critically ill patients with life-threatening SARS-CoV-2 disease: A pilot study. *J Crit Care*. 2020 Dec; 60:328-333. doi: 10.1016/j.jcrc.2020.07.001. Epub 2020 Jul 31. PMID: 32763058.
149. Sundaram V, Shah P, Mahmud N, Lindenmeyer CC, Klein AS, Wong RJ, **Karvellas CJ**, Asrani S, Jalan R. Patients with severe acute-on-chronic liver failure are disadvantaged by model for end-stage liver disease-based organ allocation policy. *Aliment Pharmacol Ther*. 2020 Oct;52(7):1204-1213. doi: 10.1111/apt.15988. Epub 2020 Jul 29. PMID: 32725664.
150. **Senaratne JM**, Sandhu R, Barnett CF, Grunau B, Wong GC, **van Diepen S**. Approach to Ventricular Arrhythmias in the Intensive Care Unit. *J Intensive Care Med*. 2021 Jul;36(7):731-748. doi: 10.1177/0885066620912701. Epub 2020 Jul 24. PMID: 32705919.
151. Rayner-Hartley E, Miller PE, Burstein B, Bibas L, Goldfarb M, Rampersad P, **van Diepen S**. The Basics of ARDS Mechanical Ventilatory Care for Cardiovascular Specialists. *Can J Cardiol*. 2020 Oct;36(10):1675-1679. doi: 10.1016/j.cjca.2020.07.011. Epub 2020 Jul 23. PMID: 32712309; PMCID: PMC7376353.
152. **Douma MJ**, MacKenzie E, Loch T, Tan MC, **Anderson D**, Picard C, **Milovanovic L**, O'Dochartaigh D, **Brindley PG**. Prone cardiopulmonary resuscitation: A scoping and expanded grey literature review for the COVID-19 pandemic. *Resuscitation*. 2020 Oct;155:103-111. doi: 10.1016/j.resuscitation.2020.07.010. Epub 2020 Jul 21. PMID: 32707142; PMCID: MC7373011.
153. Bernsmeier C, Cavazza A, Fatourou EM, Theocharidou E, Akintimehin A, Baumgartner B, Dhar A, Auzinger G, Thursz M, Bernal W, Wendon JA, **Karvellas CJ**, Antoniades CG, McPhail MJW. Leucocyte ratios are biomarkers of mortality in patients with acute decompensation of cirrhosis and acute-on-chronic liver failure. *Aliment Pharmacol Ther*. 2020 Sep;52(5):855-865. doi: 10.1111/apt.15932. Epub 2020 Jul 19. PMID: 32683724.
154. STARRT-AKI Investigators; Canadian Critical Care Trials Group; Australian and New Zealand Intensive Care Society Clinical Trials Group; United Kingdom Critical Care Research Group; Canadian Nephrology Trials Network; Irish Critical Care Trials Group, **Bagshaw SM**, Wald R, Adhikari NKJ, Bellomo R, da Costa BR, Dreyfuss D, Du B, Gallagher MP, Gaudry S, Hoste EA, Lamontagne F, Joannidis M, Landoni G, Liu KD, McAuley DF, McGuinness SP, Neyra JA, Nichol AD, Ostermann M, Palevsky PM, Pettilä V, Quenot JP, Qiu H, Rochweg B, Schneider AG, Smith OM, Thomé F, Thorpe KE, Vaara S, Weir M, Wang AY, Young P, Zarbock A. Timing of Initiation of Renal-Replacement Therapy in Acute Kidney Injury. *N Engl J Med*. 2020 Jul 16;383(3):240-251. doi: 10.1056/NEJMoa2000741. Erratum in: *N Engl J Med*. 2020 Jul 15;

PMID: 32668114.

155. Burstein B, Bibas L, Rayner-Hartley E, Jentzer JC, **van Diepen S**, Goldfarb M. National Interhospital Transfer for Patients With Acute Cardiovascular Conditions. *CJC Open*. 2020 Jul 9;2(6):539-546. doi: 10.1016/j.cjco.2020.07.003. PMID: 33305214; PMCID: PMC7711006.
156. Ayalon I, Woo JG, Basu RK, Kaddourah A, Goldstein SL, Kaplan JM; AWARE Investigators. Weight as a Risk Factor for Mortality in Critically Ill Patients. *Pediatrics*. 2020 Aug;146(2):e20192829. doi: 10.1542/peds.2019-2829. Epub 2020 Jul 3. PMID: 32620676; PMCID: PMC7397732.
157. Utino Taniguchi L, Ibrahim Q, Azevedo LCP, Stelfox HT, **Bagshaw SM**. Comparison of two frailty identification tools for critically ill patients: A post-hoc analysis of a multicenter prospective cohort study. *J Crit Care*. 2020 Oct;59:143-148. doi: 10.1016/j.jcrrc.2020.06.007. Epub 2020 Jul 1. PMID: 32679466.
158. O'Dochartaigh D, Picard CT, **Brindley PG**, Douma MJ. Temporizing Life-Threatening Abdominal-Pelvic Hemorrhage Using Proprietary Devices, Manual Pressure, or a Single Knee: An Integrative Review of Proximal External Aortic Compression and Even "Knee BOA". *J Spec Oper Med*. 2020 Summer;20(2):110-114. PMID: 32573746.
159. Alobaidi R, Basu RK, DeCaen A, Joffe AR, Lequier L, Pannu N, **Bagshaw SM**. Fluid Accumulation in Critically Ill Children. *Crit Care Med*. 2020 Jul;48(7):1034-1041. doi: 10.1097/CCM.0000000000004376. PMID: 32371612.
160. Sauro KM, Soo A, de Grood C, Yang MMH, Wierstra B, Benoit L, Couillard P, Lamontagne F, Turgeon AF, Forster AJ, Fowler RA, Dodek PM, **Bagshaw SM**, Stelfox HT. Adverse Events After Transition From ICU to Hospital Ward: A Multicenter Cohort Study. *Crit Care Med*. 2020 Jul;48(7):946-953. doi: 10.1097/CCM.0000000000004327. PMID: 32317594.
161. Schaubroeck HA, Gevaert S, **Bagshaw SM**, Kellum JA, Hoste EA. Acute cardiorenal syndrome in acute heart failure: focus on renal replacement therapy. *Eur Heart J Acute Cardiovasc Care*. 2020 Oct;9(7):802-811. doi: 10.1177/2048872620936371. Epub 2020 Jun 29. PMID: 32597679.
162. Lotfi A, Klein LW, Hira RS, Mallidi J, Mehran R, Messenger JC, Pinto DS, Mooney MR, Rab T, Yannopoulos D, **van Diepen S**. SCAI expert consensus statement on out of hospital cardiac arrest. *Catheter Cardiovasc Interv*. 2020 Oct 1;96(4):844-861. doi: 10.1002/ccd.28990. Epub 2020 Jun 20. PMID: 32406999.
163. Shavadia JS, Granger CB, Alemayehu W, Westerhout CM, Povsic TJ, **Van Diepen S**, Defilippi C, Armstrong PW. Novel Biomarkers, ST-Elevation Resolution, and Clinical Outcomes Following Primary Percutaneous Coronary Intervention. *J Am Heart Assoc*. 2020 Jul 7;9(13):e016033. doi: 10.1161/JAHA.120.016033. Epub 2020 Jun 17. PMID: 32552321; PMCID: PMC7670520.
164. Kanakarathne S, Hann A, Asokan G, **Senaratne J**. Wolf in sheep's clothing: a case of mistaken identity - appendiceal mucinous neoplasm. *ANZ J Surg*. 2020 Oct;90(10):2105-2106. doi: 10.1111/ans.16026. Epub 2020 Jun 5. PMID: 32502291.
165. Viglianti EM, **Bagshaw SM**, Bellomo R, McPeake J, Wang XQ, Seelye S, Iwashyna TJ. Hospital-level variation in the development of persistent critical illness. *Intensive Care Med*. 2020 Aug;46(8):1567-1575. doi: 10.1007/s00134-020-06129-9. Epub 2020 Jun 4. PMID: 32500182; PMCID: PMC7444658.
166. Ristovic V, de Roock S, Mesana T, **van Diepen S**, Sun LY. The Impact of Preoperative Risk on the Association Between Hypotension and Mortality After Cardiac Surgery. *The Journal of Clinical Medicine* June 2020 9(7), 2057; DOI: 10.3390/jcm9072057
167. Ronco C, **Bagshaw SM**, Bellomo R, Clark WR, Husain-Syed F, Kellum JA, Ricci Z, Rimmelé T, Reis T, Ostermann M. Extracorporeal Blood Purification and Organ Support in the Critically Ill Patient during

COVID-19 Pandemic: Expert Review and Recommendation. *Blood Purif*. 2021;50(1):17-27. doi: 10.1159/000508125. Epub 2020 May 26. PMID: 32454500; PMCID: PMC7270067.

168. **Douma MJ**, Mackenzie E, **Brindley PG**. Prone CPR: A novel and cost-free resolution to ensuring adequate chest compressions. *Resuscitation*. 2020 Jul;152:93-94. doi: 10.1016/j.resuscitation.2020.05.018. Epub 2020 May 20. PMID: 32445785; PMCID: PMC7238993.
169. D'Aragon F, Lamontagne F, Cook D, Dhanani S, Keenan S, Chassé M, English S, Burns KEA, Frenette AJ, Ball I, Boyd JG, Masse MH, Breau R, Akhtar A, Kramer A, Rochweg B, Lauzier F, **Kutsogiannis DJ**, Ibrahim Q, Hand L, Zhou Q, Meade MO; Canadian Critical Care Trials Group and the Canadian Donation and Transplant Research Program. Variability in deceased donor care in Canada: a report of the Canada-DONATE cohort study. *Can J Anaesth*. 2020 Aug;67(8):992-1004. English. doi: 10.1007/s12630-020-01692-7. Epub 2020 May 8. PMID: 32385825.
170. Young PY, Mueller TF, Sis B, Churchill TA, **Khadaroo RG**. Oncostatin M Plays a Critical Role in Survival after Acute Intestinal Ischemia: Reperfusion Injury. *Surg Infect (Larchmt)*. 2020 Nov;21(9):799-806. doi: 10.1089/sur.2019.193. Epub 2020 May 5. PMID: 32379547.
171. Ostermann M, Bellomo R, Burdmann EA, Doi K, Endre ZH, Goldstein SL, Kane-Gill SL, Liu KD, Prowle JR, Shaw AD, Srisawat N, Cheung M, Jadoul M, Winkelmayer WC, Kellum JA; Conference Participants. Controversies in acute kidney injury: conclusions from a Kidney Disease: Improving Global Outcomes (KDIGO) Conference. *Kidney Int*. 2020 Aug;98(2):294-309. doi: 10.1016/j.kint.2020.04.020. Epub 2020 Apr 26. PMID: 32709292.
172. Katz JN, Sinha SS, Alviar CL, Dudzinski DM, Gage A, Brusca SB, Flanagan MC, Welch T, Geller BJ, Miller PE, Leonardi S, Bohula EA, Price S, Chaudhry SP, Metkus TS, O'Brien CG, Sionis A, Barnett CF, Jentzer JC, Solomon MA, Morrow DA, **van Diepen S**. COVID-19 and Disruptive Modifications to Cardiac Critical Care Delivery: JACC Review Topic of the Week. *J Am Coll Cardiol*. 2020 Jul 7;76(1):72-84. doi: 10.1016/j.jacc.2020.04.029. Epub 2020 Apr 16. PMID: 32305402; PMCID: PMC7161519.
173. Viglianti EM, **Bagshaw SM**, Bellomo R, McPeake J, Molling DJ, Wang XQ, Seelye S, Iwashyna TJ. Late Vasopressor Administration in Patients in the ICU: A Retrospective Cohort Study. *Chest*. 2020 Aug;158(2):571-578. doi: 10.1016/j.chest.2020.02.071. Epub 2020 Apr 9. PMID: 32278780; PMCID: PMC7417379.
174. **Anderson D**, Nathoo N, McCombe JA, Smyth P, **Brindley PG**. Anti-N-methyl-d-aspartate receptor encephalitis: A primer for acute care healthcare professionals. *J Intensive Care Soc*. 2021 May;22(2):95-101. doi: 10.1177/1751143720914181. Epub 2020 Mar 25. PMID: 34025748; PMCID: PMC8120570.
175. **Anderson D**, Jain-Ghai S, **Sligl WI**. Adult-onset presentation of a urea cycle disorder necessitating intensive care unit admission. *Can J Anaesth*. 2020 Aug;67(8):1094-1096. doi: 10.1007/s12630-020-01618-3. Epub 2020 Mar 23. PMID: 32207085.
176. Jentzer JC, Henry TD, Barsness GW, Menon V, Baran DA, **Van Diepen S**. Influence of cardiac arrest and SCAI shock stage on cardiac intensive care unit mortality. *Catheter Cardiovasc Interv*. 2020 Dec;96(7):1350-1359. doi: 10.1002/ccd.28854. Epub 2020 Mar 17. PMID: 32180344.
177. **Karvellas CJ**, Speiser JL, Tremblay M, Lee WM, Rose CF; US Acute Liver Failure Study Group. Elevated Serum Liver-Type Fatty Acid Binding Protein Levels in Non-acetaminophen Acute Liver Failure Patients with Organ Dysfunction. *Dig Dis Sci*. 2021 Jan;66(1):273-283. doi: 10.1007/s10620-020-06166-w. Epub 2020 Mar 3. PMID: 32125573.
178. Liotta EM, **Karvellas CJ**, Kim M, Batra A, Naidech A, Prabhakaran S, Sorond FA, Kimberly WT, Maas MB. Serum osmolality, cerebrospinal fluid specific gravity and overt hepatic encephalopathy severity in patients with liver failure. *Liver Int*. 2020 Aug;40(8):1977-1986. doi: 10.1111/liv.14400. Epub 2020 Feb 12. PMID: 32020734; PMCID: PMC7398828.



179. Pederson JL, Padwal RS, Warkentin LM, Holroyd-Leduc JM, Wagg A, **Khadaroo RG**. The impact of delayed mobilization on post-discharge outcomes after emergency abdominal surgery: A prospective cohort study in older patients. *PLoS One*. 2020 Nov 6;15(11):e0241554. doi: 10.1371/journal.pone.0241554. PMID: 33156849; PMCID: PMC7647086.
180. Hessey E, **Montgomery C**, Zuege DJ, Rolfson D, Stelfox HT, Fiest KM, **Bagshaw SM**. Sex-specific prevalence and outcomes of frailty in critically ill patients. *J Intensive Care*. 2020 Sep 29;8:75. doi: 10.1186/s40560-020-00494-9. PMID: 33005426; PMCID: PMC7525935.
181. **Singh G**, Brodie D. Reply: Protecting the right ventricle in COVID-19 acute respiratory distress syndrome—More data required. *J Thorac Cardiovasc Surg*. 2021 Feb;161(2):e215-e216. doi: 10.1016/j.jtcvs.2020.07.043. Epub 2020 Jul 16. PMID: 32928543
182. **Singh G**, Nahirniak S, Arora R, Légaré JF, Kanji HD, Nagpal D, Lamarche Y, Fan E, Singh Parhar KK. Transfusion Thresholds for Adult Respiratory Extracorporeal Life Support: An Expert Consensus Document. *Can J Cardiol*. 2020 Sep;36(9):1550-1553. doi: 10.1016/j.cjca.2020.06.014. Epub 2020 Jun 26. PMID: 32599018
183. Moulson N, Bewick D, Selway T, Harris J, Suskin N, Oh P, Coutinho T, **Singh G**, Chow CM, Clarke B, Cowan S, Fordyce CB, Fournier A, Gin K, Gupta A, Hardiman S, Jackson S, Lamarche Y, Lau B, Légaré JF, Leong-Poi H, Mansour S, Marelli A, Quraishi AUR, Roifman I, Ruel M, Sapp J, Small G, Turgeon R, Wood DA, Zieroth S, Virani S, Krahn AD. Cardiac Rehabilitation During the COVID-19 Era: Guidance on Implementing Virtual Care. *Can J Cardiol*. 2020 Aug;36(8):1317-1321. doi: 10.1016/j.cjca.2020.06.006. Epub 2020 Jun 14. PMID: 32553606
184. Virani A, **Singh G**, Bewick D, Chow CM, Clarke B, Cowan S, Fordyce CB, Fournier A, Gin K, Gupta A, Hardiman S, Jackson S, Lamarche Y, Lau B, Légaré JF, Leong-Poi H, Mansour S, Marelli A, Quraishi A, Roifman I, Ruel M, John Sapp, Small G, Turgeon R, Wood DA, Zieroth S, Virani S, Krahn AD. Guiding Cardiac Care During the COVID-19 Pandemic: How Ethics Shapes Our Health System Response. *Can J Cardiol*. 2020 Aug;36(8):1313-1316. doi: 10.1016/j.cjca.2020.06.002. Epub 2020 Jun 4. PMID: 32505633
185. Anderson DA, Jirsch J, Wheatley BM, **Brindley P.G.**, Electroencephalogram (EEG) Patterns in Critical Care: A Primer for Acute Care Doctors. *Journal Intensive Care Soc* 2020 DOI: 10.1177/1751143720949454 August 2020.
186. O'Dochartaigh D, Picard C, **Brindley P.G.**, **Douma MJ**. Temporizing life threatening Abdominal-Pelvic Hemorrhage Using Proprietary Devices, Manual Pressure, or a Single Knee: An integrative Review of Proximal External Aortic Compression and even “Kneeboa”. *JSOM Volume 20, Edition 2 / Summer 2020*
187. Turgeon RD, Zieroth S, Bewick D, Chow CM, Clarke B, Cowan S, Fordyce CB, Fournier A, Gin K, Gupta A, Hardiman S, Jackson S, Lau B, Leong-Poi H, Mansour S, Marelli A, Quraishi AR, Roifman I, Ruel M, Sapp J, **Singh G**, Small G, Virani S, Wood DA, Krahn A. Use of Renin-Angiotensin System Blockers During the COVID-19 Pandemic: Early Guidance and Evolving Evidence. *Can J Cardiol*. 2020 Aug;36(8):1180-1182. doi: 10.1016/j.cjca.2020.05.033. Epub 2020 Jun 2. PMID: 32502522
188. **Singh G**, Shaw A. SMART decisions in fluid management are worth their SALT. *J Thorac Cardiovasc Surg*. 2020 Nov;160(5):1250-1254. doi: 10.1016/j.jtcvs.2019.12.126. Epub 2020 Apr 9. PMID: 32279957
189. Roifman I, Arora RC, Bewick D, Chow CM, Clarke B, Cowan S, Ducharme A, Gin K, Graham M, Gupta A, Hardiman S, Hartleib M, Jackson S, Jassal D, Kazmi M, Lamarche Y, Légaré JF, Leong-Poi H, Mansour S, Marelli A, Ruel M, Small G, Sterns L, Turgeon R, Virani S, Wijeyesundera HC, Wong K, Wood DA, Zieroth S, **Singh G**, Krahn AD. Cardiovascular Care Delivery During the Second Wave of COVID-19 in Canada. *Can J Cardiol*. 2021 May;37(5):790-793. doi: 10.1016/j.cjca.2020.11.016. Epub 2020 Dec 9. PMID: 33307163
190. Woolridge S, Alemayehu W, Kaul P, Fordyce CB, Lawler PR, Lemay M, JentzerJC, Goldfarb M, Wong GC, Armstrong PW, **van Diepen S**. National trends in coronary intensive care unit admissions, resource utilization, and outcomes. *Eur Heart J Acute Cardiovasc Care*. 2020 Dec;9(8):923-930. doi: 10.1177/2048872619883400. Epub 2019 Oct 30. PMID: 31663772.
191. Miller RJH, Southern D, Wilton SB, James MT, Har B, Schnell G, **van Diepen S**, Grant ADM. Comparative Prognostic Accuracy of Risk Prediction Models for Cardiogenic Shock. *J Intensive Care Med*. 2020 Dec;35(12):1513-1519. doi: 10.1177/0885066619878125. Epub 2019 Oct 14. PMID: 31610748.
192. Lawler PL, Berg D, Park J-G, Katz JN, Baird-Zars V, Barsness GW, Bohula E, Carnicelli AP, Chaudhry SP, Jentzer J, Menon V, Metkus T, Nativi-Nicolau J, Phreaner N, Sinha S, Teuteberg J, **van Diepen S**, Morrow DA. The Range of Cardiogenic Shock Survival by Clinical Stage: Data from the CCCTN Registry. *Critical Care Medicine* 2021; DOI: 10.1097/CCM.0000000000004948
193. **Senaratne J., Van Diepen S** (2020). Management of Endocarditis In R. Hyzy (Ed.), Evidence based critical care: A case study approach (pp 145-152). Willowick, OH: Springer Science.
194. Faqih, F., Alharthy, A., Alodat, M. Alodat M, Asad D, Aletreby W, **Kutsogiannis DJ, Brindley P.G.**, Karakitsos, D. A pilot study of therapeutic plasma exchange for serious SARS CoV-2 disease (COVID-19): A structured summary of a randomized controlled trial study protocol. *Trials* **21**, 506 (2020). <https://doi.org/10.1186/s13063-020-04454-4>
195. Graham MM. Higginson L, **Brindley P.G.**, Jetly R. Feel Better Work Better- the Covid-19 Perspective (editorial). *Can J Cardiol* 2020 doi.org/10.1016/j.cjca.2020.04.012
196. **Brindley P.G.**, Peak Performance Under pressure. *Anesth Analg* 2020. 131(1):e11-e12, July 2020.
197. **Senaratne JM, van Diepen S**. Management of Endocarditis In: Evidence Based Critical Care: A Case Study Approach. Hyzy RC ed. Springer, New York City. New York, USA; 2020. 145-152.

DCCM GRANTS

INVESTIGATOR	YEAR	FUNDER	TITLE	START	END	TOTAL
Bagshaw (PI)	2021	Medical Research Institute of New Zealand	The Mega Randomised Registry Trial Comparing Conservative vs. Liberal OXYgenation Targets (Mega-ROX)	Feb-21	Dec-25	\$20,000
Jacka (PI)	2021	Sunnybrook Research Institute	Sedating With Volatile Anesthetics Critically Ill COVID-19 Patients in ICU (SAVE-ICU trial): Effects on Ventilatory Parameters and Survival	Dec-20	Dec-26	\$7,354
Khadaroo (PI)	2021	Cultural and Scientific Services French Embassy in Canada	Novel biomarkers to diagnose acute mesenteric ischemia	2021	2022	\$13,398
Khadaroo (Co-PI)	2021	Edmonton Civic Employees	Impact of Frailty on Outcome in Patients with Brain Metastases Treated with Gamma Knife Radiosurgery	2021	2022	\$10,000
Khadaroo (Co-PI)	2021	British Geriatrics Society	A multicentre survey to determine the ability and attitudes towards frailty scoring of healthcare professionals working in surgical acute care settings	2021	2022	\$10,000
Lau (PI)	2021	EuroQoL Research Foundation	Health-Related Quality-of-Life & Health-Utility Integration in Critical Care: EQ-5D-5L Validation (QUICC)	Sep-21	Sep-23	\$58,282
Lau (PI)	2021	University of Alberta Hospital Foundation	COVID-19 Hypoxemia: Detecting the Presence of Concomitant Intra-Pulmonary or Intra-Cardiac Shunts with Contrast Bubble Studies	2021	Mar-22	\$157,300
Lau (co-PI)	2021	Saskatchewan Health Research Foundation (SHRF)	DISH-Saskatchewan: "Studying and improving direct discharges to home from the Intensive Care Units in Regina, Saskatchewan",	Jul-21	Jun-24	\$120,000
Lau (co-PI)	2021	CIHR Transitions in Care	DISH-Saskatchewan: "Patient & family perspectives on the quality and safety of direct discharges home and transfers out of the intensive care unit"	Jul-21	Jun-22	\$10,000
Lau (co-PI)	2020	Saskatchewan Health Research Foundation (SHRF)	Evaluation of Outcomes and Safety of Patients Discharged Directly Home from the ICU, DISH-Saskatchewan	Jul-20	Jun-22	\$150,000
Lau (co-PI)	2022	University of Saskatchewan College of Medicine Research Award (ComRAD)	Evaluation of Outcomes and Safety of Patients Discharged Directly Home from the ICU, DISH-Saskatchewan	Jul-20	Jun-22	\$23,900
Rewa (PI)	2021	Alberta Innovates	Improving the delivery of acute dialysis to critically ill Albertans - DIALYZING WISELY PRIHS 6 Stage 2 Application	Nov-20	Mar-21	\$3,000
Rewa (PI)	2021	University of BC	Host Response Mediators in Coronavirus (Covid-19) Infection - Is There a Protective Effect of Angiotensin II Type 1 Receptor Blockers (Arbs) on Outcomes of Coronavirus Infection? (ARBs CORONA)	Jul-20	Jan-22	\$1,000

INVESTIGATOR	YEAR	FUNDER	TITLE	START	END	TOTAL
Rewa (PI)	2021	University Hospital Foundation	from vasopressor support in critically ill patients - LIBERATE	Feb-21	Jan-23	\$249,972
Rewa (PI)	2020	Partnership for Research and Innovation in the Health System (PRIHS)	Dializing Wisely	2020	2024	\$830,225
Van Diepen (PI)	2021	University Health Network	Biomarker Registry of Biologic Determinants of Cardiac Critical Illness	Aug-20	Jul-23	\$17,500
Van Diepen (PI)	2021	The Canadian Cardiovascular Collaboratory Pharmaceutical Roundtable Initiative Grant	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 ABBREVIATE Trial	2021	2021	\$50,000
Van Diepen (co-PI)	2020	Peter Monk Innovation Fund	Semaglutide to reduce Myocardial injury in Patients with COVID-19 (SEMPATICO): A multicentre randomized controlled trial	2020	2022	250,000
Van Diepen (co-PI)	2020	Canadian Institutes of Health Research	Improving Canadian Outcomes Research On the Novel SARS-CoV-2 using Analytics: the CORONA Consortium.	2020	2020	409,179
Van Diepen (co-PI)	2020	Canadian Institutes of Health Research	Semaglutide to reduce Myocardial injury in Patients with COVID-19 (SEMPATICO): An exploratory randomized controlled clinical trial	2020	2020	\$664,145
Van Diepen (co-PI)	2020	Canadian Institutes of Health Research	Pulmonary vascular dysfunction and exercise in chronic obstructive pulmonary disease	2020	2026	\$950,000
Van Diepen (co-PI)	2020	Heart and Stroke Foundation of Canada	The Canadian Cardiovascular Collaborative Myocardial Infarction-Cardiogenic Shock Initiative.	2020	2020	\$40,000
Van Diepen (co-PI)	2021	Canadian Institutes of Health Research	Opioid Overdose-Related Cardiac Arrest: What are the Best Interventions?	2021	2024	\$123,333
Van Diepen (co-PI)	2021	The Canadian Cardiovascular Collaboratory Pharmaceutical Roundtable Initiative Grant	Cardiogenic Shock App (The C3CAP Pilot Study) – Proof-of-concept to Address Obstacles in Cardiogenic Shock Care in Canada	2021	2021	\$50,000
Van Diepen (co-PI)	2021	The Canadian Cardiovascular Collaboratory Pharmaceutical Roundtable Initiative Grant 2021	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 ABBREVIATE Trial	2021	2021	\$50,000
TOTAL						\$4,268,588

DEPARTMENT MEMBERS

NEW TO THE DEPARTMENT IN 2020-21

Lau, Vincent Assistant Research Professor

GREY NUNS COMMUNITY HOSPITAL

Byker, Leon Senaratne, Janek
Eshtaya, Ehab Simmonds, Matthew

ACADEMIC MEMBERS

ASSISTANT PROFESSOR

Buchanan, Brian *Critical Care Medicine*
Chowdhury, Raiyan *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*

ADJUNCT ASSOCIATE PROFESSOR

Cheung, Lawrence *Medicine*
Karvellas, Constantine (Dean) *Medicine*
Widder, Sandy *Surgery*

ADJUNCT PROFESSOR

Khadaroo, Rachel *Surgery*
Tredget, Edward *Surgery*

ADJUNCT DATA ANALYST

McKinlay, David *Critical Care Medicine*

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*

ASSISTANT CLINICAL PROFESSOR

Davidow, Jonathan *Critical Care Medicine*
Djogovic, Dennis *Critical Care Medicine*
Heule, Mark *Critical Care Medicine*

Murtha, William *Critical Care Medicine*
Singh, Gurmeet *Critical Care Meicine*
Sobey, Alan *Critical Care Medicine*

CLINICAL PROFESSOR

Duggan, Shelley *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 CRITICAL CARE

CLINICAL LECTURER

Russell, Michael *Medicine*

ASSISTANT CLINICAL PROFESSOR

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

ASSOCIATE CLINICAL PROFESSOR

Simmonds, Matthew *Anesthesiology and Pain Medicine*

CLINICAL PROFESSOR

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

DEPARTMENT PERSONNEL

Stephanie Russell - Assistant Chair – Administration

DEPARTMENT OFFICE (UAH)

Lorraine Nowak - Department Admin Assistant to the Chair

Rosanne Prinsen - Department Communications Coordinator

Kim Rennick - Admin Assistant

Ana Wigger - Medical Education Program Assistant

RESEARCH OFFICE

Nadia Baig - Research Manager

Teresa Lawrence - Research Admin

Lorena McCoshen - Research Coordinator

Dawn Opgenorth - Project Manager

CONFERENCES

ASICP - Alberta Society of Intensive Care Physicians

This 3-day event is hosted by the Alberta Society of Intensive Care Physicians and is represented by all critical care physicians in the province. It includes local, national, and international speakers that engage in presented sessions, an academic trainee research competition, and a business meeting for ASICP members.

January 2021 – cancelled due to Covid

CRIT/ER - Critical Care in the Emergency Room

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.

October 2-4, 2020

DCCM MEMBERS IN THE MAINSTREAM MEDIA

Dr. Peter Brindley

- Brindley PG. Psychedelics for medical purposes: time to change your mind? <https://blogs.bmj.com/bmj/2021/03/21/psychedelics-for-medical-purposes-time-to-change-your-mind/> March 21, 2021.
- Brindley PG. Covid isolation discs: how music can help our well-being. <https://blogs.bmj.com/bmj/2021/01/14/covid-isolation-discs-how-music-can-help-our-wellbeing/> January 14, 2021.
- Brindley PG, Morgan M. Covid Christmas, it's a dog's life. <https://blogs.bmj.com/bmj/2020/12/23/happy-covid-christmasits-a-dogs-life/> December 23, 2020.
- Morgan M, Brindley PG. Working from home during covid: what TEAM(S) are you on? <https://blogs.bmj.com/bmj/2020/12/11/working-from-home-during-covid-whose-teams-are-you-on/> December 11, 2020.
- Brindley PG, Morgan M. So, Doctor, what about the vaccine? <https://blogs.bmj.com/bmj/2020/11/17/peter-brindley-and-matt-morgan-so-doctor-what-about-the-vaccine/> November 17, 2020
- Brindley PG, Morgan MM. Covid Fatigue Syndrome and "Masking" How We Feel. <https://blogs.bmj.com/bmj/2020/11/06/peter-brindley-covid-19-fatigue-and-masking-how-we-feel/> November 6, 2020
- Brindley PG. Covid Fatigue Syndrome: And at Exactly the Wrong Time. BMJ Opinions.
- Brindley P.G. Medical administration during covid: not all fun and games. BMJ opinions. <https://blogs.bmj.com/bmj/2020/09/29/peter-brindley-medical-administration-during-covid-19-not-all-fun-and-games/> September 28, 2020

Dr. Raiyan Chowdhury

- Point of View: A first-hand account from an Alberta ICU during Christmas <https://www.cbc.ca/news/canada/edmonton/author/dr-raiyan-chowdhury-1.5854323>
- Is it right for doctors to deny patients unproven anti-COVID-19 therapies? <https://www.macleans.ca/opinion/is-it-right-for-doctors-to-deny-patients-unproven-anti-covid-19-therapies/>

Dr. Noel Gibney

- Radio Canada. L'Alberta prévoit la création d'hôpitaux de campagne, selon un document interne. December 30, 2020. <https://ici.radio-canada.ca/nouvelle/1754219/pandemie-covid-19-hopitaux-sante-hospitalisations-alberta>
- Red Deer Advocate. Doctors urge Alberta to hold off on easing COVID-19 restrictions next week. February 26, 2021. <https://www.reddeeradvocate.com/news/doctors-urge-alberta-to-hold-off-on-easing-covid-19-restrictions-next-week/>
- CTV National. 'It'll crash tremendously': Alberta now leads Canada and U.S. in per capita COVID-19 cases. May 3, 2021. <https://www.ctvnews.ca/health/coronavirus/it-ll-crash-tremendously-alberta-now-leads-canada-and-u-s-in-per-capita-covid-19-cases-1.5412090>
- Maclean's. How Alberta's COVID-19 crisis became 'absolutely frightening'. May 4, 2021. <https://www.macleans.ca/news/covid-19-how-albertas-crisis-became-absolutely-frightening/>
- City News, Edmonton. With COVID-19 restrictions disappearing next week, experts express concern over Delta variant. June 21, 2021. <https://edmonton.citynews.ca/2021/06/21/covid-19-restrictions-disappearing-concern-delta-variant/>
- Edmonton Journal. Shandro defends Alberta government's removal of isolation, masking

rules. July 30, 2021. <https://edmontonjournal.com/news/politics/shandro-alberta-covid-isolating-masking-quarantining>

Dr. Rachel Khadaroo

- Canadian Frailty Network Article, Impact Stories & Initiatives. "Improving recovery after surgery for older adults living with frailty" <https://www.cfn-nce.ca/impact/improving-recovery-after-surgery-for-older-adults-living-with-frailty/>
- PRESS RELEASE Alberta Innovates: BE-FIT study included as part of Alberta Innovates Partnership for Research and Innovation in Health System (PRIHS). October 2020. https://albertainnovates.ca/wp-content/uploads/2020/05/PRIHS_onepager_khadaroo.pdf

Dr. Oleksa Rewa

- Update on COVID-19 (Interview). Kontakt Ukrainian TV. April 2020.





Dr. Sean vanDiepen

- Global News Edmonton. "COVID-19: As Alberta prepares to peel back public health measures, doctors offer advice". June 30, 2021. <https://globalnews.ca/news/7995174/doctors-comment-alberta-lifting-covid-restrictions/>
- Global News Edmonton. "Doctors on what they're watching for now that Alberta is fully open". July 2, 2021. <https://globalnews.ca/news/7998408/covid-19-alberta-fully-reopened-doctors-monitoring/>
- Global News Edmonton. "Concerns over COVID-19 Delta variant, single dose protection as Alberta enters Stage 2. June 9th, 2021. <https://globalnews.ca/news/7998408/covid-19-alberta-fully-reopened-doctors-monitoring/>
- Global News Edmonton. "Status of ICU at Edmonton hospitals". May 6, 2021. <https://globalnews.ca/video/7841792/status-of-icu-iat-edmonton-hospitals>
- Global New Edmonton. Cardiac complications of Covid 19. May 6, 2021.
- Global News Edmonton. Covid 19 and Critical Care. May 1 2021.
- CBC News Calgary: "Demand grows for most advanced form of life support, as Alberta battles 3rd wave of COVID-19". April 27, 2021. <https://www.cbc.ca/news/canada/calgary/ecmo-alberta-1.6002507>



UNIVERSITY OF ALBERTA

DEPARTMENT OF CRITICAL CARE MEDICINE

-  2-124 Clinical Sciences Building
8440 – 112 Street Edmonton, AB T6G 2B7
-  780-248-1256
-  ccmcomm@ualberta.ca
-  ualberta.ca/critical-care