

Department of Critical Care Medicine
2019 - 2020 Annual Report



Table of Contents

Message from the Academic Chair and Clinical Department Head	4
Mission Statement.....	6
Values	6
Transparency and Diversity	6
History of Critical Care Medicine in Edmonton.....	7
Critical Care Units.....	9
Organizational Structure.....	10
University of Alberta Hospital.....	10
E. Garner King General Systems Intensive Care Unit.....	10
Edmonton Firefighter Burn Treatment Centre	11
Neuroscience Intensive Care Unit.....	12
Mazankowski Alberta Heart Institute	13
Royal Alexandra Hospital.....	14
Grey Nuns Community Hospital.....	15
Misericordia Community Hospital	16
Sturgeon Community Hospital.....	17
Connect Care	18
Critical Care Strategic Clinical Network™.....	19
Partnerships.....	21
Hospital Sírio-Libanês (HSL).....	21
LOGIC – Linking of Global Intensive Care.....	24
Edmonton Marathon – Run For Our Lives	25
2018 Research Funding Awarded:	25
2017 Research Funding Awarded:	25
Interactive Booth at Marathon Sports Expo.....	25
Covid-19 Pandemic Impacts and Initiatives.....	26
DCCM Research COVID-19 Impact.....	28
New Studies	28
COVID-19 Related Publications from the DCCM:.....	29
DCCM Education COVID-19 Impact	30

DCCM COVID-19 “Town Hall” Style Grand Rounds	32
DCCM Members in External Leadership Roles	33
Awards and Recognition.....	34
List of all Departmental Awards or special accolades.....	34
List of External Awards.....	35
Research and Innovation	37
Message from Associate Chair	37
Research Groups	37
DCCM Research Day.....	37
Education	38
Message from Associate Chair	38
Critical Care Medicine Residency Program	39
Program Overview	39
Training Sites.....	39
Post-Graduate Fellowship Training.....	39
2019-2020 Residents.....	40
2019-2020 Fellows	40
2018-2019 Residents.....	41
2018-2019 Fellows	41
DCCM Education Events.....	42
Critical Care Ultrasound and Simulation.....	43
Message from the Associate Chair	43
Canadian Resuscitative Ultrasound Course (West)	43
Safety and Quality.....	44
Message from the Associate Chair	44
Medical Informatics	46
2019-2020 Publications	47
2019-2020 Grants	69
Presentations	73
DCCM Grand Rounds	73
The R.T. Noel Gibney Lecture in Critical Care Medicine	74
2020 – Dr. J. Randall Curtis (University of Washington)	75
Visiting Professors.....	76
Dr. John Muscedere – Queen’s University.....	76

Dr. Matt Morgan – Cardiff University	77
Dr. Damon Scales – Sunnybrook Research Institute, University of Toronto	78
Appendix	79
Department Members	80
Department Personnel.....	82
Department Office (UAH)	82
Research Office	82
Research Studies – UAH Critical Care Research Group.....	83
Study descriptions with full study names from July 1st, 2019 to June 30, 2020	83
Research Studies: RAH Critical Care Research Group	85
Study descriptions with full study names from July 1st, 2019 to June 30, 2020	85
Research Studies Neurosciences ICU UAH.....	88
Study descriptions with full study names from July 1st, 2019 to June 30, 2020	88
Full List of Academic Half Day topics	91
Conferences	93
ASICP - Alberta Society of Intensive Care Physicians	93
CRIT/ER - Critical Care in the Emergency Room.....	93
DCCM Members in the News.....	94
Young Physician Program.....	98

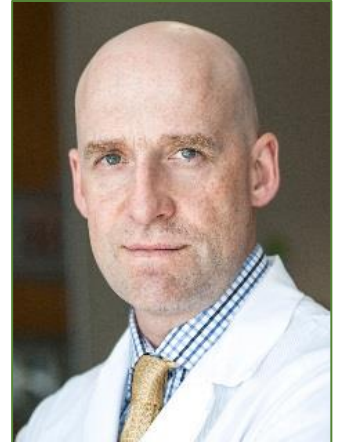
Message from the Academic Chair and Zone Clinical Department Head

Welcome to the Department of Critical Care Medicine! The Department is committed to providing excellence in patient care, research and education. The Academic Department is integrated with the Clinical Department of Critical Care Medicine, Edmonton Zone. Our people are our greatest resource. The Department consists of 11 primarily appointed, 7 cross appointed full time Faculty, 39 Clinical Faculty and 6 adjunct Faculty.

We are particularly proud of our residency training program which was initiated by Dr. E.G. King in 1970 and was one of the first Critical Care training programs in Canada. Our graduates now provide exemplary care to critically ill patients across Canada and around the world.

Research in the Department spans the full spectrum from basic science and translational work through medical education, epidemiology, health services research and clinical trials. The Department is internationally recognized for its expertise and contributions to the field of critical care nephrology and we are actively pursuing growth in the fields of neurocritical care, cardiovascular intensive care, and health services and education research.

Herein, we are proud to provide the Department's annual report. The report provides an overview of the important work and accomplishments achieved over the last year.



A handwritten signature in black ink, appearing to read 'S. Bagshaw'.

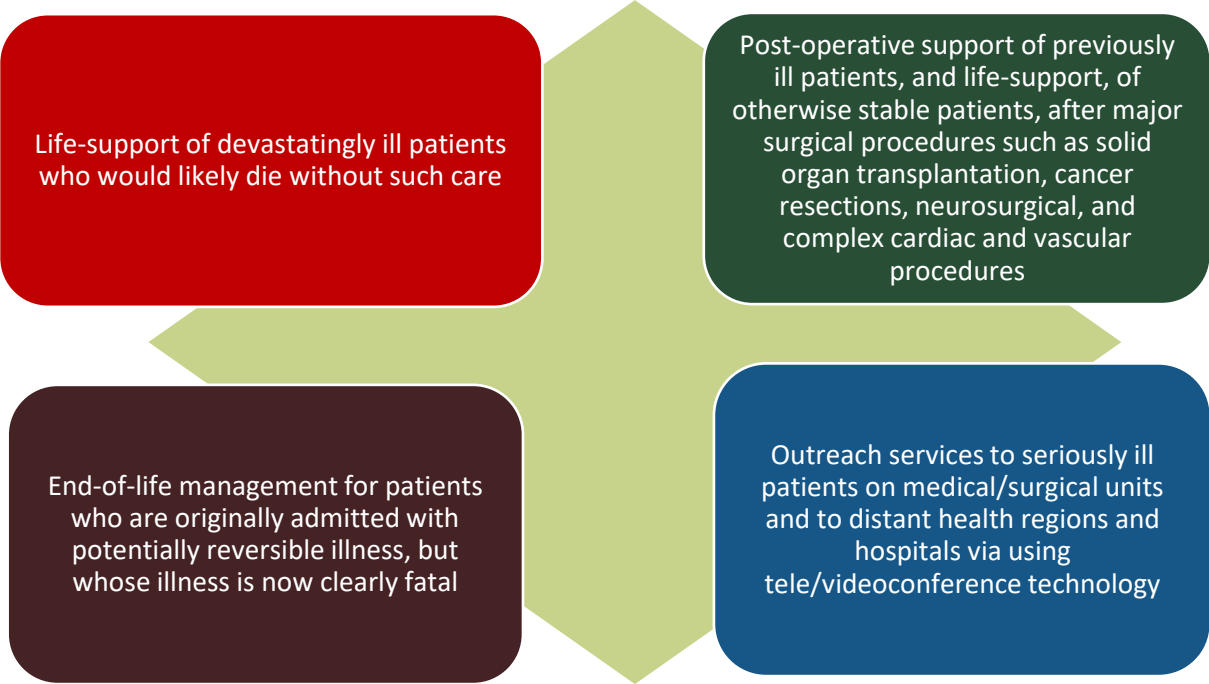
Dr. Sean M Bagshaw, MD, MSc, FRCPC
Professor and Chair
Department of Critical Care Medicine
Faculty of Medicine and Dentistry

A handwritten signature in black ink, appearing to read 'S. Duggan'.

Dr. Shelley Duggan, MD, FRCPC
Clinical Professor and Head,
Department of Critical Care Medicine
Edmonton Zone, Alberta Health

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.

Critical care units fulfil numerous vital functions within our acute care hospitals:



The 5 mixed medical/surgical ICUs and 3 specialized ICUs fulfill these functions for critically ill patients in need of advanced monitoring or with overwhelming life-threatening multi-system illnesses in need of life-sustaining support. These patients are supported in our ICUs by highly skilled and specialized multi-disciplinary teams. These ICUs provide critical care services to patients across our acute care hospitals in the Edmonton Zone 24 hours a day and 365 days a year.

Mission Statement

To provide exemplary patient and family-centered care of the critically ill today and tomorrow.

Values

Provide compassion to our patients, patient's families, and within our organization.

Integrity in our approach to people, situations, and problems.

Collaborative and inclusive approach within and external to our Department.

To show respect in all our interactions.

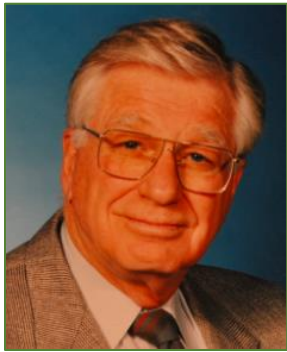
Provide a learning environment.

Safe, transparent, and accountable organization.

Transparency and Diversity

The Department is committed to ensuring transparency, social accountability and to facilitate diversity for recruitment, promotion and leadership. The Department has been working closely to align with the FoMD (<https://www.ualberta.ca/medicine/about/social-accountability/diversity/diversity-statements.html>) and AHS (<https://insite.albertahealthservices.ca/Main/assets/tms/dvi/tms-dvi-council-framework.pdf>) on these processes.

History of Critical Care Medicine in Edmonton



The concept of developing a specialized focus in critical care medicine in Edmonton was the brainchild of Dr. Brian Sproule, a pulmonologist who had participated in the care and implementation of mechanical ventilation for patients with polio during the epidemic of 1953. He arranged for Dr. Garner King to train in pulmonary and critical care medicine in Denver.

On his return from Denver, Dr. King set up one of the first multi-system intensive care units in Canada at the University of Alberta Hospital. In 1970, Dr. King developed a fellowship program in critical care medicine. This was one of the first of its kind and trained physicians from Canada and beyond, many of whom went on to develop new critical care programs elsewhere in Canada and around the world.



Initially, critical care medicine was a component within Dr. King's academic home, the Division of Pulmonary Medicine. However, over time, it became clear that critical care medicine had practitioners with varied backgrounds including anesthesia, surgery, emergency medicine and a range of medical subspecialties (e.g., pulmonary, nephrology, cardiology).

In 1985, the free-standing Division of Critical Care Medicine was established under Dr. King as an Interdepartmental Division within the Faculty of Medicine and Dentistry. The Divisional Director reported jointly to the Dean and the Chairs of Medicine, Surgery and Anesthesia and attended the monthly meetings of the Dean with the Chairs. The Division of Critical Care Medicine was responsible for the development of new residency and fellowship training programs in critical care medicine. On a national level, the Royal College of Physicians and Surgeons of Canada officially recognized Critical Care Medicine as a specialty in 1986.



In 1987, Dr. Tom Noseworthy took over from Dr. King as Division Director. He was subsequently appointed as the President of the Royal Alexandra Hospital in 1989 at which time, Dr. Rick Johnston was appointed as Division Director.

In 1995, the government of Alberta disbanded the individual boards of the hospitals in the province and created regional health authorities. The Capital Health Authority created clinical departments including a clinical department of Critical Care Medicine, which was for the first time primarily responsible for recruitment of specialists in critical care medicine ("intensivists"). Dr. Noel Gibney was selected as the regional program clinical department head for the new clinical department, which was



responsible for the delivery of critical care services across all 5 acute care hospitals in the Edmonton area.

In 2002 Dr. Gibney, was appointed as Division Director. This allowed the academic Division and the clinical Department to merge their vision, mission and goals. At this time, it was also agreed within the Faculty of Medicine and Dentistry that it should be possible for Faculty to hold a primary appointment in the Division of Critical Care Medicine (DCCM) and secondary appointments, if desired, in other departments. This was important for intensivists to receive full credit for academic activities in critical care medicine, which prior to that time, were not equitably valued by the traditional base specialties. The ability of academic intensivists to practice and function fully within the DCCM was a major advance and significantly facilitated the development of active educational and research programs within the Division. Starting in 2008, discussions were initiated with the Faculty of Medicine and Dentistry to advance the Division of Critical Care Medicine to full academic Department status.

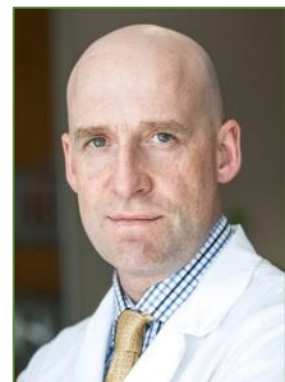


In 2012, Dr. David Zygun was recruited from Calgary to assume the role as Division Director and Clinical Department Head from Dr. Gibney. Dr. Zygun continued to advocate for the Division of Critical Care Medicine to be recognized with Departmental status within the Faculty of Medicine and Dentistry and the University of Alberta. In 2016, the Dean of the Faculty of Medicine and Dentistry, Dr. Richard Fedorak announced the creation of the Department of Critical Care Medicine with Dr. David Zygun as the first chair.

In 2017, Dr. Zygun was appointed Zone Medical Director for the Edmonton Zone, Alberta Health Services and resigned as Chair. He was succeeded by Dr. Sean Bagshaw as the new Academic Chair



of the Department of Critical Care Medicine, Faculty of Medicine and Dentistry and by Dr. Shelley Duggan as the new Clinical Department Head, Edmonton Zone.



Critical Care Units

Every critical care unit across the Edmonton Zone is staffed with multi-disciplinary teams of physicians, registered nurses, registered respiratory therapists, pharmacists and additional allied health specialists including social workers, dietitians, spiritual care, physiotherapy, and occupational therapy. Each member of the team has undertaken specialized training in the complex care for critically ill patients and to work as part of this team.

The academic mission of the Department is closely aligned with the clinical mission of the critical care units across the Edmonton Zone, Alberta Health Services and Covenant Health. The Department supports and facilitates academic contributions across all adult critical care units in Edmonton and St. Albert.

The Department has also aligned both academically and clinically with regional critical care units in the Central Zone (Red Deer Regional Hospital, Red Deer) and North Zone (QEII Regional Hospital, Grand Prairie).

These critical care units boast state of the art technology and provides exemplary care to approximately 6,500 critically ill patients annually. Our critical care units provide outstanding opportunities for education across the spectrum of healthcare professionals and for medical trainees, visiting professors and early career professionals. The Department is also fertile ground for scholarly contributions to quality improvement and patient safety, research and implementation evaluation of novel and evidence-informed best practices. The Department aims to adapt and evolve as a leading learning healthcare system within our broader provincial health system.



Organizational Structure

University of Alberta Hospital

E. Garner King General Systems Intensive Care Unit

Unit Type: mixed medical/surgical ICU | No. of Beds: 28

Unit Director: Dr. Dennis Djogovic

We are a closed 28 bed ICU staffed by full-time fellowship-certified critical care specialists. We are located on the third level of the Walter C. Mackenzie Health Sciences Center (WMC) (also known as the University of Alberta Hospital). The hospital is located on the North Campus of the University of Alberta in Edmonton. We are a referral centre for Central and Northern Alberta, British Columbia and Saskatchewan, as well as the Northwest Territories and Nunavut. We care for a diverse mix of general medical and surgical patients. We also a level 1 regional trauma centre. We also support complex hepatobiliary, solid organ and liver transplant services. A broad range of multi-disciplinary team members are involved to support all aspects of the patients and family's care. The GSICU/Burn ICU admitted 1,758 patients during the 2019/2020 academic calendar.

Alberta Health Services		Critical Care KPI Dashboard												eCritical ALBERTA		
Type	Adult ICU	Zone	Edmonton	Site	University of Alberta GS/BURN ICU											
01-Jul-19														30-Jun-20		
Discharges																
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
Discharges	151	141	136	136	170	162	169	160	166	147	199	181				
Critical Care and Hospital Mortality																
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
Critical Care Mortality %	11.9%	11.3%	15.4%	18.4%	9.4%	13.0%	17.8%	7.5%	8.4%	11.6%	9.0%	10.5%				
Hospital Mortality %	17.2%	19.9%	19.1%	22.1%	15.9%	20.4%	27.2%	13.8%	15.7%	17.0%	17.6%	16.6%				
Critical Care Nighttime Discharges																
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
Live Disch 1900 - 0700 %	17.9%	18.4%	14.0%	19.9%	25.3%	9.3%	14.8%	13.8%	8.4%	2.7%	8.5%	15.5%				
Live Disch 1900 - 2300 %	15.9%	13.5%	9.6%	16.9%	8.2%	7.4%	9.5%	10.6%	4.2%	2.7%	4.5%	9.4%				
Live Disch 2300 - 0700 %	2.0%	5.0%	4.4%	2.9%	17.1%	1.9%	5.3%	3.1%	4.2%		4.0%	6.1%				
Critical Care Readmission																
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
Readmit 24 Hr. %	0.8%	1.8%		2.8%	13.3%	9.3%	3.3%	15.9%	15.7%	8.2%	18.9%	15.9%				
Readmit 48 Hr. %	2.4%	1.8%	0.9%	2.8%	14.0%	10.1%	4.9%	15.9%	15.7%	8.2%	18.9%	17.9%				
Readmit 72 Hr. %	2.4%	1.8%	1.8%	3.8%	14.0%	10.1%	5.7%	15.9%	15.7%	9.0%	19.5%	17.9%				
Hosp. Index Readmit %	4.0%	12.1%	6.6%	5.1%	11.8%	8.0%	3.6%	13.8%	13.3%	7.5%	15.6%	14.9%				
Critical Care Avoidable Days																
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
Avoidable Days %	10.9%	8.4%	11.6%	14.5%	11.2%	20.4%	12.2%	19.8%	21.6%	11.1%	9.3%	8.0%				
Critical Care Occupancy																
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
Mean Occupancy % Actual	86.3%	90.2%	84.1%	89.4%	118.6%	113.1%	104.0%	108.8%	105.4%	80.7%	98.9%	101.6%				
Mean Occupancy % CIHI	84.2%	88.7%	82.9%	84.4%	86.0%	106.0%	102.6%	107.9%	105.1%	81.1%	99.1%	99.9%				
Min. Occupancy % Actual	68.8%	78.1%	68.8%	71.9%	3.1%	85.7%	85.7%	92.9%	64.3%	64.3%	67.9%	78.6%				
Max. Occupancy % Actual	100.0%	109.4%	100.0%	100.0%	121.4%	121.4%	121.4%	128.6%	132.1%	107.1%	121.4%	121.4%				
Percent of Days >= 100%	2.2%	9.4%	0.7%	0.6%	34.2%	86.1%	78.6%	94.3%	65.2%	3.2%	57.8%	65.7%				
Patient Goals																
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
Discharges With Goals %	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
Goals Documented Daily %	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
First Family Contact																
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
Eligible Admit	78	74	66	50	40	43	51	38	25	21	38	35				
Contact First 30 Min %	25.6%	33.8%	22.7%	36.0%	20.0%	18.6%	9.8%	26.3%	12.0%	14.3%	7.9%	11.4%				
In-Person Contact %	75.6%	66.2%	65.2%	66.0%	70.0%	72.1%	72.5%	73.7%	52.0%	28.6%	18.4%	48.6%				
Telephone Contact %	24.4%	32.4%	34.8%	34.0%	30.0%	27.9%	27.5%	26.3%	48.0%	71.4%	81.6%	51.4%				

Edmonton Firefighter Burn Treatment Centre

Unit Type: Comprehensive Burn Unit | No. of Beds: 4

Unit Director: Dr. Dennis Djogovic

We are a closed collaborative 4 bed specialized burn ICU staffed by full-time fellowship-certified critical care specialists. We are located on level three of the Walter C. Mackenzie Health Sciences Center (WMC). We have a large catchment for a burn referral hospital, including for Central and Northern Alberta, British Columbia and Saskatchewan, as well as the Northwest Territories and Nunavut. We care for patients with severe burn injuries and complex head and neck procedures. A broad range of multi-disciplinary team members are involved to support all aspects of the patients and family's care. The GSICU/Burn ICU admitted 1,758 patients during the 2019/2020 academic calendar.

Alberta Health Services		Critical Care KPI Dashboard											eCritical ALBERTA	
Type	Adult ICU	Zone										Edmonton	Site	University of Alberta GS/BURN ICU
01-Jul-19													30-Jun-20	
Discharges														
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20		
Discharges	151	141	136	136	170	162	169	160	166	147	199	181		
Critical Care and Hospital Mortality														
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20		
Critical Care Mortality %	11.9%	11.3%	15.4%	18.4%	9.4%	13.0%	17.8%	7.5%	8.4%	11.6%	9.0%	10.5%		
Hospital Mortality %	17.2%	19.9%	19.1%	22.1%	15.9%	20.4%	27.2%	13.8%	15.7%	17.0%	17.6%	16.6%		
Critical Care Nighttime Discharges														
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20		
Live Disch 1900 - 0700 %	17.9%	18.4%	14.0%	19.9%	25.3%	9.3%	14.8%	13.8%	8.4%	2.7%	8.5%	15.5%		
Live Disch 1900 - 2300%	15.9%	13.5%	9.6%	16.9%	8.2%	7.4%	9.5%	10.6%	4.2%	2.7%	4.5%	9.4%		
Live Disch 2300 - 0700%	2.0%	5.0%	4.4%	2.9%	17.1%	1.9%	5.3%	3.1%	4.2%		4.0%	6.1%		
Critical Care Readmission														
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20		
Readmit 24 Hr. %	0.8%	1.8%		2.8%	13.3%	9.3%	3.3%	15.9%	15.7%	8.2%	18.9%	15.9%		
Readmit 48 Hr. %	2.4%	1.8%	0.9%	2.8%	14.0%	10.1%	4.9%	15.9%	15.7%	8.2%	18.9%	17.9%		
Readmit 72 Hr. %	2.4%	1.8%	1.8%	3.8%	14.0%	10.1%	5.7%	15.9%	15.7%	9.0%	19.5%	17.9%		
Hosp. Index Readmit %	4.0%	12.1%	6.6%	5.1%	11.8%	8.0%	3.6%	13.8%	13.3%	7.5%	15.6%	14.9%		
Critical Care Avoidable Days														
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20		
Avoidable Days %	10.9%	8.4%	11.6%	14.5%	11.2%	20.4%	12.2%	19.8%	21.6%	11.1%	9.3%	8.0%		
Critical Care Occupancy														
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20		
Mean Occupancy % Actual	86.3%	90.2%	84.1%	89.4%	118.6%	113.1%	104.0%	108.8%	105.4%	80.7%	98.9%	101.6%		
Mean Occupancy % CIHI	84.2%	88.7%	82.9%	84.4%	86.0%	106.0%	102.6%	107.9%	105.1%	81.1%	99.1%	99.9%		
Min. Occupancy % Actual	68.8%	78.1%	68.8%	71.9%	3.1%	85.7%	85.7%	92.9%	64.3%	64.3%	67.9%	78.6%		
Max. Occupancy % Actual	100.0%	109.4%	100.0%	100.0%	121.4%	121.4%	121.4%	128.6%	132.1%	107.1%	121.4%	121.4%		
Percent of Days >= 100%	2.2%	9.4%	0.7%	0.6%	34.2%	86.1%	78.6%	94.3%	65.2%	3.2%	57.8%	65.7%		
Patient Goals														
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20		
Discharges With Goals %	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
Goals Documented Daily %	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
First Family Contact														
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20		
Eligible Admit	78	74	66	50	40	43	51	38	25	21	38	35		
Contact First 30 Min %	25.6%	33.8%	22.7%	36.0%	20.0%	18.6%	9.8%	26.3%	12.0%	14.3%	7.9%	11.4%		
In-Person Contact %	75.6%	66.2%	65.2%	66.0%	70.0%	72.1%	72.5%	73.7%	52.0%	28.6%	18.4%	48.6%		
Telephone Contact %	24.4%	32.4%	34.8%	34.0%	30.0%	27.9%	27.5%	26.3%	48.0%	71.4%	81.6%	51.4%		

Neuroscience Intensive Care Unit

Unit Type: Neurosciences ICU | No. of Beds: 15

Unit Director: Dr. Peter Brindley

We are a closed collaborative unit encompassing 11 mechanical ventilation ICU beds, 4 high acuity beds, plus 4 additional stroke observation beds staffed by full-time fellowship-certified critical care specialists.

Currently located on the fourth level of the University of Alberta Hospital, the Neurosciences ICU is one of only two dedicated Neurosciences ICUs in Canada. A major rebuilding and expansion is underway along with the development of a specialized neurocritical care fellowship program.

The Neurosciences ICU provides exemplary multi-disciplinary collaborative care for patients with complicated neurological and neurosurgical disorders, including management of

traumatic brain injury, cerebral aneurysms/subarachnoid hemorrhage, spinal cord injury, cerebral tumors, cerebrovascular strokes, neuromuscular disorders, seizures, neurological infections and organ donation. Intensivists work in close collaboration with neurosurgeons, neurologists, interventional radiologists, and cerebral doppler technologists to provide highly specialized Neurocritical care.

Alongside our educational mandate, our Neurosciences ICU contributes to a wide range of scholarly activities, including research and quality and safety. The Neurosciences ICU admitted 750 patients during the 2019/2020 academic calendar.

Alberta Health Services		Critical Care KPI Dashboard												eCritical ALBERTA		
Type	Adult ICU	Zone	Edmonton	Site	University of Alberta NEURO ICU											
01-Jul-19													30-Jun-20			
Discharges																
Discharges	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
	52	53	65	71	75	67	62	55	61	67	63	59				
Critical Care and Hospital Mortality																
Critical Care Mortality %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
	13.5%	5.7%	7.7%	7.0%	12.0%	13.4%	9.7%	10.9%	6.6%	3.0%	6.3%	10.2%				
Hospital Mortality %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
	13.5%	7.5%	10.8%	8.5%	20.0%	20.9%	21.0%	20.0%	13.1%	14.9%	11.1%	11.9%				
Critical Care Nighttime Discharges																
Live Disch 1900 - 0700 %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
	17.3%	28.3%	18.5%	22.5%	36.0%	11.9%	12.9%	16.4%	8.2%	11.9%	6.3%	1.7%				
Live Disch 1900 - 2300%	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
	9.6%	20.8%	4.6%	9.9%	17.3%	7.5%	3.2%	10.9%	3.3%	9.0%	3.2%					
Live Disch 2300 - 0700%	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
	7.7%	7.5%	13.8%	12.7%	18.7%	4.5%	9.7%	5.5%	4.9%	3.0%	3.2%	1.7%				
Critical Care Readmission																
Readmit 24 Hr. %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
		4.1%		4.6%	15.0%	11.3%	14.3%	4.5%	15.1%	8.8%	7.1%	17.3%				
Readmit 48 Hr. %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
	2.2%	4.1%		7.7%	15.0%	11.3%	14.3%	4.5%	17.0%	10.5%	7.1%	17.3%				
Readmit 72 Hr. %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
	2.2%	6.1%		9.2%	15.0%	13.2%	14.3%	6.8%	17.0%	10.5%	8.9%	19.2%				
Hosp. Index Readmit %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
	1.9%	13.2%	3.1%	11.3%	12.0%	10.4%	11.3%	5.5%	14.8%	9.0%	7.9%	16.9%				
Critical Care Avoidable Days																
Avoidable Days %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
	5.0%	5.5%	12.4%	6.6%	8.4%	6.3%	6.8%	6.5%	19.3%	5.7%	8.9%	9.0%				
Critical Care Occupancy																
Mean Occupancy % Actual	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
	94.9%	95.1%	93.7%	93.3%	129.8%	105.2%	98.5%	89.9%	71.8%	77.0%	76.9%	87.6%				
Mean Occupancy % CIHI	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
	93.5%	95.2%	93.0%	95.2%	89.3%	88.7%	98.4%	91.4%	71.3%	77.6%	78.0%	88.2%				
Min. Occupancy % Actual	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
	60.0%	60.0%	60.0%	70.0%	50.0%	60.0%	70.0%	50.0%	30.0%	45.5%	45.5%	63.6%				
Max. Occupancy % Actual	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
	120.0%	110.0%	110.0%	110.0%	110.0%	110.0%	120.0%	120.0%	110.0%	100.0%	100.0%	100.0%				
Percent of Days >= 100%	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
	57.3%	57.7%	50.2%	50.0%	32.2%	22.8%	62.7%	36.4%	14.2%	7.1%	5.7%	26.4%				
Patient Goals																
Discharges With Goals %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
Goals Documented Daily %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
First Family Contact																
Eligible Admit	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
	22	22	32	22	24	21	14	13	16	7	6	11				
Contact First 30 Min %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
	63.6%	54.5%	56.3%	54.5%	37.5%	23.8%	14.3%	23.1%	37.5%	28.6%	0.0%	27.3%				
In-Person Contact %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
	86.4%	90.9%	84.4%	90.9%	95.8%	85.7%	85.7%	92.3%	93.8%	14.3%	50.0%	72.7%				
Telephone Contact %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20				
	9.1%	9.1%	15.6%	9.1%	4.2%	14.3%	14.3%	7.7%	6.3%	85.7%	50.0%	27.3%				

Mazankowski Alberta Heart Institute

Unit Type: Cardiac Surgical ICU | No. of Beds: 24

Unit Director: Dr. Mohamad Zibdawi

The Cardiovascular Intensive Care Unit (CVICU) of the Mazankowski Alberta Heart Institute (MAZ) is a highly-specialized collaborative critical care unit. We are a closed collaborative 24 bed unit staffed by full-time fellowship-certified critical care specialists. The MAZ performs approximately 1,500 adult cardiac surgical cases annually, including heart and lung transplant, adult congenital cardiac surgery, ventricular assist device implantation, and is the regional referral for Extracorporeal Membrane Oxygenation (ECMO) - both veno-arterial and veno-venous. The CVICU admitted 1,618 patients during the 2019/2020 academic calendar.

Alberta Health Services		Critical Care KPI Dashboard												eCritical ALBERTA			
Type	Adult CVICU	Zone		Edmonton										Site		Mazankowski Alberta Heart Institute CVI...	
01-Jul-19														30-Jun-20			
Discharges																	
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20					
Discharges	125	129	141	127	146	127	160	149	145	97	123	149					
Critical Care and Hospital Mortality																	
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20					
Critical Care Mortality %	4.0%	3.9%	5.7%	4.7%	3.4%	3.1%	3.8%	3.4%	4.1%	6.2%	5.7%	2.7%					
Hospital Mortality %	7.2%	4.7%	5.7%	6.3%	7.5%	7.1%	11.3%	10.7%	9.0%	13.4%	13.0%	5.4%					
Critical Care Nighttime Discharges																	
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20					
Live Disch 1900 - 0700 %	3.2%	3.1%	0.7%	1.6%	17.1%	4.7%	8.1%	7.4%	6.2%	1.0%	1.6%	5.4%					
Live Disch 1900 - 2300%	3.2%	2.3%	0.7%	1.6%	2.1%	3.1%	5.6%	6.0%	1.4%	1.0%	0.8%	2.7%					
Live Disch 2300 - 0700%		0.8%			15.1%	1.6%	2.5%	1.3%	4.8%		0.8%	2.7%					
Critical Care Readmission																	
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20					
Readmit 24 Hr. %		0.8%		0.8%	5.9%	14.4%	10.6%	6.8%	10.6%	19.0%	4.7%	6.4%					
Readmit 48 Hr. %		1.6%	0.8%	0.8%	6.7%	16.1%	10.6%	6.8%	12.1%	20.2%	6.5%	7.1%					
Readmit 72 Hr. %	0.9%	1.6%	1.5%	1.7%	6.7%	16.9%	11.3%	7.5%	12.1%	20.2%	8.4%	7.1%					
Hosp. Index Readmit %	4.0%	6.2%	2.8%	3.1%	6.2%	15.7%	10.0%	6.7%	11.0%	17.5%	7.3%	6.7%					
Critical Care Avoidable Days																	
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20					
Avoidable Days %	5.3%	2.9%	3.8%	6.6%	7.9%	12.8%	12.8%	6.7%	7.0%	12.9%	7.0%	1.4%					
Critical Care Occupancy																	
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20					
Mean Occupancy % Actual	85.7%	93.3%	91.8%	87.0%	105.5%	104.3%	102.4%	101.3%	100.0%	69.7%	82.3%	92.5%					
Mean Occupancy % CIHI	86.3%	93.7%	92.6%	87.4%	82.5%	95.3%	94.6%	93.0%	93.4%	62.1%	74.3%	84.4%					
Min. Occupancy % Actual	66.7%	66.7%	70.8%	62.5%	50.0%	75.0%	75.0%	75.0%	62.5%	37.5%	54.2%	66.7%					
Max. Occupancy % Actual	100.0%	104.2%	104.2%	100.0%	104.2%	104.2%	104.2%	104.2%	104.2%	87.5%	91.7%	100.0%					
Percent of Days >= 100%	2.8%	25.5%	25.5%	2.0%	18.2%	26.5%	27.3%	20.3%	31.6%			0.0%					
Patient Goals																	
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20					
Discharges With Goals %	0.0%	0.8%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
Goals Documented Daily %	0.0%	0.1%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%					
First Family Contact																	
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20					
Eligible Admit	68	81	93	72	43	52	74	75	54	28	40	50					
Contact First 30 Min %	36.8%	46.9%	35.5%	37.5%	23.3%	30.8%	35.1%	29.3%	31.5%	39.3%	10.0%	10.0%					
In-Person Contact %	94.1%	87.7%	90.3%	87.5%	97.7%	86.5%	94.6%	86.7%	83.3%	17.9%	15.0%	52.0%					
Telephone Contact %	5.9%	12.3%	8.6%	12.5%	2.3%	13.5%	5.4%	13.3%	16.7%	82.1%	85.0%	46.0%					

Royal Alexandra Hospital

Unit Type: mixed medical/surgical ICU | No. of Beds: 25

Unit Director: Dr. Jonathan Davidow

We are a 25 bed General Systems ICU located at the Royal Alexandra Hospital, a 894 bed inner city teaching hospital. We are a closed ICU staffed by full-time fellowship-certified critical care specialists and a full spectrum of multi-disciplinary specialists. We are a referral hospital for Central and Northern Alberta, British Columbia and Saskatchewan, as well as the Northwest Territories and Nunavut. We manage a broad range of medical and surgical patients. The RAH ICU is a level 2 trauma centre. We have expertise in the perioperative care of thoracic surgical patients, high-risk obstetrics, continuous renal replacement therapy, plasmapheresis, intracranial pressure monitoring, and management of vulnerable patients with mental health conditions, substance abuse and addiction. The RAH ICU has a strong focus on quality, safety, patient and family-centered care, and the care of vulnerable populations. The RAH ICU admitted 1,475 patients during the 2019/2020 academic calendar.

Alberta Health Services		Critical Care KPI Dashboard												eCritical ALBERTA	
Type	Adult ICU	Zone	Edmonton	Site	Royal Alexandra Hospital ICU										
01-Jul-19													30-Jun-20		
Discharges															
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
Discharges	126	119	116	117	147	133	121	112	121	104	138	121			
Critical Care and Hospital Mortality															
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
Critical Care Mortality %	12.7%	10.9%	13.8%	9.4%	16.3%	12.0%	12.4%	12.5%	11.6%	16.3%	13.0%	11.6%			
Hospital Mortality %	27.6%	13.4%	14.7%	12.6%	19.7%	18.8%	12.4%	14.3%	18.2%	24.0%	15.9%	14.9%			
Critical Care Nighttime Discharges															
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
Live Disch 1900 - 0700 %	7.1%	6.7%	7.8%	6.8%	7.5%	6.8%	8.3%	7.1%	10.7%	5.8%	4.3%	3.3%			
Live Disch 1900 - 2300%	5.6%	3.4%	6.9%	6.8%	6.1%	4.5%	6.6%	4.5%	9.9%	3.8%	3.6%	2.5%			
Live Disch 2300 - 0700%	1.6%	3.4%	0.9%		1.4%	2.3%	1.7%	2.7%	0.8%	1.9%	0.7%	0.8%			
Critical Care Readmission															
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
Readmit 24 Hr. %	1.1%	1.0%		1.0%		0.9%	1.9%			1.3%	0.9%				
Readmit 48 Hr. %	2.2%	1.9%		2.0%	0.8%	1.9%	2.8%			2.5%	0.9%	1.9%			
Readmit 72 Hr. %	2.2%	1.9%	2.0%	2.9%	2.5%	2.8%	2.8%		1.0%	3.8%	0.9%	4.9%			
Hosp. Index Readmit %	7.1%	5.9%	6.9%	6.0%	6.8%	7.5%	4.1%	0.9%	5.0%	7.7%	2.2%	5.8%			
Critical Care Avoidable Days															
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
Avoidable Days %	5.1%	5.4%	13.4%	15.2%	10.5%	9.5%	7.8%	7.7%	6.2%	4.0%	5.7%	11.4%			
Critical Care Occupancy															
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
Mean Occupancy % Actual	85.7%	90.3%	90.4%	89.9%	89.7%	83.8%	89.6%	86.1%	81.3%	75.0%	74.2%	81.8%			
Mean Occupancy % CIHI	84.4%	89.0%	89.1%	87.9%	89.5%	82.1%	88.1%	85.0%	80.4%	73.9%	73.8%	80.8%			
Min. Occupancy % Actual	60.0%	76.0%	72.0%	68.0%	68.0%	52.0%	68.0%	60.0%	48.0%	52.0%	52.0%	56.0%			
Max. Occupancy % Actual	104.0%	108.0%	104.0%	108.0%	108.0%	104.0%	108.0%	108.0%	104.0%	100.0%	96.0%	108.0%			
Percent of Days >= 100%	5.9%	16.4%	9.1%	9.7%	11.3%	1.1%	10.1%	9.7%	3.4%	0.3%		5.1%			
Patient Goals															
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
Discharges With Goals %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
Goals Documented Daily %	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
First Family Contact															
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
Eligible Admit	88	68	80	87	104	91	74	77	71	60	83	78			
Contact First 30 Min %	58.0%	52.9%	50.0%	56.3%	49.0%	48.4%	51.4%	53.2%	39.4%	28.3%	37.3%	41.0%			
In-Person Contact %	55.8%	58.8%	46.3%	44.8%	50.0%	52.7%	50.6%	52.7%	36.6%	10.0%	4.8%	6.4%			
Telephone Contact %	40.9%	39.7%	53.8%	55.2%	46.2%	45.1%	43.2%	48.1%	63.4%	90.0%	95.2%	92.3%			

Grey Nuns Community Hospital

Unit Type: mixed medical/surgical ICU | No. of Beds: 8

Unit Director: Dr. Dominic Carney

The Grey Nuns Community Hospital (GNH) is located in southeast Edmonton, Alberta. The GNH is the Northern Alberta Regional Center for vascular surgery. The GNH ICU is an eight bed Medical/Surgical Adult ICU with specialized expertise in high-risk and emergency vascular surgery. The ICU is a closed unit and is staffed five full-time fellowship-certified critical care specialists who provide 24 hour a day in-house coverage.

GNH ICU provides all tertiary critical care services, including advanced forms of mechanical ventilation, acute renal replacement therapy, chronic hemodialysis and plasmapheresis. The GNH ICU also provides an outreach Rapid Response Team. Multidisciplinary care of the critically-ill patient is emphasized, with the ICU team including critical care fellows, critical care registered nurses, advanced nurse practitioners, registered respiratory therapists, clinical pharmacists, clinical dietitians, physiotherapists, occupational therapists and critical care physicians. The GNH ICU admitted 451 patients during the 2019/2020 academic calendar.

Alberta Health Services		Critical Care KPI Dashboard												eCritical ALBERTA	
Type	Adult ICU	Zone										Edmonton	Site		Grey Nuns Hospital ICU
01-Jul-19														30-Jun-20	
Discharges															
Discharges	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
	33	27	38	47	51	40	40	33	40	26	41	35			
Critical Care and Hospital Mortality															
Critical Care Mortality %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
	12.1%	14.8%	18.4%	8.5%	17.6%	12.5%	12.5%	9.1%	17.5%	23.1%	24.4%	2.9%			
Hospital Mortality %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
	15.2%	14.8%	23.7%	17.0%	19.6%	20.0%	22.5%	15.2%	25.0%	26.9%	36.6%	11.4%			
Critical Care Nighttime Discharges															
Live Disch 1900 - 0700 %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
	9.1%	14.8%	5.3%	10.6%	7.8%	7.5%	7.5%	6.1%	7.5%		4.9%	11.4%			
Live Disch 1900 - 2300%	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
	6.1%	11.1%	5.3%	6.4%	7.8%	5.0%	7.5%	6.1%	7.5%		4.9%	8.6%			
Live Disch 2300 - 0700%	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
	3.0%	3.7%		4.3%		2.5%						2.9%			
Critical Care Readmission															
Readmit 24 Hr. %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
				2.6%	2.4%					5.3%	3.8%				
Readmit 48 Hr. %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
				2.6%	7.3%	3.1%				15.8%	7.7%				
Readmit 72 Hr. %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
				2.6%	7.3%	3.1%				15.8%	7.7%				
Hosp. Index Readmit %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
	3.0%		5.3%	4.3%	3.9%	2.5%		3.0%		11.5%	7.3%	2.9%			
Critical Care Avoidable Days															
Avoidable Days %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
	7.3%	1.9%	8.3%	9.9%	7.1%	5.2%	13.4%	7.0%	6.2%	1.5%	2.7%	2.7%			
Critical Care Occupancy															
Mean Occupancy % Actual	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
	74.8%	69.1%	80.3%	80.0%	74.8%	79.0%	84.8%	79.3%	66.1%	61.6%	59.7%	83.5%			
Mean Occupancy % CIHI	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
	73.8%	67.7%	78.8%	79.0%	73.8%	76.6%	82.7%	77.6%	65.7%	61.7%	58.9%	82.9%			
Min. Occupancy % Actual	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
	50.0%	37.5%	50.0%	25.0%	25.0%	50.0%	50.0%	50.0%	25.0%	12.5%	25.0%	37.5%			
Max. Occupancy % Actual	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
	100.0%	100.0%	100.0%	112.5%	112.5%	112.5%	112.5%	112.5%	112.5%	100.0%	100.0%	100.0%			
Percent of Days >= 100%	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
	5.6%	1.1%	19.9%	20.7%	9.9%	14.6%	27.3%	13.7%	14.7%	0.1%	0.8%	24.6%			
Patient Goals															
Discharges With Goals %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
Goals Documented Daily %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
First Family Contact															
Eligible Admit	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
	19	19	21	30	32	27	18	16	16	10	14	16			
Contact First 30 Min %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
	26.3%	63.2%	42.9%	56.7%	34.4%	33.3%	16.7%	37.5%	31.3%	40.0%	14.3%	25.0%			
In-Person Contact %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
	89.5%	84.2%	81.0%	70.0%	87.5%	81.5%	94.4%	87.5%	81.3%	20.0%	35.7%	37.5%			
Telephone Contact %	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
	10.5%	15.8%	19.0%	30.0%	12.5%	18.5%	5.6%	12.5%	18.8%	80.0%	64.3%	62.5%			

Misericordia Community Hospital

Unit Type: mixed medical/surgical ICU | No. of Beds: 10

Unit Director: Dr. Ella Rokosh

Misericordia Community Hospital (MIS) is located in west Edmonton, Alberta. It is a major orthopedic (hip and knee), urologic (lithotripsy) and breast cancer surgery center. It is home to the Institute for Reconstructive Sciences in Medicine (IRSM) program as well as the only inpatient hyperbaric chamber in the province. Its nearby affiliate, Villa Caritas, houses 150 geriatric mental health patients.

The MIS ICU is a closed 10 bed medical/surgical unit, staffed by five full-time fellowship-certified critical care specialists. They provide daytime in-house care and 24/7 on call coverage which is supplemented at night with in-house extenders and clinical associates. The ICU team is comprised of an intensivist, nurse practitioner, critical care registered nurse, pharmacist, registered respiratory therapist and a dietician, all providing team-based care to the patients. The team takes pride in their collaborative approach to patient care and has received acknowledgment of their excellent work on the provincial Delirium Initiative.

The MIS ICU provides all tertiary care services for variety of critical illnesses with exception of trauma, neurosurgery and cardiac surgery. It has the expertise and equipment to provide advanced modes of ventilation and life support, continuous renal replacement therapy and plasmapheresis. It also provides a Rapid Response service to the rest of the hospital. The ICU excels in care of neuromuscular patients and in weaning from prolonged mechanical ventilation. The ICU's intensivists are also part of the zonal Chronic Ventilation Program, which spans inpatient and ambulatory care of patients with chronic respiratory failure due to variety of diagnoses. The MIS ICU admitted 467 patients during the 2019/2020 academic calendar.

Alberta Health Services		Critical Care KPI Dashboard												eCritical ALBERTA
Type	Adult ICU	Zone	Edmonton										Site	Misericordia Community Hospital ICU
01-Jul-19														30-Jun-20
Discharges														
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20		
Discharges	31	48	41	42	55	36	45	29	39	30	36	35		
Critical Care and Hospital Mortality														
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20		
Critical Care Mortality %	16.1%	8.3%	17.1%	11.9%	14.5%	16.7%	22.2%	24.5%	17.9%	10.0%	13.9%	17.1%		
Hospital Mortality %	25.6%	16.7%	19.5%	11.9%	14.5%	22.2%	24.4%	34.5%	17.9%	10.0%	13.9%	22.9%		
Critical Care Nighttime Discharges														
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20		
Live Disch 1900 - 0700 %	6.5%	16.7%	7.3%	14.3%	16.4%	5.6%	2.2%	10.3%	23.1%	6.7%	5.6%	5.7%		
Live Disch 1900 - 2300%	6.5%	10.4%	4.9%	9.5%	16.4%	5.6%	2.2%	10.3%	20.5%	6.7%	5.6%	2.9%		
Live Disch 2300 - 0700%		6.3%	2.4%	4.8%					2.6%			2.9%		
Critical Care Readmission														
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20		
Readmit 24 Hr. %		2.5%	3.0%		2.1%				3.1%					
Readmit 48 Hr. %	4.3%	2.5%	6.1%		2.1%				12.5%				3.7%	
Readmit 72 Hr. %	4.3%	2.5%	12.1%		2.1%				12.5%	3.7%			3.7%	
Hosp. Index Readmit %	6.5%	8.3%	14.6%		3.6%		2.2%		10.3%	6.7%	2.8%		2.9%	
Critical Care Avoidable Days														
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20		
Avoidable Days %	13.2%	5.5%	8.7%	10.7%	8.2%	6.4%	13.9%	5.8%	5.3%	3.2%	4.1%	8.7%		
Critical Care Occupancy														
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20		
Mean Occupancy % Actual	80.1%	79.3%	69.2%	81.4%	70.9%	73.6%	68.8%	78.4%	77.6%	33.0%	56.5%	65.1%		
Mean Occupancy % CIHI	79.4%	79.0%	68.7%	81.3%	70.0%	72.9%	69.7%	78.3%	78.1%	31.3%	55.2%	64.0%		
Min. Occupancy % Actual	50.0%	50.0%	40.0%	50.0%	40.0%	30.0%	40.0%	40.0%	20.0%	10.0%	20.0%	30.0%		
Max. Occupancy % Actual	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	70.0%	100.0%	100.0%		
Percent of Days >= 100%	8.3%	15.7%	4.3%	10.7%	1.4%	2.7%	1.7%	15.2%	12.4%		1.4%	4.5%		
Patient Goals														
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20		
Discharges With Goals %	12.9%	4.2%	12.2%	9.5%	0.0%	0.0%	2.2%	0.0%	23.1%	3.3%	5.6%	0.0%		
Goals Documented Daily %	4.8%	2.0%	2.8%	1.0%	0.0%	0.4%	0.0%	0.4%	4.0%	0.0%	1.0%	0.0%		
First Family Contact														
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20		
Eligible Admit	21	31	32	30	37	21	24	21	18	19	20	18		
Contact First 30 Min %	71.4%	35.5%	43.8%	66.7%	45.9%	61.9%	50.0%	57.1%	44.4%	42.1%	45.0%	16.7%		
In-Person Contact %	66.7%	64.5%	68.8%	60.0%	70.3%	57.1%	58.3%	81.0%	61.1%	0.0%	10.0%	27.8%		
Telephone Contact %	28.6%	35.5%	31.3%	36.7%	29.7%	42.9%	41.7%	19.0%	38.9%	100.0%	90.0%	72.2%		

Sturgeon Community Hospital

Unit Type: mixed medical/surgical ICU | No. of Beds: 5

Unit Director: Dr. Gabriel Suen

The Sturgeon Community Hospital (SCH) is located in the city of St. Albert, just north of Edmonton. The SCH is a 5 ICU bed and 3 high-intensity bed closed-model unit, staffed by full-time fellowship-certified critical care specialists. While a relatively small ICU, we provide a valuable service to the people of St. Albert, as well as contributing to the total critical care bed pool for Central and Northern Alberta. We are able to provide a wide variety of multi-disciplinary services, including continuous renal replacement therapy (CRRT). The SCH ICU admitted 324 patients during the 2019/2020 academic calendar.

Alberta Health Services		Critical Care KPI Dashboard											eCritical ALBERTA		
Type	Adult ICU	Zone	Edmonton										Site	Sturgeon Community Hospital ICU	
01-Jul-19														30-Jun-20	
Discharges															
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
Discharges	25	22	28	25	26	28	33	26	26	28	32	25			
Critical Care and Hospital Mortality															
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
Critical Care Mortality %	12.0%	9.1%	17.9%	4.0%	7.7%	14.3%	24.2%		11.5%	17.9%	6.3%	28.0%			
Hospital Mortality %	12.0%	13.6%	17.9%	12.0%	7.7%	25.0%	24.2%	11.5%	23.1%	21.4%	15.6%	28.0%			
Critical Care Nighttime Discharges															
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
Live Disch 1900 - 0700 %	12.0%	9.1%	3.6%	4.0%	7.7%	3.6%	12.1%	3.8%	3.8%	3.6%	3.1%	8.0%			
Live Disch 1900 - 2300%	4.0%	4.5%	3.6%		7.7%	3.6%	9.1%		3.8%	3.6%	3.1%	4.0%			
Live Disch 2300 - 0700%	8.0%	4.5%		4.0%			3.0%	3.8%				4.0%			
Critical Care Readmission															
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
Readmit 24 Hr. %					4.2%	4.8%	4.0%								
Readmit 48 Hr. %	4.5%				4.2%	4.8%	4.0%	4.3%							
Readmit 72 Hr. %	4.5%				4.2%	9.5%	4.0%	4.3%							
Hosp. Index Readmit %	4.0%				3.8%	7.1%	3.0%	7.7%							
Critical Care Avoidable Days															
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
Avoidable Days %	4.0%	6.0%	17.9%	17.5%	1.9%	2.9%	4.1%	8.6%	3.4%	2.8%	3.8%	10.4%			
Critical Care Occupancy															
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
Mean Occupancy % Actual	54.7%	40.6%	58.5%	94.8%	1160.0%	1867.8%	832.2%	2015.0%	2489.8%		962.2%	539.4%			
Mean Occupancy % CIHI	56.0%	41.1%	59.2%	69.0%	81.3%	50.0%	83.3%	62.5%	87.5%		25.0%	56.3%			
Min. Occupancy % Actual	25.0%	12.5%	25.0%	37.5%	50.0%	25.0%	62.5%	37.5%	50.0%	12.5%	0.0%	0.0%			
Max. Occupancy % Actual	100.0%	75.0%	87.5%	100.0%	112.5%	100.0%	112.5%	100.0%	100.0%	87.5%	62.5%	75.0%			
Percent of Days >= 100%	1.8%			12.0%	135.3%	181.5%	124.8%	27.6%	250.1%						
Patient Goals															
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
Discharges With Goals %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%	0.0%	0.0%	0.0%			
Goals Documented Daily %	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
First Family Contact															
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20			
Eligible Admit	14	16	14	13	10	19	18	13	17	9	11	6			
Contact First 30 Min %	57.1%	50.0%	50.0%	53.8%	40.0%	31.6%	44.4%	61.5%	35.3%	55.6%	9.1%	50.0%			
In-Person Contact %	85.7%	68.8%	85.7%	53.8%	80.0%	68.4%	72.2%	76.9%	58.8%	0.0%	18.2%	50.0%			
Telephone Contact %	7.1%	31.3%	7.1%	46.2%	20.0%	26.3%	22.2%	23.1%	41.2%	100.0%	81.8%	50.0%			

Connect Care



Connect Care – the provincial electronic medical record (EMR) for Alberta Health Services (AHS) facilities made its appearance in critical care for the first time on November 3rd 2019 at the 4 adult critical care units located at the University of Alberta Hospital and the Mazankowski Alberta Heart Institute (GSICU, Burn ICU, Neurosciences ICU, CVICU). Considering the substantial amount of preparation and last-minute “build” that was needed, the “go-live” event went relatively smoothly, despite being acutely tested by several transplant and complex patient admissions occurring during the transition. We have learned a lot from that experience.

Over the course of the subsequent year, the EMR continued to be optimized and, after a delay of 5 months due to the COVID-19 pandemic, the second wave “go-live” event occurred on October 24th, 2020. This particular wave relied heavily on virtual training. The wave 2 transition proved to be far smoother although not without challenges. For the first time, there is now a large component of interfacility transfers, transfers between facilities for procedures, as well as the first launch of labor and delivery services within Connect Care.

The subsequent waves for the Edmonton zone critical care are scheduled for June 2, 2021 (Royal Alexandra Hospital) and spring of 2022 (Grey Nuns Community Hospital and Misericordia Community Hospital). With every subsequent wave, we anticipate more efficient patient care in terms of information availability, transportability and care coordination. As all the critical care sites adopt Connect Care, the streamlining of services and connectivity of the ICUs in the Edmonton Zone and across the province should benefit.

At this stage, we are roughly 50% live working in Connect Care. Our Connect Care team consists of Dr. Alan Sobey (Provincial Knowledge Lead and Physician Builder), Dr. Darren Hudson (Physician Builder and Provincial Area Trainer) and Dr. Ella Rokosh (Medical Informatics Lead, Provincial Physician Trainer and Area Trainer) and relies on the amazing engagement of our SuperUsers across each site.

Dr. Ella Rokosh, MD, FRCPC

Site Lead, Critical Care Medicine

Connect Care: Medical Informatics Lead, Critical Care-Edmonton Zone

Connect Care Provincial Trainer and Physician Builder

Critical Care Strategic Clinical Network™

To get the most out of our health care system, Alberta Health Services (AHS) has established Strategic Clinical Networks (SCNs). SCNs – networks of people who are passionate and knowledgeable about specific areas of health – are mandated to find new and innovative ways of delivering care that will improve health outcomes, improve the patient experience, arm the people of Alberta with skills and tools to stay healthy, and provide the best health care for generations to come.

The [Critical Care Strategic Clinical Network™ \(CC SCN\)](#) is a community of health care professionals, operational leaders and stakeholders from Alberta’s adult, cardiovascular,

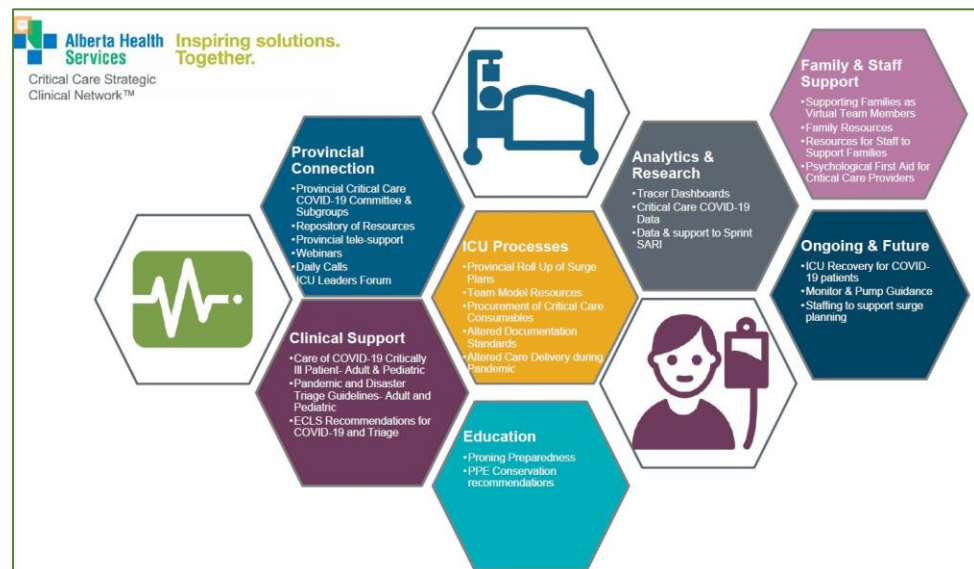


neurosciences and pediatric critical care units. The CC SCN applies best practices, ground-breaking evidence, innovative ideas and local successes, and translates them into provincial ways of working. Several members of our zonal community have leadership roles or serve on the Core Committee for the CC SCN and participate in CC SCN initiatives.

The mission is to be a recognized leader in the provision of optimal, sustainable, patient and family-centered critical care across the health continuum.

The Scientific Office of the CC SCN was created to lead Alberta Health Services (AHS) in the promotion, adoption and diffusion of evidence-based innovation to drive decision-making in critical care medicine. As researchers and innovators, the CC SCN leads innovative research and partners with patients and their families, students, researchers and organizations in order to improve the health of the people of Alberta through the development, execution, and implementation of evidence-informed science and research.

The CC SCN has had a central role in Alberta’s response to the COVID-19 pandemic. Many of the activities led by the CC SCN are outlined in the adjacent figure and the info-graphics on the following page.



INTENSIVE CARE IN ALBERTA



Supporting critically ill patients
24 hours a day, 7 days a week, 365 days a year

Units

- 15 Adult ICUs
- 2 Pediatric ICUs
- 3 Cardiovascular ICUs



296 Beds

Alberta ICUs support our health system by providing life saving specialized care.

Over 2 000 children & 13 000 adults required care in ICU.
The majority received support for breathing, infections and heart complications.

It takes a team of healthcare professionals committed to saving the sickest patients and supporting their families.



To learn more about ICU please visit



MyHealth.Alberta.ca
**Intensive Care: A guide for you
and your family**

2019 data retrieved from eCritical Tracer

COVID-19 IN ALBERTA ICUS

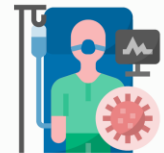


Alberta ICUs are supporting our health system during COVID19 pandemic by delivering life-saving specialized care.



211 Adults admitted to ICU
3 Children admitted to ICU
Average age 62 years

Average length of ICU stay
is 8 days



69% Required a breathing machine
7% Required continuous dialysis

**35% of COVID ICU patients
were treated with proning**

A special position to help the
lungs work better



To learn more about
COVID19
please visit
Alberta Health Services



Data retrieved from eCritical Tracer October 24, 2020

Partnerships

Hospital Sírio-Libanês (HSL)



HOSPITAL SÍRIO-LIBANÊS

Commission International and Accreditation Canada, and these certifications ensure the quality of care.

Besides providing exemplary patient care, education and research are also major mandates at the Hospital Sírio-Libanês. HSL has a Research and Education Institute founded in 2003 which comprises an area of 3000 m², including research laboratories and meeting rooms that can



accommodate up to 800 people. Teaching activities include multidisciplinary residency and medical residency for surgical and clinical specialties such as critical care, internal medicine, neurology, cardiology, anesthesiology and oncology.

The Department of Critical Care is a major area for patient care, teaching and research. It is comprised of 86 mixed ICU beds with 30 mixed medical-surgical and 22 cardiac ICU beds. In addition, 45 clinical step-down unit beds and 45 cardiac step-down unit beds are also part of the Department. The ICU works with board-certified intensivists 24/7 in an open format, so each patient has his/her own primary physician that is responsible for the decisions regarding care. The ICUs receive approximately 2,000 patient admissions per year and complex cancer care comprises about 40% of all admissions. The ICU also admits patients with acute respiratory failure, sepsis, and having had undergone high risk and complex neurosurgical procedures. HSL has growing liver and heart transplantation programs, as well as ventricular assist devices for heart failure.

In 2018, the Department of Critical Care Medicine and the Governors of the University of Alberta signed a memorandum-of-understanding (MOU) with the Department of Critical Care at the Hospital Sírio-Libanês for a five-year term. The MoU established the framework through which

our respective Departments of Critical Care Medicine can foster and develop a collaborative relationship through such activities as:

- a. Joint development/endorsement of an international critical care meeting hosted at HSL every two (2) years;
- b. Exchange of clinical faculty (i.e., visiting professors);
- c. Exchange of research faculty (i.e., visiting professors);
- d. Exchange of critical care clinical trainees (i.e. medical students; residents);
- e. Exchange of other trainees, including post-graduate and undergraduate students;
- f. Create opportunities for young faculty and trainees to complete formal graduate studies at the University of Alberta; and
- g. Develop collaborative scholarly research activities and output such clinical trials and publications.

In September 2019, the Department arranged with AHS for Dr. Rodrigo Rotheia from HSL to visit as a Medical Staff Observer at the University of Alberta Hospital.





UNIVERSITY OF ALBERTA
FACULTY OF MEDICINE & DENTISTRY
Department of Critical Care Medicine



Welcome Dr. Rodrigo Rotheia



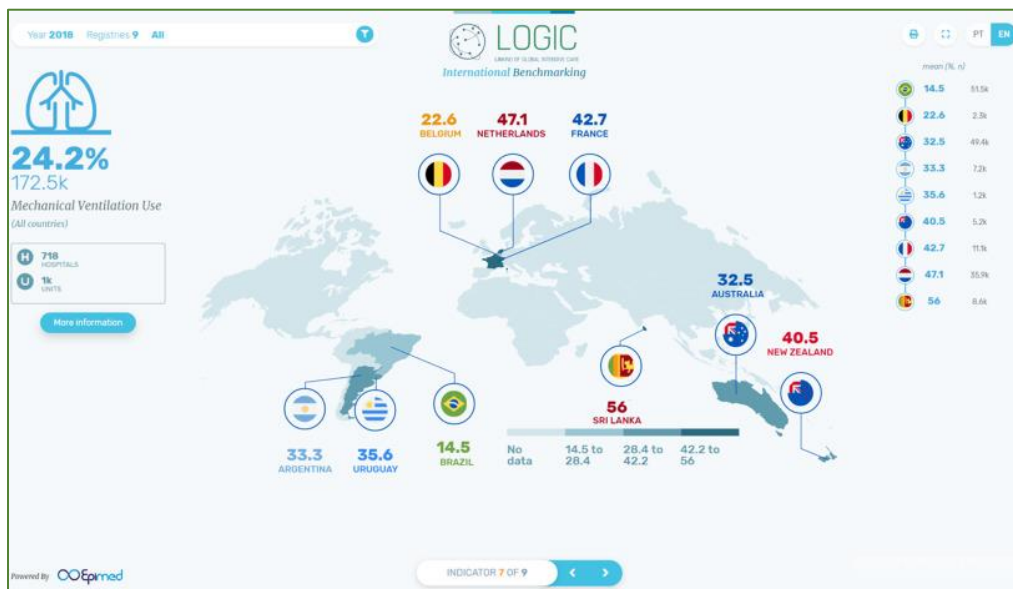
Dr. Rotheia is from Hospital Sirio-Libanes in Sao Paulo - this is the Department of Intensive Care Medicine and Hospital we have partnered with in Brazil. He is a 4th year ICU resident.

He will be spending September with us for a one-month observership in GSICU.

When you see him in the halls or on the unit be sure to say "Hi!"

LOGIC – Linking of Global Intensive Care

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



LOGIC currently has contributions from 13 countries representing 1,500 ICUs and 7 million patient admissions.

Website: <https://www.icubenchmarking.com/>

Edmonton Marathon – Run For Our Lives

The Department of Critical Care Medicine has been a registered charity with the Edmonton Marathon since 2016.

Our objectives have been 3-fold:

1. To build and foster our critical care community across the Edmonton Zone;
2. To generate awareness of our specialty of critical care medicine to the Edmonton public;
3. To raise funds that can be reinvested into our Department across our sites in the Edmonton zone (i.e., innovations in patient care, quality, research, and education).

We have been one of the top fundraisers in the Marathon over the past 3 years (2017 \$10,249 / 2018 \$10,162 / 2019 \$7,706) and this has enabled us to fund a series of pilot projects within the Department across the zone (estimated total funds raised \$20,000). We would like to preserve and grow this legacy; unfortunately, the 2020 Edmonton Marathon was cancelled due to the COVID-19 pandemic.

2018 Research Funding Awarded:

- Patient and family perception of research participation in pragmatic trials in intensive care using waived consent: A substudy of the PEPTIC trial (\$6,830.00).
- A Novel Approach to Improving Communication and Family Centered Care in the ICU: Implementing a practical smart phone application to assist family navigation, communication and measure family satisfaction in Edmonton's critical care units (\$10,000.00). This app is now available for download.
- Extension to coordinate implementation of a longitudinal curriculum alongside “Qpath” (a digital archiving system and educational quality assurance software) (\$10,000.00).

2017 Research Funding Awarded:

Design and evaluation of a Competency-Based Critical Care Ultrasound Program for Critical Care Medicine, Faculty, Fellows and Nurse Practitioners (\$10,000.00)

Interactive Booth at Marathon Sports Expo

The Department hosted an interactive booth at the Shaw Conference Centre where the racers picked up their packages.

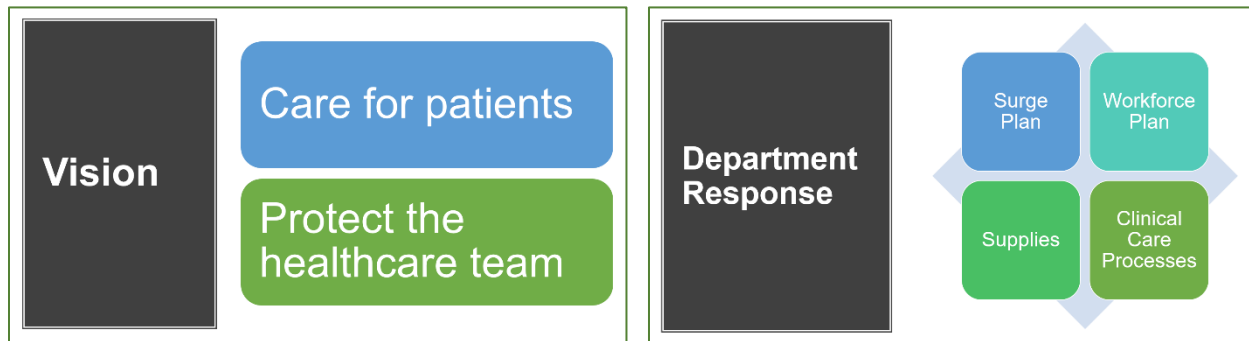
- August 19-20th, 2017: Approximately 10,000 people passed through over the two days
- August 17-18th, 2018: Approximately 5,000 people passed through over the two days
- August 16-17th, 2019: Approximately 5,000 people passed through over the two days.



Covid-19 Pandemic Impacts and Initiatives

The Department of Critical Care Medicine, in partnership with the CC SCN, has played a substantial leading role in our province's COVID-19 pandemic preparedness and response. This has been realized through numerous initiatives and countless hours of organization including:

- The development and hosting of 10 weeks of virtual “**Town Hall**” style **Department COVID-19 Grand Rounds** between April-June 2020 to enable a platform for communication and dissemination of “just-in-time” information for our critical care community (see below). These rounds were widely attended by members of the critical care community across Alberta, Western Canada and by other Departments.



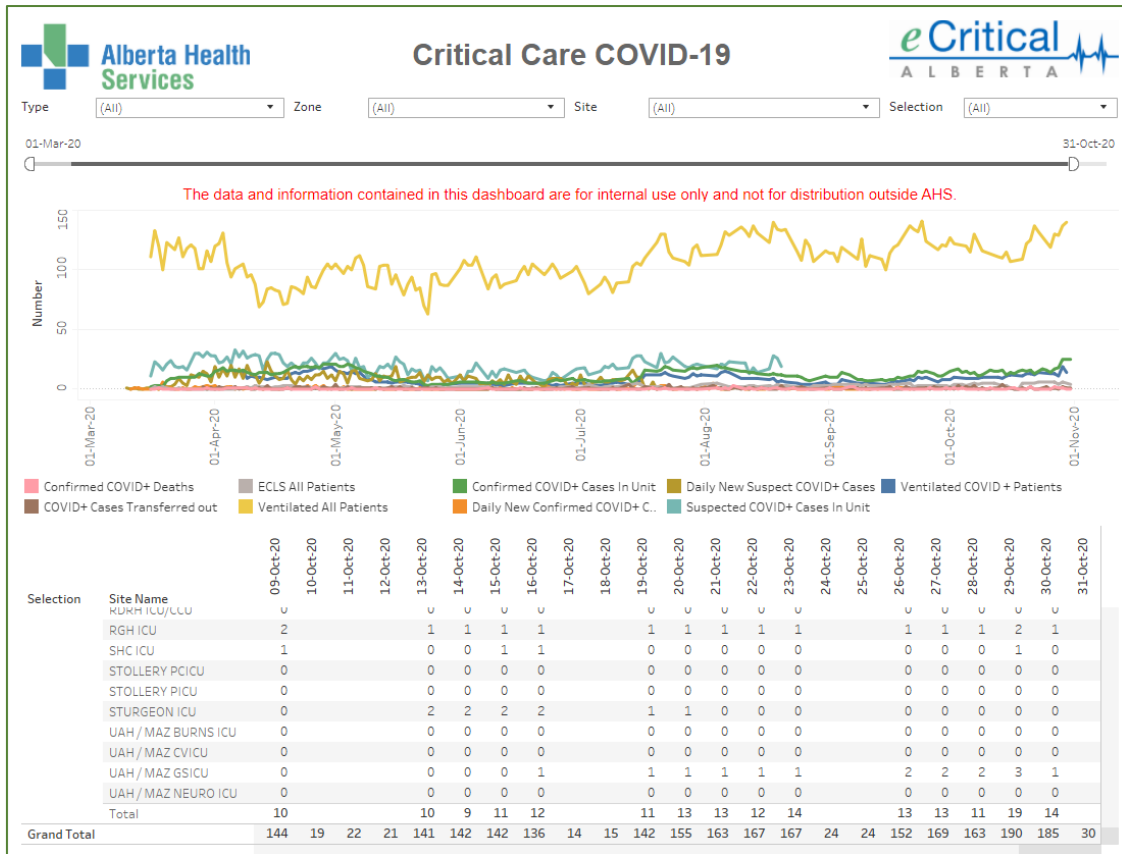
- The development of comprehensive **surge capacity plans** for all acute care hospital sites across the Edmonton Zone – in terms of a tiered expansion of ICU beds, equipment (e.g., ventilators, IV pumps) and personnel.
- The development of the **Critical Care Triage during Pandemic or Disaster in Alberta – Adult** guideline and protocol in the event that demand for critical care services and support exceed supply.
- The development of best practice standards and a central repository of COVID-19 related information (see: <https://www.criticalcareresearchscn.com/detail/posts/critical-care-clinical-practice-guidelines>)
- The development of a comprehensive evidence-informed “**Care of the Adult Critically Ill COVID-19 Patient**” guideline for the support and management of COVID-19 patients (See: <https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-covid-19-care-adult-critically-ill.pdf>)
- The development of ethical and evidence-informed guidelines for the **Triage of Extracorporeal Life Support (ECLS) during COVID-19** (See: https://site.cmg.io/scnresearch/FINAL_ECLS_COVID-19_Recommendations_March_13_2020-1.pdf)
- The development of provincial educational tools, simulation and evidence-informed guidelines for the use of **Proning during Pandemic** in critically ill patients with hypoxemia

respiratory failure and COVID-19 (See:

[https://site.cmg.io/scnresearch/Proning Education Package with links-1.pdf](https://site.cmg.io/scnresearch/Proning_Education_Package_with_links-1.pdf))

- The development of a daily census, a provincial critical care COVID-19 dashboard and other informatics resources to monitor ICU capacity and COVID-19 activity across Alberta ICUs in “real-time” (see below).

Summary	# Currently Ventilated Patients	# Patients on ECLS	# Currently Confirmed Cases	# Current Confirmed Cases Ventilated	# Currently Confirmed Cases Transferred out	# Confirmed Cases Transferred out (CUMULATIVE)	# Confirmed Deaths DAILY	# Confirmed Deaths (CUMULATIVE Total)
North	7	0	2	2	0	8	0	5
Edmonton	66	4	10	3	0	51	0	14
Central	4	0	0	0	0	14	0	1
Calgary	56	1	9	5	0	55	0	20
South	7	0	4	4	0	16	0	9
TOTAL	140	5	25	14	0	144	0	49



- The rapid COVID-19 research response and deployment, despite widespread lockdown of University Research-related activities, led by members of our Department (Drs. Sligl and Rewa). The was facilitated and fostered by our alignment with Infectious Disease (Dr. Sligl)

along with partnerships with Hematology/Transfusion Medicine and Laboratory Medicine (see below).

DCCM Research COVID-19 Impact

Due to the COVID-19 pandemic, many research studies supported across ICUs in the Edmonton Zone were suspended. This pause in research activity and recruitment of patients into studies had substantial impact on our research personnel and research office operations. However, COVID-19 also presented unique opportunities for critical care to be on the frontlines of important COVID-19 related research.

New Studies

During the COVID-19 lockdown in the spring 2020, the DCCM was able to initiate the following COVID-19 specific trials across Edmonton Zone ICUs:

New Studies at the UAH (GSICU/Burns)

- Short Period Incidence Study of Severe Acute Respiratory Infection (SPRINT-SARI)
- A Multi-centre, Adaptive, Randomized, Open-label, Controlled Clinical Trial of the Safety and Efficacy of Investigational Therapeutics for the Treatment of COVID-19 in Hospitalized Patients (CATCO)
- A Randomized Open-Label Trial of CONvalescent Plasma for Hospitalized Adults with Acute COVID-19 Respiratory Illness (CONCOR-1)
- 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? (ARB CORONA I)

New Studies at the MAZ (CVICU)

- The ExtraCorporeal Membrane Oxygenation for 2019 novel Coronavirus Acute Respiratory Disease. (ECMO-CARD)

New Studies at the SCH

- Short Period Incidence Study of Severe Acute Respiratory Infection (SPRINT-SARI)

New Studies at the MIS

- Short Period Incidence Study of Severe Acute Respiratory Infection (SPRINT-SARI)
- A Multi-centre, Adaptive, Randomized, Open-label, Controlled Clinical Trial of the Safety and Efficacy of Investigational Therapeutics for the Treatment of COVID-19 in Hospitalized Patients (CATCO)

New Studies at the GNH

- Short Period Incidence Study of Severe Acute Respiratory Infection (SPRINT-SARI)
- A Multi-centre, Adaptive, Randomized, Open-label, Controlled Clinical Trial of the Safety and Efficacy of Investigational Therapeutics for the Treatment of COVID-19 in Hospitalized Patients (CATCO)

New Studies at RAH

- Short Period Incidence Study of Severe Acute Respiratory Infection (SPRINT-SARI)
- A Multi-centre, Adaptive, Randomized, Open-label, Controlled Clinical Trial of the Safety and Efficacy of Investigational Therapeutics for the Treatment of COVID-19 in Hospitalized Patients (CATCO)
- Lessening Organ Dysfunction with VITamin C; A Multicentre Concealed-Allocation Parallel-Group Blinded Randomized Controlled Trial to Ascertain the Effect of High-Dose Intravenous Vitamin C Compared to Placebo on Mortality or Persistent Organ Dysfunction at 28 Days in Hospitalized Patients with COVID-19
- Lessening Organ Dysfunction with VITamin C: A Multicentre Concealed-Allocation Parallel-Group Blinded Randomized Controlled Trial to Ascertain the Effect of High-Dose Intravenous Vitamin C Compared to Placebo on Mortality or Persistent Organ Dysfunction at 28 Days in Septic Intensive Care Unit Patients
- Neurological Complications of COVID 19 (NCC COVID)
- A Randomised, Embedded, Multi-factorial, Adaptive Platform Trial for Community-Acquired Pneumonia (REMAP-CAP)
- The Use of Capnographic Late Dead Space Fraction and Clinical Prediction Rules in the Prediction of Pulmonary Embolism in Critically Ill Patients Undergoing Computed Tomography of the Chest or Ventilation Perfusion Scanning (Deadspace) *COVID-19 infections and/or ARDS will be identified at baseline in order to enable a subgroup analysis evaluating alveolar dead space)
- CAVI-ARDS: CAreful Ventilation In COVID 19 -induced ARDS - The CAVIARDS 19 Trial

COVID-19 Related Publications from the DCCM:

1. Osman M, Faridi RM, **Sligl W**, Shabani-Rad M, Dharmani-Khan P, **Parker A** et al. Impaired natural killer cell counts and cytolytic activity in patients with severe COVID-19. *Blood Adv* 2020; 4(20):5035-5039 (PMID: 33075136).
2. Wald R, **Bagshaw SM**. COVID-19-Associated Acute Kidney InjuryL Learning from the First Wave. *J Am Soc Nephrol* 2020; Epub Oct 28 (PMID: 33115918)
3. REMAP-CAP COVID-19 Investigators (**Sligl W, Rewa O, Bagshaw SM**). Effect of hydrocortisone on mortality and organ support in patients with severe COVID-19. *JAMA* 324(13):L1317-1329 (PMID: 32876697).
4. Ronco C, **Bagshaw SM**, Bellomo R, Clark WR et al. Extracorporeal blood purification and organ support in critically ill patients during COVID-19 Pandemic: Expert review and recommendations. *Blood Purif* 2020; May 2: 1-11 (PMID: 32454500)
5. Faqih F, Alharthy A, Alshaya R, Papanikoaou J, **Kutsogiannis DJ, Brindley PG**, Karakitsos D. Reverse takotsubo cardiomyopathy in fulminant COVID-19 associated cytokine release syndrome and resolution following therapeutic plasma exchange: a case-report. *BMC Cardiovasc Disord* 2020; 20(1):389 (PMID: 32842957).
6. 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; S0883-9441 (PMID: 32763058).

7. 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*. 2020 Epub: Aug 14 (PMID: 32797661)
8. 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 (PMID: 32954709).
9. 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 (PMID: 32305402).
10. Parhar KKS, Lequier L, Blackwood J, Zuege DJ, **Singh G**. Optimizing provision of extracorporeal life support during the COVID-19 pandemic: practical considerations for Canadian jurisdictions. *CMAJ*. 2020 Apr 6;192(14):E372-E374 (PMID: 32336679).

DCCM Education COVID-19 Impact

The Residency Training Program was substantially impacted in numerous ways by the COVID-19 pandemic, including:

- Suspension of Junior Rotating Resident Seminars – these have since resumed.
- Weekly PGME COVID-19 briefings (Mar 13 – May 27, 2020).
- Redeployment and re-allocation of rotating residents (including in response to the COVID-19 outbreak at MIS ICU).
- Transition of education portfolio activities. This included Academic Half Day (AHD) presentations, CaRMS, International Interviews, Resident Program Committee meetings (RPC), and all other program-related meetings were transition to virtual/online (via Zoom platform).
- Cancellation of selected academic events including the Annual DCCM Research Day and in-person Objective Structured Clinical Examinations (OSCE).

PGME RESPONSE TO COVID-19

WELCOME

COVID-19 Pandemic continues to cause major disruptions in both learning and clinical environments. The Office of Postgraduate Medical Education is committed to providing regular written updates to our programs, learners, and stakeholders. The frequency will depend on the volume and urgency of information being shared with us and decisions being made.



COVID-19 INFORMATION & UPDATES

PGME OFFICE UPDATES

- [PGME Office Update - June 2, 2020 @ 14:00](#)
- [PGME Office Update - May 27, 2020 @ 18:00](#)
- [PGME Office Update - May 20, 2020 @ 18:00](#)

ADDITIONAL INFORMATION

- [PABA and AHS Communication - July 10, 2020](#)
- [International PGME Trainees Currently Abroad - May 25, 2020](#)
- [Fellowship Memo - April 22, 2020](#)
- [PEAP Memo - April 8, 2020](#)
- [AMMG Program Memo - April 8, 2020](#)
- [Guidelines for Exceptions to Call Maximums](#)
- [Resident Coverage Flowchart](#)

QUICK LINKS

For up-to-date information about COVID-19 within Alberta and across Canada, please visit:

- [Government of Alberta](#)
- [Global Affairs Canada](#)
- [Public Health Agency of Canada](#)

ALBERTA HEALTH SERVICES

AHS Medical staff receive daily COVID-19 updates from the Chief Medical Officer (CMO). The updates provide guidance as AHS keeps up with the evolving situation.

Our updates will not relay AHS information but will provide you with important links such as the following:

DCCM COVID-19 “Town Hall” Style Grand Rounds

Enclosed is a link to the [Video Library](#)

April 7th

COVID-19 Grand Rounds – 1

Presenters: Drs. Sean Bagshaw, Shelley Duggan, Dennis Djogovic, Gabriel Suen, Wendy Sligl and Oleksa Rewa

April 14th

COVID-19 Grand Rounds – 2

Presenters: Drs. Sean Bagshaw, Shelley Duggan, Jon Davidow, Arabesque Parker and Wendy Sligl

April 21st

COVID-19 Grand Rounds - 3 – “The Annual R.T. Noel Gibney Lecture in Critical Care Medicine”

Presenters: Dr. J. Randall Curtis

April 28th

COVID-19 Grand Rounds - 4

Presenters: Drs. Sean Bagshaw, Shelley Duggan, Oleksa Rewa, Dustin Anderson and Wendy Sligl

May 5th

COVID-19 Grand Rounds - 5

Presenters: Drs. Sean Bagshaw, Shelley Duggan, Oleksa Rewa, Daniel Garros, Jocelyn Slemko and Kristen Robertson

May 12th

COVID-19 Grand Rounds - 6

Presenters: Drs. Sean Bagshaw, Shelley Duggan, Janek Senaratne and Darren Hudson

May 12th

COVID-19 Grand Rounds - 7

Topic: Pandemic Recovery: Lessons from the 2003 SARS Outbreak

Presenters: Drs. Sean Bagshaw, Andrea Robinson

June 2nd

COVID-19 Grand Rounds – 8

Topic: Multi-System Inflammatory Syndrome in Children (MIS-C) and SARS-CoV-2

Presenters: Dr. Sean Bagshaw, Dr. Ashley Hunter (PICU)

June 9th

COVID-19 Grand Rounds – 9

Topic: COVID-19 MacGyvering: The Good, the Bad and the Forgotten

Presenters: Dr. Sean Bagshaw, Dr. Leonard Byker

June 16th

COVID-19 Grand Rounds – 10

Topic: COVID-19: Beyond the Curve

Presenters: Dr. Sean Bagshaw, Dr. Derek Townsend

DCCM Members in External Leadership Roles

- Dr. Sean Bagshaw** - Scientific Director, Critical Care Strategic Clinical Network, AHS
- Dr. Dennis Djogovic** - Director (Interim), Human Organ Procurement and Exchange Program (HOPE)
- Dr. Lawrence Cheung** - Associate Dean, Post-Graduate Medical Education, FoMD, University of Alberta
- Dr. Shelley Duggan** - Board of Directors, Alberta Medical Association; Facility Medical Director, “New Edmonton Hospital”
- Dr. Curtis Johnson** - Associate Zone Medical Director, Edmonton Zone, AHS; Co-Lead, Operations Section, Emergency Coordinating Centre, AHS
- Dr. Noel Gibney** - Deputy Facility Medical Director, “New Edmonton Hospital”
- Dr. Neil Gibson** - Associate Zone Medical Director, Acute Care Coverage and FoMD Liaison, AHS
- Dr. Darren Hudson** - Medical Director, eCritical Alberta, AHS
- Dr. Erika MacIntyre** - Vice-President, Edmonton Zone Medical Staff Association
- Dr. Jim Kutsogiannis** - President, Canadian Neurocritical Care Society
- Dr. Damian Paton-Gay** - Facility Section Head, Trauma, Royal Alexandra Hospital
- Dr. Gurmeet Singh** - Chair, Canadian Cardiovascular Society Affiliate Senate (C-CAS); Vice President, Canadian Cardiovascular Critical Care (CANCARE) Society; Co-chair, CCS COVID-19 Rapid Response Team (RRT)
- Dr. Clinton Torok-Both** - President, Alberta Society of Intensive Care Physicians
- Dr. Derek Townsend** - Deputy Facility Medical Director, University of Alberta Hospital, Mazankowski Alberta Health Institute and Kaye Edmonton Clinic, AHS; Board of Directors, Alberta Medical Association
- Dr. Sean van Diepen** - Director, Cardiac Intensive Care Unit, Mazankowski Alberta Health Institute, AHS
- Dr. Sandy Widder** - Associate Zone Medical Director (Interim), Integrated Quality Management, AHS
- Dr. David Zygun** - Medical Director, Edmonton Zone, AHS

Awards and Recognition

List of all Departmental Awards or special accolades

Mentor of the Year – Dr. Wendy Sligl

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. Dennis Djogovic

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. Wendy Sligl

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.

List of External Awards

Dr. Sean Bagshaw

Researcher of the Year
Edmonton Zone Medical Staff Society

Dr. Sean Bagshaw

Best Safety and Quality Paper
World Congress of Intensive Care Medicine (Melbourne, Australia)

Dr. Peter Brindley

Letter of Recognition: Simulation based Education (2018-20)
College of Physicians and Surgeons

Dr. Brian Buchanan

Outstanding Teacher: Off-Service Rotation (2018-2019)
RCPSC Emergency Medicine Residency Program

Dr. Brian Buchanan

Champion Award for Young Leaders
Edmonton Zone Medical Staff Society

Dr. Mathew Douma

2019 [Top 40 under 40](#)
Avenue Magazine (now Edify Magazine)

Dr. Neil Gibson

Honour Roll
Canadian Association of Physician Assistants

Dr. Richard Johnston

Life Achievements - Medal of Service
Edmonton Zone Medical Staff Society

Dr. Rachel Khadaroo

First Place Award: Storyboard Forum Display: "Elder-friendly Approaches to the Surgical Environment (EASE)"
Canadian Frailty Network National Conference on Frailty, Toronto, Ontario

Dr. Damian Paton Gay

Letter of Recognition
Simulation based Education July 2019 - College of Physicians and Surgeons

Dr. Adam Romanovsky

Sub-Specialty Teacher of the Year Award
Core Internal Medicine Residency Program

Dr. Sean van Diepen

Excellence in Clinical Teaching Award: Honorable Mention
Cardiology Trainees

Dr. Gurmeet Singh

Humanitarian Award co-accepted as co-chair, on behalf of CCS COVID-19 Rapid Response Team
Canadian Cardiovascular Society (CCS)

Dr. Sandy Widder

Dr. William A. Shandro Award for Teaching Excellence in Clinical Surgery
Medical Students Association

Dr. Sandy Widder

Dr. William A. Shandro Award for Teaching Excellence in Clinical Surgery
FoMD office of advocacy and wellbeing

Research and Innovation

Message from Associate Chair



The goal of research within the Department of Critical Care Medicine is to allow every healthcare professional to contribute to the general body of knowledge. All attending medical staff, residents, nursing and allied health professionals contribute to critical care research and to the betterment of patient care.

Research is part of our daily routine clinical practice. All aspects of medical practice have some foundation in evidence. Depending on the strength of that evidentiary foundation, the frequency of its clinical occurrence, and the existence of an evaluation method, research adds to our understanding and delivery of medical care.

[Dr. Oleksa Rewa](#)

Associate Chair, Research and Innovation

Research Groups

Two research groups operate within the Department of Critical Care Medicine. The RAH group, located at the Royal Alexandra Hospital, directed by Dr. Jim Kutsogiannis, and the UAH group, located at the University of Alberta Hospital, directed by Dr. Oleksa Rewa.

University of Alberta (UAH) - Site Lead – Dr. Oleksa Rewa

Royal Alexandria Hospital (RAH) - Site Lead – Dr. Jim Kutsogiannis

Grey Nuns Community Hospital - Site Lead – Dr. Dominic Carney

Misericordia Community Hospital - Site Lead – Dr. Erika Macintyre

Sturgeon Community Hospital - Site lead – Drs. Gabriel Suen/Oleksa Rewa

Neurosciences ICU - Site Lead – Dr. Jim Kutsogiannis

MAZ CVICU - Site lead – Dr. Sean van Diepen

DCCM Research Day

The event was postponed this year due to the COVID-19 pandemic.

Education

Message from Associate Chair

The Department of Critical Care Medicine strives to provide the best educational experience and environment for trainees to learn the foundations for independence and competence in their practice fields. Our training programs are designed to establish the foundation for safe, independent critical care practice by focusing on the development and maintenance of competence in clinical care, medical education and research, and by equipping and developing life-long commitment to education.

The Critical Care education experience starts as a junior resident, with training in a base specialty program such as internal medicine, surgery, emergency medicine or anesthesia. During this rotation, trainees learn the fundamentals of critical care and resuscitation of the acutely ill patient.



For those interested in a career in critical care medicine a two-year, Royal College of Physicians and Surgeons of Canada (RCPSC) approved residency training program is available. Through the residency, trainees will gain experience at managing patients with a variety of medical and surgical problems, and, at the end, will be prepared to care for any type of patient. There are also opportunities to develop skills in renal replacement therapies, percutaneous tracheostomy, extracorporeal life support therapies and solid organ transplantation care.

For those focused on specific training, we offer limited, one-year fellowships (in Cardiovascular ICU, Critical Care Cardiology, Neurocritical Care, Critical Care Ultrasound). We also have an active research program and offer research fellowships.

We pride ourselves in incorporating the use of an active simulation program into our training. The simulation program helps provide a safe and controlled environment for realistic, experiential learning and gives trainees the experience and emotional involvement that fosters complex thought and self-reflection. The program also consists of regular collaboration with other centers, sessions focusing on crisis resource management and multidisciplinary exercises.

[Dr. Adam Romanovsky, MD, FRCPC](#)

Associate Chair, Education

Critical Care Medicine Residency Program

[We offer a two-year residency training program](#) approved by the Royal College of Physicians and Surgeons of Canada. Our training program offers complete clinical exposure including all the major subspecialties of critical care.

Our training program is small enough that you will be given as much responsibility as needed, while at the same time, the number of attending physicians is sufficient to ensure that the ICU does not rely on trainees to operate. Our philosophy is “Education before service”.

Training is clinically focused and, at the end, you are prepared to provide care for a wide spectrum of critically ill patients – general medical, surgical, trauma, solid organ transplant, neurosurgical, cardiovascular, and burn-injured.

Program Overview

The mandatory twelve months of core Critical Care Medicine are divided into 2-month blocks. Each block gives the resident the opportunity to develop an appreciation of the entire spectrum of critical illness from admission to discharge.

The ICUs are divided into teams so that the resident is not overwhelmed with patient responsibilities. Between core rotations there is ample elective time to round out the resident’s knowledge and pursue special interests or projects. Up to three months in the two years can be used to complete the mandatory academic project – which may be in clinical research, quality improvement and patient safety, informatics or any other area if approved by the Program Director. In addition, one month each are spent the Neurosciences and Cardiovascular Intensive Care Units to provide focused exposure to these special patient populations.

Training Sites

Residents rotate through the General Systems ICUs at the Royal Alexandra Hospital, University of Alberta Hospital and Grey Nuns Community Hospital. These units are mixed medica/surgery ICUs and the residents are exposed to a wide variety of critical illness. Residents also rotate through the Neurosciences and Cardiovascular Surgical specialty ICUs. Residents also have opportunity to rotate in regional ICUs.

Post-Graduate Fellowship Training

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

We currently offer the following programs:

- Cardiovascular Intensive Care (CVICU) Clinical Fellowship
- Critical Care Ultrasound (CCUS) Clinical Fellowship
- Neurosciences Intensive Care (NSICU) Clinical Fellowship
- Critical Care Research Fellowship

2019-2020 Residents

Year One:

Dr. Dustin Anderson
 Dr. Lazar Milovanovic
 Dr. Jocelyn Slemko

Year Two:

Dr. Rashid Alballaa
 Dr. Sarah Andersen
 Dr. Leon Byker
 Dr. Andrea Robinson

<p><u>DO NOT DISTRIBUTE.</u> <u>NOT FOR POSTING.</u> <u>NOT FOR DISTRIBUTION.</u></p>	<p>CCM2 Critical Care Medicine Year 2 Residents</p>	 <p>Rashid Alballaa Pager: 780-969-4620 Email: alballaa@ualberta.ca</p>	 <p>Sarah Andersen Pager: 780-445-5556 Email: sandarse@ualberta.ca CHIEF RESIDENT: Jul 1 – Dec 31, 2019</p>	 <p>Leon Byker Pager: 780-445-5420 Email: lbyker@ualberta.ca</p>	 <p>Andrea Robinson Pager: 780-445-6872 Email: andrea2@ualberta.ca CHIEF RESIDENT: Jan 1 – Jun 30, 2020</p>
<p><u>DO NOT DISTRIBUTE.</u> <u>NOT FOR POSTING.</u> <u>NOT FOR DISTRIBUTION.</u></p>	<p>CCM1 Critical Care Medicine Year 1 Residents</p>	 <p>Dustin Anderson Pager: 780-969-4027 Email: dustin3@ualberta.ca</p>	 <p>Lazar Milovanovic Pager: 780-445-6472 Email: lmilovan@ualberta.ca</p>	 <p>Jocelyn Slemko Pager: 780-445-7175 Email: jmslemko@ualberta.ca</p>	<p><u>DO NOT DISTRIBUTE.</u> <u>NOT FOR POSTING.</u> <u>NOT FOR DISTRIBUTION.</u></p>

2019-2020 Fellows

Dr. Jeremy Katulka (CCUS)
 Dr. Mohammad Dairi (CVICU)
 Dr. Jean Deschamps (CVICU)

<p><u>DO NOT DISTRIBUTE.</u> <u>NOT FOR POSTING.</u> <u>NOT FOR DISTRIBUTION.</u></p>	<p>CCM ULTRASOUND FELLOWSHIP</p>	 <p>Jeremy Katulka Pager: 780-445-6723 Email: katulka@ualberta.ca</p>	<p>CCM CV-ICU FELLOWSHIP</p>	 <p>Mohammad DAIRI (Jan 1 – Dec 31, 2020) Pager: 780-445-2836 Email: dairi@ualberta.ca</p>	 <p>Jean Deschamps Pager: 780-445-5537 Email: jean3@ualberta.ca</p>
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2018-2019 Residents

Year One:










Dr. Rashid Alballaa
 Dr. Sarah Andersen
 Dr. Leonard Byker
 Dr. Andrea Robinson

Year Two:

Dr. Arabesque Parker
 Dr. Jean Deschamps
 Dr. Jeremy Katulka
 Dr. Geoffrey Shumilak

2018-2019 Fellows

Dr. Anne Gregory (CVICU)

<p>CCM2 Critical Care Medicine Year 2 Residents</p>	 Arabesque Parker Pager: 780-969-0992 aaparker@ualberta.ca CCM2 – (finish program on December 31, 2018)	 Jean Deschamps Pager : 780-445-5537 jean3@ualberta.ca	 Jeremy Katulka Pager: 780-445-6723 katulka@ualberta.ca CHIEF RESIDENT: July 1 – Dec 31, 2018	 Geoffrey Shumilak Pager: 780-445-7367 shumilak@ualberta.ca CHIEF RESIDENT: Jan 1 – June 30, 2019	<p>Critical Care CV-ICU Fellowship (1 Year Program)</p> <p>CV-ICU Fellow: Anne Gregory</p>
<p>CCM1 Critical Care Medicine Year 1 Residents</p>	 Rashid Alballaa Pager : 780-969-4620 alballaa@ualberta.ca	 Sarah Andersen Pager :780-445-5556 sanderse@ualberta.ca (Program start : Sept 24/18)	 Leonard Byker Pager: 780-445-5420 lbyker@ualberta.ca	 Andrea Robinson Pager: 780-445-6872 Andrea2@ualberta.ca	 Anne Gregory Pager: 780-445-6570 agregory@ualberta.ca

DCCM Education Events

Academic Half Day – every week Wednesday 13:30 – 15:30 hours

Covering 75 topics over the course of the academic year (see appendix).

Journal Club

Oct 1st 2019

Article #1: Early Neuromuscular Blockade in the Acute Respiratory Distress Syndrome

Article #2: A Multicenter Trial of Vena Cava Filters in Severely Injured Patients.

Nov 26th 2019

Article #1 Targeted Temperature Management for Cardiac Arrest with Non-shockable Rhythm

Article #2 Effect of Vitamin C Infusion on Organ Failure and Biomarkers of Inflammation and Vascular Injury in Patients with Sepsis and Severe Acute Respiratory Failure

The CITRIS-ALI Randomized Clinical Trial

Feb 11th 2020

Article #1: Conservative Oxygen Therapy During Mechanical Ventilation in the ICU.

Article #2: Effects of tranexamic acid on death, disability, vascular occlusive events and other morbidities in patients with acute traumatic brain injury (CRASH-3): a randomised, placebo-controlled trial

May 26th 2020

Article #1: Non-sedation or Light Sedation in Critically Ill, Mechanically Ventilated Patients;

Article #2: Liberal or Conservative Oxygen Therapy for Acute Respiratory Distress Syndrome

Other Activities:

CaRMS	September 18 th , 2019
International Applicant Interviews	October 23 rd , 2019
CaRMS Match Day	November 6 th , 2019
In Training Exam	December 11 th /19 th , 2019
MCCCKAP Exam	March 11 th /20 th , 2020
In Training Exam	June 3 rd /20 th , 2020
PD incoming/outgoing Welcome/Good Bye lunch	June 24 th , 2020

Critical Care Ultrasound and Simulation

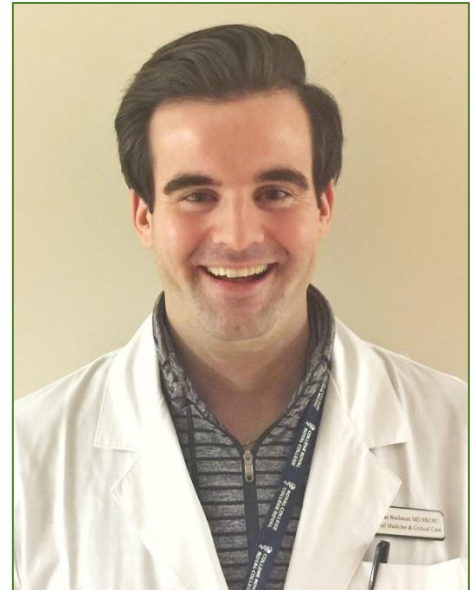
Message from the Associate Chair

[Critical Care Ultrasound \(CCUS\)](#) covers a vast array of applications from focused echocardiography and thoracic assessment to vascular access and procedural guidance. CCUS is rapidly gaining traction within the realm of critical care and emergency medicine, nationally and internationally, and encouraging acute care physicians and affiliated practitioners alike to become trained as critical point-of-care sonographers.

Visit: <http://www.albertasono.ca/>

[Dr. Brian Buchanan](#)

Associate Chair CCUS and Simulation



Canadian Resuscitative Ultrasound Course (West)

In the summer of 2019, Dr. Buchanan offered the first annual [CRUS West](#) Conference at the University of Alberta. The meeting welcomed 40 participants and 16 faculty from across Canada.

This is the biggest and most comprehensive course of its kind offered in western Canada. It is ideal for any clinician involved in resuscitation, such as intensivists, emergency physicians, anesthesiologists or internists.

Point-of-care ultrasound (POCUS) is revolutionizing care for the critically ill patient. Ultrasound allows the treating clinician to exploit the rapid, portable and repeatable nature of the technique to assist in decision making for those with shock, respiratory failure, or in need of invasive procedures.

The Canadian Resuscitative Ultrasound Course will focus on the core skill set required to begin the road to competency in point-of-care ultrasound. This will include didactic and hands-on sessions, with emphasis on image acquisition, image interpretation and clinical integration. This course uses a flipped classroom model where lectures will be provided ahead of time in advance of the session. With particular emphasis on cardiac and respiratory failure, as well as vascular access, this course is ideally suited for those caring for the gravely ill patients typically seen in the ICU, the ED or OR.

2019 - August 23rd and 24th

2020 - August 13th and 14th (Cancelled Due to Covid-19)

Safety and Quality

Message from the Associate Chair

The Canadian Healthcare system is under a period of intense pressure and transformation. Current crisis including the COVID-19 pandemic and ballooning government deficits has placed significant additional pressures on a system that was already struggling. Even before these challenges, on a daily basis, we faced issues of high costs, fighting for timely and accessible care, and ensuring equitable care to all patients despite socioeconomic status. The struggle to improve these challenges is the basis of Health Quality and Patient Safety as a field of study, research, and improvement. Improving healthcare outcomes is the key priority of any healthcare delivery or research organization. We recognize this and fully immerse ourselves in this belief. The Department of Critical Care Medicine at the University of Alberta and our Academic Chair, Dr. Sean Bagshaw and Clinical Department Head, Dr. Shelley Duggan, has made the study and practice of [Health Quality and Patient Safety](#) a fundamental pillar of everything that we do.

On a micro and community level, our efforts and projects are designed to improve care for our own patients. On a macro and societal level, our efforts and projects are designed to be shared through both quality and research methodology with the wider world in the hopes that we may improve the Canadian healthcare system and healthcare outcomes around the world.

The Department of Critical Care Medicine has the advantage of operating in a unified healthcare system with closely linked intensive care units throughout the Edmonton Zone and throughout the province of Alberta. This provides for many local opportunities for healthcare quality and patient safety improvement. Local is key when it comes to our field. With intricately linked units, local work can then be shared with a wider community for improvement and refinement.

Our goals closely align with those of the Institute of Medicine and the Health Quality Council of Alberta. We focus on improving safety, effectiveness, patient centeredness, timeliness, efficiency, and equality.

Over the years, we have added several academic and clinical Faculty with specialized training in Health Quality and Patient Safety. This group includes graduates from Canadian, American, and European health quality and safety programs.

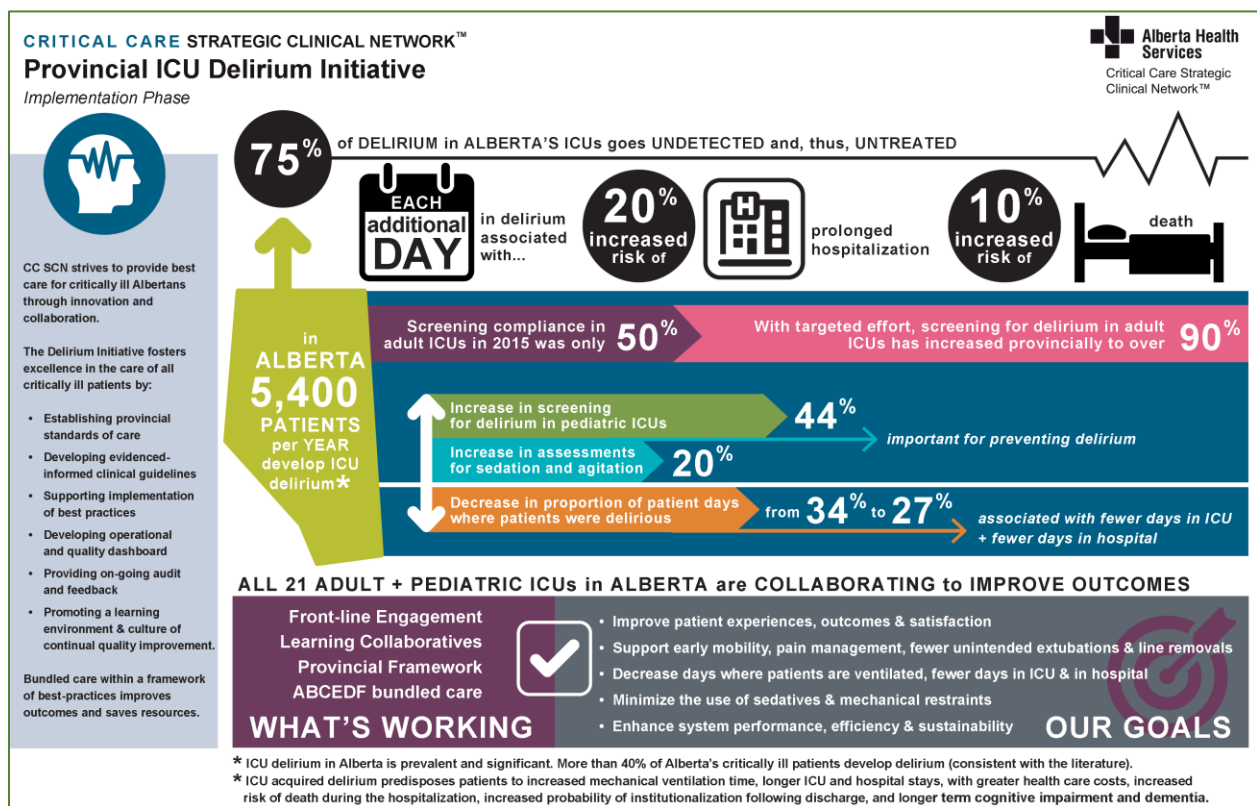
Current research programs in health quality and patient safety have included local programs to improve mobilization following mechanical ventilation, reduce medical waste, reduce central line associated infections, and enhance the quality, efficacy and safety of care transfers and handovers. Much larger scale community and provincial wide programs have leveraged the Critical Care Strategic Clinical Network, and have focused on delirium, medication reconciliation programs, and the development of a post ICU (survivorship) follow up clinic. Training programs for clinical fellows in Critical Care Medicine has also been created with the goal of eventually offering a grad level program through the university.

Our approach is always multidisciplinary and collaborative. Our goal is to engage and teach our clinical colleagues, provide local solutions that can be expanded beyond, and share our findings

with the world. As our healthcare system is stressed by new challenges such as COVID-19 and old demons such as ever tightening budgets, we realize that necessary changes and improvements will only come with an increased focus on the study, measurement, and improvement of health quality and patient safety.

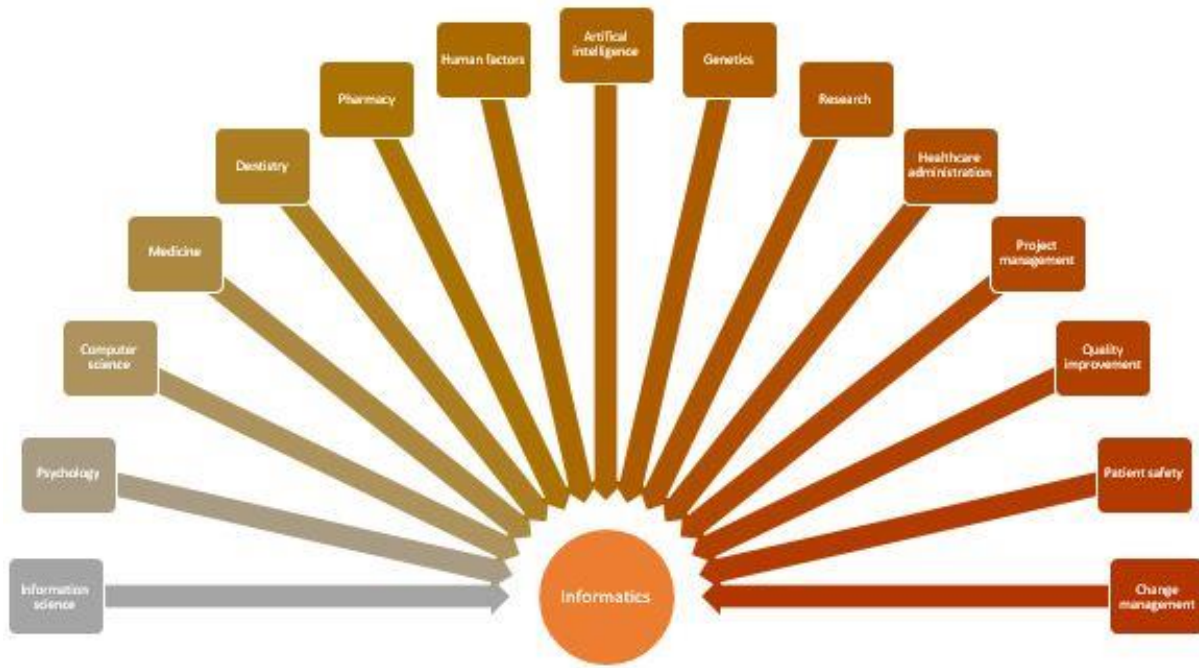
We look forward to hearing from you, as a patient or a medical professional or healthcare shareholder, regarding any concerns, ideas, or collaborative initiatives you may have. Please do not hesitate to reach out.

Dr. Raiyan Chowdhury, MD, FRCSC
Associate Chair, Quality and Safety



Medical Informatics

Health Information Science (or Informatics) is the interdisciplinary science that uses the power of information technology to improve healthcare. Informatics and data science are not just about computers as the speciality draws from many different disciplines.



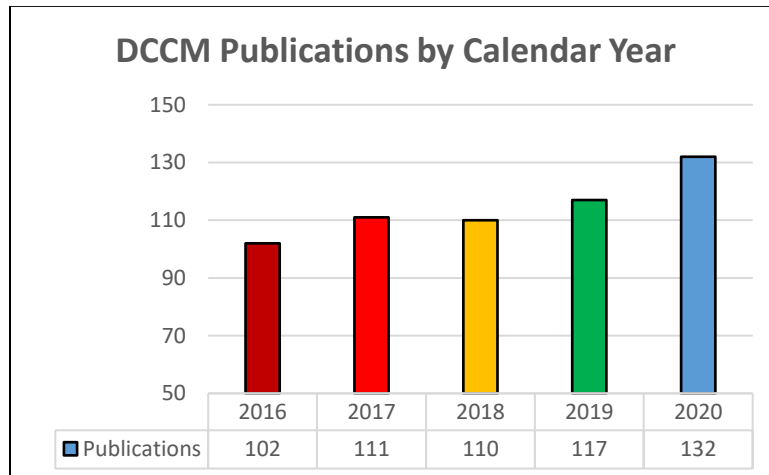
The Department of Critical Care Medicine and critical care in Alberta are uniquely positioned in Canada with eCritical Alberta. This province-wide Critical Care information system connects all intensive care units across Alberta to a single network to provide next-level data analytics through our TRACER data warehouse. The Department collaborates with international organizations, national critical care research networks and individual universities to enhance patient care and research.

Dr. Darren Hudson, MD, FRCPC
Lead, Medical Informatics
Medical Director, eCritical Alberta

2019-2020 Publications

Publication Summary (Trainees underlined):

- 162 total publications
- 38 publications with Department Faculty as first or senior author
- 15 publications with trainee as first author
- 20 publications with IF >10
- 8 publications in NEJM, Lancet, and JAMA Network journals



1. Baran DA, Grines CL, Bailey S, Burkhoff D, Hall SA, Henry TD, Hollenberg SM, Kapur NK, O'Neill W, Ornato JP, Stelling K, Thiele H, **van Diepen S**, Naidu SS. SCAI clinical expert consensus statement on the classification of cardiogenic shock: This document was endorsed by the American College of Cardiology (ACC), the American Heart Association (AHA), the Society of Critical Care Medicine (SCCM), and the Society of Thoracic Surgeons (STS) in April 2019. *Catheter Cardiovasc Interv*. 2019 Jul 1;94(1):29-37. doi: 10.1002/ccd.28329. Epub 2019 May 19. PMID: 31104355.
2. Jentzer JC, **van Diepen S**, Barsness GW, Henry TD, Menon V, Rihal CS, Naidu SS, Baran DA. Cardiogenic Shock Classification to Predict Mortality in the Cardiac Intensive Care Unit. *J Am Coll Cardiol*. 2019 Oct 29;74(17):2117-2128. doi: 10.1016/j.jacc.2019.07.077. Epub 2019 Sep 20. PMID: 31548097.
3. Wernerman J, Christopher KB, Annane D, Casaer MP, Coopersmith CM, Deane AM, De Waele E, Elke G, Ichai C, **Karvellas CJ**, McClave SA, Oudemans-van Straaten HM, Rooyackers O, Stapleton RD, Takala J, van Zanten ARH, Wischmeyer PE, Preiser JC, Vincent JL. Metabolic support in the critically ill: a consensus of 19. *Crit Care*. 2019 Sep 18;23(1):318. doi: 10.1186/s13054-019-2597-0. PMID: 31533772; PMCID: PMC6751850.
4. Joannidis M, Forni LG, Klein SJ, Honore PM, Kashani K, Ostermann M, Prowle J, **Bagshaw SM**, Cantaluppi V, Darmon M, Ding X, Fuhrmann V, Hoste E, Husain-Syed F, Lubnow M, Maggiorini M, Meersch M, Murray PT, Ricci Z, Singbartl K, Staudinger T,

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5. Dong V, Nanchal R, **Karvellas CJ**. Pathophysiology of Acute Liver Failure. *Nutr Clin Pract.* 2020 Feb;35(1):24-29. doi: 10.1002/ncp.10459. Epub 2019 Dec 15. PMID: 31840297.
 6. PEPTIC Investigators for the Australian and New Zealand Intensive Care Society Clinical Trials Group, Alberta Health Services Critical Care Strategic Clinical Network, and the Irish Critical Care Trials Group, Young PJ, **Bagshaw SM**, Forbes AB, Nichol AD, Wright SE, Bailey M, Bellomo R, Beasley R, Brickell K, Eastwood GM, Gattas DJ, van Haren F, Litton E, Mackle DM, McArthur CJ, McGuinness SP, Mouncey PR, Navarra L, Opgenorth D, Pilcher D, Saxena MK, Webb SA, Wiley D, Rowan KM. Effect of Stress Ulcer Prophylaxis With Proton Pump Inhibitors vs Histamine-2 Receptor Blockers on In-Hospital Mortality Among ICU Patients Receiving Invasive Mechanical Ventilation: The PEPTIC Randomized Clinical Trial. *JAMA.* 2020 Feb 18;323(7):616-626. doi: 10.1001/jama.2019.22190. PMID: 31950977; PMCID: PMC7029750.
 7. Ray KK, Colhoun HM, Szarek M, Baccara-Dinet M, Bhatt DL, Bittner VA, Budaj AJ, Diaz R, Goodman SG, Hanotin C, Harrington RA, Jukema JW, Loizeau V, Lopes RD, Moryusef A, Murin J, Pordy R, Ristic AD, Roe MT, Tuñón J, White HD, Zeiher AM, Schwartz GG, Steg PG (**van Diepen S** - Site PI); **ODYSSEY OUTCOMES Committees and Investigators**. Effects of alirocumab on cardiovascular and metabolic outcomes after acute coronary syndrome in patients with or without diabetes: a prespecified analysis of the ODYSSEY OUTCOMES randomised controlled trial. *Lancet Diabetes Endocrinol.* 2019 Aug;7(8):618-628. doi: 10.1016/S2213-8587(19)30158-5. Epub 2019 Jul 1.
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 14. Rucker D, Warkentin LM, Huynh H, **Khadaroo RG**. Sex differences in the treatment and outcome of emergency general surgery. *PLoS One*. 2019 Nov 4;14(11):e0224278. doi: 0.1371/journal.pone.0224278. PMID: 31682610; PMCID:PMC6827895.
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2019-2020 Grants

Funding Summary:

- 26 grants (10 CIHR)
- 14 grants with DCCM Faculty as PI
- Total funding: \$21,373,188

Investigator	Year	Funder	Competition	Title	Start	End	Total
Bagshaw (PI)	2019	AbSPOR Support Unit - Pragmatic Trials Platform	Demonstration Project Grant	Mega-ROX	2019	2021	\$100,000
Rewa (PI) Bagshaw (PI)	2020	CFN/CIHR	COVID-19 Project Grant	Frailty and COVID-19	2020	2022	\$48,625
Bagshaw (co-I) Niven (PI)	2019	Choosing Wisely Alberta	Project	REDUCE (RED blood cell Utilization in Critical CareE)	2019	2020	\$99,631
Kutsogiannis (Co-I) Scales (PI)	2019	CIHR	Project	PROTEST: PROphylaxis for Venous Thromboembolism in Severe Traumatic Brain Injury	2019	2023	\$2,000,000
Brindley (PI) Buchanan (PI)	2019	CMO of QHI (AHS)	EZ QI Competition	Quality Improvement in Critical Care Human Factors related to Airway and Resuscitation Management (CHARM)	2019	2020	\$5,000
Parker (PI) Widder (PI)	2019	CMO of QHI (AHS)	EZ QI Competition	Improving the Timeliness of Blood Product Delivery during Activation of Massive Hemorrhage Protocols in Edmonton Zone	2019	2020	\$13,000
Kim (PI) Widder (PI)	2019	CMO of QHI (AHS)	EZ QI Competition	Tick tock, time's up: reducing time to appropriate imaging in major trauma	2019	2020	\$5,000

Widder (PI)	2019	Kaye-UHF	Kay Fund Competition	Geriatric Recovery and Enhancement Alliance in Trauma (GREAT) Multidisciplinary Quality Improvement Initiative	2019	2022	\$204,385
Rewa (PI)	2019	Baxter	IIR	Development of a CRRT Quality Dashboard	2019	2022	\$290,180
van Diepen (PI)	2019	Venture Fund	-	PRotocolized vs pErsonalized blood preSSure peRi-operative paramEters in Coronary Artery Bypass Grafting Surgery: The PRESSURE Cardiac Surgery Trial	2019	2021	\$50,000
van Diepen (co-PI)	2019	Early Career Arrhythmia and Atrial Fibrillation Award (ECA3) 2019	-	Opportunities to prevent sudden cardiac death: the BC Cardiac Arrest registry	2019	2021	\$89,824
Van Diepen (co-I)	2019	Kaye-UHF	Kaye Competition	Evaluation of an accelerated diagnostic chest pain protocol in the emergency department with next generation high sensitivity troponin I assay	2019	2021	\$115,926
Chaudhury (PI) Kutsogiannis (co-I)	2020	CCSCN	Seed Grant	Systematic review of opioid withdrawal in vulnerable populations	2020	2021	\$10,000
Rewa (co-I) Silver (PI)	2020	Kidney Foundation of Canada	Kidney Health Research Grant	Promoting Kidney Recovery after AKI receiving Dialysis	2020	2023	\$178,279
Kutsogiannis (PI)	2020	RAH Foundation	Grant Support	SPRINT-SARI	2020	2021	\$7,500

Kutsogiannis (PI)	2020	RAH Foundation	Grant Support	REMAP-CAP			\$50,200
Bagshaw (co-I) Khadaroo (co-I) Kutsogiannis (co-I) Macala (co-I) Rewa (co-I) Sligl (co-I) Fox-Robichaud (PI)	2020	CIHR	Team Network Grant	Canadian Sepsis Research Network	2020	2025	\$6,789,630
Bagshaw (co-I) Parhar (PI)	2020	CIHR	Project	VENTING WISELY	2020	2023	\$600,524
Bagshaw (co-I) Rewa (co-I) Rochweg (PI)	2020	CIHR	Project	Fluids in Septic Shock (FISSH)	2020	2022	\$1,147,501
Bagshaw (co-I) Ferguson (PI)	2020	CIHR	Project	Ultra-Low Tidal Volume Mechanical Ventilation in ARDS Through ECCO2R	2020	2022	\$520,200
Bagshaw (co-I) Rewa (co-I) Fiest (PI)	2020	CIHR	COVID	Understanding and managing the effects of COVID-19 restricted visitation policies on the families and healthcare providers of critically ill patients	2020	2021	\$298,769
Rewa (co-I) Cuthbertson (PI)	2020	CIHR	COVID	SAVE-ICU	2020	2023	\$2,100,000
Bagshaw (co-I) Widder (co-I) Niven (PI)	2020	AI/AHS	PRIHS (AI/AHS)	Don't Misuse My Blood	2019	2022	\$751,654
Rewa (co-I) Boyd (PI)	2020	CIHR	COVID	ARBs CORONA II	2020	2022	\$3,456,541
Lau (PI) Bagshaw (co-I) Brindley (co-I) Jacka (co-I) Kutsogiannis (co-I) Rewa (co-I)	2020	UHF	COVID	COVID Shunt Study	2020	2021	\$85,000

Macala (PI)	2020	CIHR	Project	Sex differences in preclinical models of sepsis: A systematic review	2020	2021	\$147,059
Khadaroo (PI)	2020	Alberta Innovates	Partnership for Research and Innovation in the Health System (PRIHS V Competition)	“Elder-Friendly Bedside reconditioning for Functional ImprovementTs (BE FIT) following Surgery Study”	2020	2023	\$947,735
Khadaroo (PI)	2020	Canadian Frailty Network	Inter-disciplinary Fellowship Program	“Characterization of biological samples to identify and provide optimized care to elderly patients undergoing emergency Surgery”	2020	2021	\$25,000
Khadaroo (PI)	2020	Canadian Institutes of Health Research (CIHR)	Project Grant - Priority Announcement: Clinical Research - Musculoskeletal Health	“Elder-friendly BEside reconditioning for Functional ImprovementTs (BE FIT) following Surgery Study”	2019	2021	\$100,000
Khadaroo (Co-PI)	2020	Canadian Institutes of Health Research (CIHR)	Project Grant	“PREPARE Trial: a parallel arm multicenter randomized trial of frailty-focused PReoperative Exercise to decrease PostoperAtive complication Rates and disability scorEs”	2019	2022	\$1,136,025
Total							\$21,373,188

Presentations

DCCM Grand Rounds

<u>Date</u>	<u>Speaker</u>	<u>Topic</u>
3-Sep-19	Dr. Dustin Anderson	Autoimmune Encephalitis in the ICU
10-Sep-19	Dr. Mike Jacka	SCCM Guidelines for Sedation and Analgesia and the ICU
11-Sep-19	Dr. Brian Buchanan	(CCUS) Principles of Critical Care & Point-of-Care Ultrasound
24-Sep-19	Dr. Sarah Farrow	Can you believe it?!" - The truth about "Statistical Significance" in CCM
1-Oct-19	Dr. Adam Romanvosky	Journal Club
8-Oct-19	Dr. Nori Bradley	Everything really is bigger in Texas: Lessons learned for trauma care
9-Oct-19	Dr. Jeremy Katulka	(CCUS) Hemodynamic Assessment in Resuscitation
15-Oct-19	Dr. Brendan Leier	What's the Harm in Being Right? Managing Risk in Communicating Medical Information
22-Oct-19	Dr. John Muscedere	Frailty in the ICU
5-Nov-19	Dr. Dominic Carney	Jim Henson and the history of septic shock
20-Nov-19	Dr. Fung	(CCUS) Tubes and Lines: When Things Go Haywire
26-Nov-19	Drs. Erika MacIntyre/ Mark Heule	Chronic and Home mechanical Ventilation - Everything old is new again
26-Nov-19	Dr. Brian Buchanan	Journal Club
3-Dec-19	Dr. Matthew Weiss	MAID in Canada: Organ Donation after Medical Assistance in Dying
10-Dec-19	Dr. Daman Scales	PROphylaxis for venous ThromboEmbolism in Severe Traumatic Brain injury
18-Dec-19	Dr. Brian Buchanan	CCUS XMAS rounds
7-Jan-20	Dr. Samuel Stewart	Death, Medicine & the Law
14-Jan-20	Dr. Jennifer Burke	Physician and Family Member: how do we manage the hats?
15-Jan-19	Dr. Brian Buchanan	(CCUS) Optic Nerve Sheath Assessment in the Critically Ill
21-Jan-20	Dr. Lazar Milovanovic	In search of clinical judgement: a fellow's journey
28-Jan-20	Dr. Tafirenyika Madzimure	Regional Critical Care Experience of a Region, North. How did we get here?
4-Feb-20	Dr. Matt Morgan	How kissing a frog can save your life
11-Feb-20	Dr. Adam Romanovsky	Journal Club
25-Feb-20	Dr. Clark Maul	The Fontan Paradox
3-Mar-20	Dr. Shannon Mohoric	CoVID-19: Preparing for a pandemic and managing misinformation
10-Mar-20	Dr. Sarah Andersen	Rationing and Futility in the ICU
11-Mar-19	Dr. Jean Descamps	(CCUS) Right Ventricular Function in Critical Illness
7-Apr-20	Dr. Sean Bagshaw	COVID-19 Grand Rounds - 1
14-Apr-20	Dr. Jean Descamps	COVID-19 Grand Rounds - 2
21-Apr-20	Dr. J Randall Curtis	R.T. Noel Gibney Lecture in Critical Care Medicine
28-Apr-20	Dr. Jeremy Katulka	COVID-19 Grand Rounds - 4
5-May-20	Dr. John Marshall	COVID-19 Grand Rounds - 5
12-May-20	Dr. Rashid Alballaa	COVID-19 Grand Rounds - 6
26-May-20	Dr. Andrea Robinson	Pandemic Recovery: Lessons from the 2003 SARS Outbreak
26-May-20	Dr. Adam Romanovsky	Journal Club
2-Jun-20	Dr. Ashley Humber	Multisystem Inflammatory Syndrome in Children (MIS-C) and SARS-CoV-2
9-Jun-20	Dr. Leon Byker	COVID MacGyvering: the Good, the Bad and the Forgotten
16-Jun-20	Dr. Derek Townsend	COVID-19 Beyond the Curve

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

This annual Lectureship was inaugurated in 2018 and aims to honor the enduring legacy Dr. Gibney has made to Critical Care Medicine in Edmonton over the last 40 years. This lecture aims



to honor Noel's legacy by inviting recognized local, national or international speakers whose vision, body of scholarly contributions and leadership have advanced the field of critical care medicine.

Dr. R. T. Noel Gibney graduated from University College Dublin Medical School in 1975 and thereafter completed specialty training in internal medicine, pulmonary medicine and nephrology in Dublin. In 1981, Dr. Gibney completed a fellowship in critical care medicine at Massachusetts General Hospital in Boston (1981) and held a "Instructor" appointment at Harvard Medical School.

Dr. Gibney moved to Edmonton in 1982, appointed as an Assistant Professor, and attending physician and Medical Director of the Intensive Care Unit at the Edmonton General Hospital. In 2002, Dr. Gibney was named a full Professor and became the Director of the new Division of Critical Care Medicine and subsequently the Edmonton Zone Clinical Department Head until 2012 during a period of unprecedented growth in the field of critical care medicine.

Dr. Gibney served on numerous academic and clinical committees and boards, often focused on quality, rapid response systems, health technology and informatics, pandemic preparedness, international disaster relief, medical disclosure and governance.

Dr. Gibney has trained, inspired and been a mentor to a generation of critical care physicians in Canada, many who have gone on to hold prominent leadership positions in our health system. He is recognized as an esteemed teacher and has received numerous awards for his contributions to medical education. Dr. Gibney has been a leading investigator and facilitator of research (>200 publications) both locally and through broader collaborations.

As Department Chair and Edmonton ZCDH, Dr. Gibney encouraged excellence in clinical care, and importantly fostered building an academic Department through growing contributions to clinical research and medical education.

The University and the Edmonton Zone hospitals will continue to honor his impact and legacy for many years (hopefully through his continued contributions as Professor Emeritus).

- 2018 - Dr. Margaret Herridge (University of Toronto)
- 2019 - Dr. Deborah Cook (McMaster University)
- 2020 - Dr. J. Randall Curtis (University of Washington)

2020 – Dr. J. Randall Curtis (University of Washington)

Title: Integrating Palliative and Critical Care: Lessons from Recent Trials and Implications for Clinical Practice

Biography: Dr. Curtis completed medical school at Johns Hopkins University then an internal medicine residency and pulmonary and critical care fellowship at the University of Washington. He is a pulmonary and critical care physician and palliative medicine physician at Harborview Medical Center at the University of Washington. He also holds the A. Bruce Montgomery – American Lung Association Endowed Chair in Pulmonary and Critical Care Medicine and he is the founding Director of the Cambia Palliative Care Center of Excellence at the University of Washington. He has an active research program with over 25 years of continuous funding from the National Institutes of Health and has also received funding from a number of foundations including the Cambia Health Foundation, Robert Wood Johnson Foundation, and the Greenwall Foundation. His research focuses on improving palliative care for patients with serious illness as well as for patients’ families. He has authored more than 300 peer-reviewed research articles and more than 150 editorials and chapters. He is also committed to mentoring in palliative care research and is the director of two T32 awards and a K12 award from the National Institutes of Health to train palliative care researchers of the future. Dr. Curtis has been the recipient of several awards for his research and teaching in palliative care and in 2017 he was named one of the 30 Visionaries in Hospice and Palliative Medicine by the American Academy of Hospice and Palliative Medicine.

THIRD ANNUAL
**R.T. NOEL
GIBNEY
LECTURE**
IN CRITICAL CARE MEDICINE

TUESDAY, APRIL 21, 2020
16:30 - 17:30 | Classroom D - 2F1.04 WMC

**INTEGRATING PALLIATIVE
AND CRITICAL CARE:**
LESSONS FROM RECENT TRIALS AND
IMPLICATIONS FOR CLINICAL PRACTICE

Featuring
J. Randall Curtis, M.D., M.P.H.
Professor of Medicine
Director, Cambia Palliative Care Center of Excellence
A. Bruce Montgomery – American Lung Association
Endowed Chair in Pulmonary and Critical Care Medicine
University of Washington, Seattle, WA, USA

Dr. Curtis completed medical school at Johns Hopkins University then an internal medicine residency and pulmonary and critical care fellowship at the University of Washington. He is a pulmonary and critical care physician and palliative medicine physician at Harborview Medical Center at the University of Washington. He also holds the A. Bruce Montgomery – American Lung Association Endowed Chair in Pulmonary and Critical Care Medicine and he is the founding Director of the Cambia Palliative Care Center of Excellence at the University of Washington. He has an active research program with over 25 years of continuous funding from the National Institutes of Health and has also received funding from a number of foundations including the Cambia Health Foundation, Robert Wood Johnson Foundation, and the Greenwall Foundation. His research focuses on improving palliative care for patients with serious illness as well as for patients’ families. He has authored more than 300 peer-reviewed research articles and more than 150 editorials and chapters. He is also committed to mentoring in palliative care research and is the director of two T32 awards and a K12 award from the National Institutes of Health to train palliative care researchers of the future. Dr. Curtis has been the recipient of several awards for his research and teaching in palliative care and in 2017 he was named one of the 30 Visionaries in Hospice and Palliative Medicine by the American Academy of Hospice and Palliative Medicine.

An enduring legacy of Dr. Gibney's contributions to Critical Care Medicine in Edmonton over the last 40 years. This lecture aims to honor Noel's legacy by inviting recognized local, national or international speakers whose vision, body of scholarly contributions and leadership have advanced the field of critical care medicine.

UNIVERSITY OF ALBERTA
FACULTY OF MEDICINE & DENTISTRY


Alberta Health Services

Visiting Professors

Dr. John Muscedere – Queen’s University

Title: Frailty in the ICU

Biography: Dr. John Muscedere, MD, FRCPC, is an intensivist at Kingston General Hospital (KGH), and Professor of Critical Care Medicine in the Faculty of Health Sciences at Queen’s University. He also serves as the Research Director of the Critical Care Program at Queen’s and KGH, and Co-Chair of the Canadian Critical Care Trials Group (CCCTG) Knowledge Translation Committee. Dr. Muscedere is also the Scientific Director and Chief Executive Officer of Canadian Frailty Network (CFN), a not-for-profit funded under Canada’s Networks of Centres of Excellence (NCE) program. CFN is improving care of the frail elderly by increasing frailty recognition and assessment, increasing evidence for decision-making, mobilizing evidence into policy and practice, and advocating for change in the healthcare system to meet the needs of this vulnerable population.



Rounds Announcement


UNIVERSITY OF ALBERTA
FACULTY OF MEDICINE & DENTISTRY
Department of Critical Care Medicine

Alberta Health Services
Department of Critical Care Medicine

Critical Care Grand Rounds

“Frailty in the ICU: Why aging societies will change the practice of critical care medicine.”
Presented by: Dr. John Muscedere

Date: 22 October, 2019
Time: 16:30 – 17:30
Room: Classroom D 2F1.04 WMC



Objectives:

1. Understand the impact of frailty on outcomes from critical illness
2. Understand how frailty assessment could be used to tailor practice
3. Know the knowledge gaps in our understanding of frailty in the ICU.

Videoconference to: Royal Alex, Grey Nuns, Misericordia, Sturgeon, Grande Prairie, Red Deer, Fort McMurray

Join the discussion at #dccmrounds

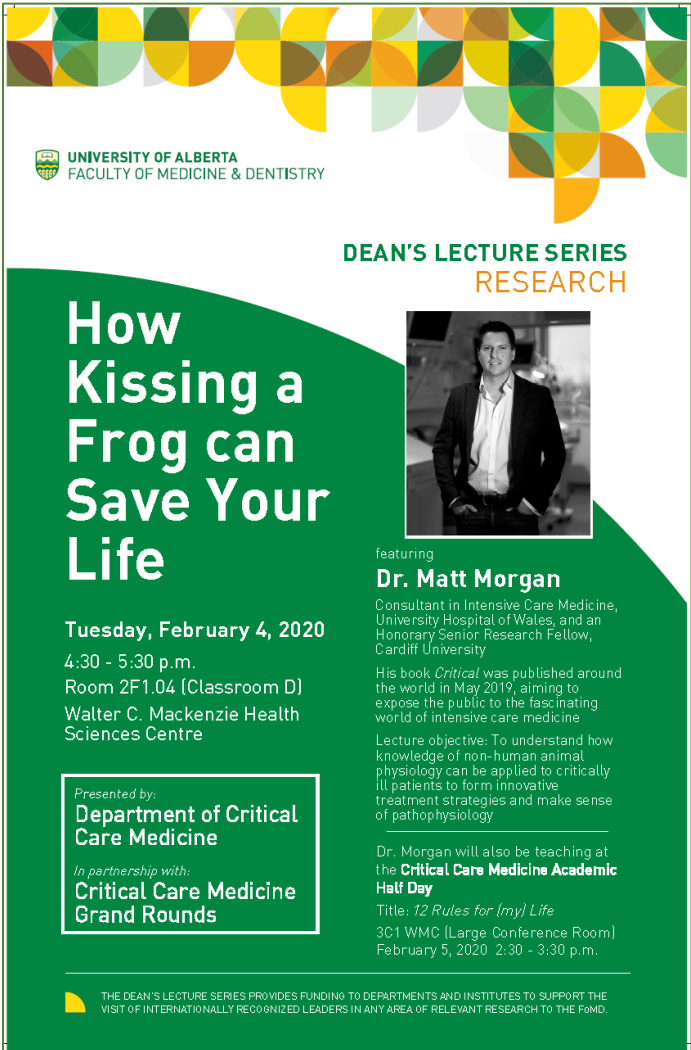
- NOTE: This event is being recorded in video format by AHS. If you do not wish to appear in the video recording ensure you sit out of camera range. Recordings can be found at: <https://www.ualberta.ca/critical-care-for-faculty-staff/rounds-library>
- Learning Activity (Section 1) as defined by the Maintenance of Certification program of the Royal College of Physicians and Surgeons of Canada, approved by the Department of Critical Care Medicine Continuing Education.
- Reminder: You can record your rounds attendance and evaluation <http://ccgm.ualberta.ca/>

<https://www.ualberta.ca/critical-care>
2-124 Clinical Sciences Building
8440-112 Street
Edmonton, Alberta T6G 2G3

Dr. Matt Morgan – Cardiff University

Title: How Kissing a Frog Can Save Your Life

Biography: Dr. Matt Morgan is a British trained intensive care doctor with a wealth of clinical, research and education experience. He is the head of critical care research for a major UK academic tertiary teaching hospital and works for a Russell group University. He has postgraduate qualifications in intensive care medicine, has worked in some of the largest UK and Australasian hospitals and has a background in military medicine. He has won prizes for his research interests and has completed a PhD with a major Russell Group University. He has been awarded a prestigious 3-year grant to expand his research into wearable technologies. He is passionate about medical education and works for BMJ Learning, a major international medical education provider. He is enthused about innovation having designed medical software used by over 50,000 people and completed a PhD implementing artificial intelligence methods to overcome complex diagnostic problems.



UNIVERSITY OF ALBERTA
FACULTY OF MEDICINE & DENTISTRY

DEAN'S LECTURE SERIES
RESEARCH

How Kissing a Frog can Save Your Life

Tuesday, February 4, 2020
4:30 - 5:30 p.m.
Room 2F1.04 (Classroom D)
Walter C. Mackenzie Health Sciences Centre

Presented by:
Department of Critical Care Medicine

In partnership with:
Critical Care Medicine Grand Rounds

featuring
Dr. Matt Morgan
Consultant in Intensive Care Medicine, University Hospital of Wales, and an Honorary Senior Research Fellow, Cardiff University

His book *Critical* was published around the world in May 2019, aiming to expose the public to the fascinating world of intensive care medicine

Lecture objective: To understand how knowledge of non-human animal physiology can be applied to critically ill patients to form innovative treatment strategies and make sense of pathophysiology


Dr. Morgan will also be teaching at the **Critical Care Medicine Academic Half Day**
Title: *12 Rules for [my] Life*
3C1 WMC (Large Conference Room)
February 5, 2020 2:30 - 3:30 p.m.

THE DEAN'S LECTURE SERIES PROVIDES FUNDING TO DEPARTMENTS AND INSTITUTES TO SUPPORT THE VISIT OF INTERNATIONALLY RECOGNIZED LEADERS IN ANY AREA OF RELEVANT RESEARCH TO THE FOMD.

Dr. Damon Scales – Sunnybrook Research Institute, University of Toronto

Title: Prophylaxis for Venous Thromboembolism in Severe Traumatic Brain Injury

Biography: Dr. Scales graduated from the University of Toronto (UofT) in 1997. Following residencies in Internal Medicine and Critical Care Medicine (UofT), he completed a PhD in Clinical Epidemiology (UofT). He is a Professor of Medicine (UofT), Scientist, and Chief of Critical Care at the Sunnybrook Health Sciences Centre and the Sunnybrook Research Institute. Dr. Scales conducts epidemiological and health services research examining system-level factors that influence the outcomes of critically ill patients. He has conducted several cluster randomized controlled trials (RCTs) of large scale quality improvement interventions. He is currently conducting 3 RCTs funded by the Canadian Institute for Health Research: The PITSTOP RCT investigating a prehospital sepsis intervention (PITSTOP; NCT03068741); the NEURO-ETT RCT (NCT02920580) evaluating different airway management strategies for neurologically-impaired ICU patients; and the PROTEST RCT (NCT03559114) evaluating early versus late anticoagulant thromboprophylaxis for patients with traumatic brain injury.




Rounds Announcement

UNIVERSITY OF ALBERTA
FACULTY OF MEDICINE & DENTISTRY
Department of Critical Care Medicine

Alberta Health Services
Department of Critical Care Medicine

Critical Care Grand Rounds

"PROphylaxis for venous ThromboEmbolism in Severe Traumatic Brain injury: a double-blind Randomized Controlled Trial (PROTEST Trial)"
Presented by: Dr. Damon Scales
Date: 10 December, 2019
Time: 16:30 – 17:30
Room: Classroom D 2F1.04 WMC



Objectives:

1. To review the risk of thromboembolism and also progression of intracranial hemorrhage in patients with severe traumatic brain injury
2. To discuss practice patterns of thromboprophylaxis in these patients
3. To describe the PROTEST randomized trial

Videoconference to: Royal Alex, Grey Nuns, Misericordia, Sturgeon, Grande Prairie, Red Deer, Fort McMurray

Join the discussion at #dccmrounds

- NOTE: This event is being recorded in video format by AHS. If you do not wish to appear in the video recording ensure you sit out of camera range. Recordings can be found at: <https://www.ualberta.ca/critical-care/faculty-and-staff/rounds-library>
- Learning Activity (Section 1) as defined by the Maintenance of Certification program of the Royal College of Physicians and Surgeons of Canada, approved by the Department of Critical Care Medicine Continuing Education.
- Reminder: You can record your rounds attendance and evaluation <http://ccpm.ualberta.ca/>

<https://www.ualberta.ca/critical-care>
2-124 Clinical Sciences Building
8440-112 Street
Edmonton, Alberta T6G 2G3

Appendix

Department Members

GFT/SCS - Critical Care

Gibney, Noel	Professor Emeritus
Bagshaw, Sean	Professor
Brindley, Peter	Professor
Chin, Wu	Professor
Kutsogiannis, Demetrios (Jim)	Professor
Sligl, Wendy Irene	Professor
Zygun, David	Professor
Jacka, Michael	Assoc Prof
Van Diepen, Sean	Assoc Prof
Buchanan, Brian	Asst Prof
Chowdhury, Raiyan H	Asst Prof
Lau, Vincent	Asst Prof
Macala, Kimberley	Asst Prof
Rewa, Oleksa	Asst Prof

PRIMARY - Critical Care

Alherbish, Aws	Asst Clinical Prof
Carney, Dominic	Asst Clinical Prof
Davidow, Jonathan	Assoc Clinical Professor
Djogovic, Dennis	Clinical Professor
Duggan, Shelley	Clinical Professor
Gibson, Neil	Clinical Professor (SEC)
Henry, Monica	Asst Clinical Prof
Heule, Mark	Assoc Clinical Professor
Hudson, Darren	Asst Clinical Prof
Johnston, Curtis	Clinical Professor
Johnston, Richard	Clinical Professor
Liu, Allen	Asst Clinical Prof
Luksun, Warren	Asst Clinical Prof
MacIntyre, Erika	Asst Clinical Prof
Marcushamer, Samuel	Asst Clinical Prof
Markland, Darren	Asst Clinical Prof
Matheson, Douglas	Asst Clinical Prof (SEC)
Meier, Michael Anthony	Clinical Professor
Murtha, William	Assoc Clinical Professor
Norris, Sean	Asst Clinical Prof (SEC)
Parker, Arabesque	Asst Clinical Prof

Paton-Gay, John Damian	Asst Clinical Prof (SEC)
Rokosh, Ella	Asst Clinical Prof
Romanovsky, Adam	Asst Clinical Prof
Russell, Michael	Clinical Lecturer (SEC)
Simmonds, Matthew	Assoc Clinical Prof (SEC)
Singh, Gurmeet	Assoc Clinical Professor
Sobey, Alan	Assoc Clinical Prof
Stephens, Mary	Clinical Professor (SEC)
Stollery, Daniel Ernest	Clinical Professor
Suen, Gabriel	Asst Clinical Prof
Torok-Both, Clinton	Asst Clinical Prof
Townsend, Derek	Clinical Professor
Zibdawi, Mohamad	Asst Clinical Prof

ADJUNCT GFT IN ANOTHER DEPARTMENT - Secondary Critical Care

Brisebois, Ronald	Adjunct Professor
Cheung, Lawrence	Adjunct Assoc Prof
Karvellas, Constantine (Dean)	Adjunct Assoc Prof
Khadaroo, Rachel	Adjunct Professor
Tredget, Edward E	Adjunct Professor
Shaw, Andrew	Adjunct Professor
Widder, Sandy	Adjunct Assoc Prof

ADJUNCT

Bowker, Samantha	Adjunct Asst Prof
Douma, Matthew	Adjunct Asst Prof
Hall, Adam	Adjunct Asst Prof
Kim, Michael Joon	Adjunct Asst Prof
Madzimure, Tafirenyika	Adjunct Asst Prof
Senaratne, Janek	Adjunct Asst Clinical Professor
Skoretz, Stacey	Adjunct Asst Prof
Villeneuve, Pierre-Marc	Adjunct

Department Personnel

Stephanie Russell
Assistant Chair – Administration

Department Office (UAH)

Rosanne Prinsen
Department Admin Assistant

Kim Rennick
Admin Assistant

Ana Wigger
Medical Education Program Assistant

Research Office

Nadia Baig
Research Manager

Lorena McCoshen
Research Coordinator

Dawn Opgenorth
Project Manager

Teresa Lawrence
Research Admin

Research Studies – UAH Critical Care Research Group

Study descriptions with full study names from July 1st, 2019 to June 30, 2020

Bacteremia Antibiotic Length Actually Needed for Clinical Effectiveness: A Randomized Controlled Trial

Principal Investigator: Dr. Wendy Sligl

The aim of the study is, to determine whether shorter duration antibiotic therapy (7days) is as effective as longer duration antibiotic therapy (14 days) in critically ill patients with bloodstream infections.

Acute Liver Failure Study Group

Principal Investigator: Dr. Constantine Karvellas

To continue and extend the current highly successful registry tracking secular trends in ALF, with several added features: a tighter study group, continuation of the ALI study, more detailed data and specimen gathering on each case, electronic data capture, use of detailed check lists for ICU management, and more long term follow-up studies. As well as, to further elucidate the pathogenesis of liver injury and multi-organ failure.

Re-Evaluating the Inhibition of Stress Erosions and prophylaxis against gastrointestinal bleeding in the critically ill (REVISE) trial

Principal Investigator: Dr. Oleksa Rewa

To determine if, in critically ill patients using breathing machines, the use of pantoprazole is effective in preventing bleeding from stomach ulcers or whether it causes more problems such as lung pneumonia and clostridium difficile, or whether pantoprazole has no effect at all.

Frailty, Outcomes, Recovery and Care Steps of Critically Ill Patients

Principal Investigator: Dr. Oleksa Rewa & Dr. Sean Bagshaw

The purpose of this study is to determine how and when to measure frailty in ICU patients. We also need to understand how the care received affects the outcomes of those who are or become frail. We are also looking to determine how we can improve outcomes of those who are frail.

Lessening Organ Dysfunction with Vitamin C

Principal Investigator: Dr. Oleksa Rewa

The purpose of this parallel blinded randomized controlled study is to determine if the administration of vitamin C decreases the harmful effects of infections on organs and improve health status more quickly than placebo.

Relaxation for Critically Ill Patient Outcomes and Stress-coping Enhancement (REPOSE): Pilot clinical trial of an integrative intervention to improve adult critically ill patients' delirium and related outcomes

Principal Investigator: Dr. Elisavet Papathanassoglou & Dr. Sean Bagshaw

The purpose of this study is to see if a relaxation intervention, that does not involve medications, can prevent and treat psychological problems and pain in critically ill patients and improve well-being with very low risk of side-effects and low cost. As well it may help patients relax and retain a sense of control over their situation.

Canadian Severe Acute Infection Outbreak and Pandemic Preparedness Study: Short Period Incidence Study of Severe Acute Respiratory Infection

Principal Investigator: Dr. Oleksa Rewa

The primary aim of this study is to establish a research response capability for future epidemics / pandemics through a global SARI observational study. The secondary aim of this study is to describe the clinical epidemiology and microbiology profiles of patients with SARI. The tertiary aim of this study is to assess the Ethics, Administrative, Regulatory and Logistic (EARL) barriers to conducting pandemic research on a global level.

Randomized, Embedded, Multifactorial Adaptive Platform trial for Community-Acquired Pneumonia

Principal Investigator: Dr. Wendy Sligl

The primary aim of the REMAP is, for patients with severe Community-acquired pneumonia (CAP) who are admitted to an ICU, to identify the effect of a range of interventions to improve outcome as defined by all-cause mortality at 90 days.

ExtraCorporeal Membrane Oxygenation for 2019 novel Coronavirus Acute Respiratory Disease (ECMOCARD)

Principal Investigator: Dr. Gurmeet Singh

This is a prospective/retrospective multi-centre short period incidence observational study of patients in participating hospitals and intensive care units (ICUs) with 2019 novel coronavirus (COVID-19).

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)

Principal Investigator: Dr. Oleksa Rewa

The aim of this study is to determine if modulation of ACE2 by angiotensin type I receptor blockers decreases WHO COVID-19 ordinal outcome scale that evaluates the severity (need for ventilation, vasopressors, extracorporeal membrane oxygenation or renal replacement therapy and mortality) of hospitalized COVID-19 infected adults.

STandard versus Accelerated initiation of Renal Replacement Therapy in Acute Kidney Injury (STARRT-AKI): A Multi-Centre, Randomized, Controlled Trial

Principal Investigator: Dr. Sean Bagshaw

To determine whether, in critically ill patients with severe AKI, randomization to accelerated initiation of RRT, compared to a conservative strategy consistent with standard care, leads to:

1. Improved survival (primary outcome) at 90 days; and
2. Recovery of kidney function (principal secondary outcome), defined as independence from RRT at 90 days

Critical Care Outcomes of Patients with Hematologic Malignancy and Hematopoietic Cell Transplantation

Principal Investigator: Dr. Sean Bagshaw

To evaluate determinants of ICU and 1-year survival and physical disability in critically ill adults with HM and HCT admitted to an ICU in Canada.

CRRTnet: A Multicenter Data Registry for Outcome for Continuous Renal Replacement Therapy

Principal Investigator: Dr. Sean Bagshaw

This is an observational registry and the goal is to collect a minimum of 2000 male and female subjects >18 years of age and < 89 years of age with acute kidney injury will be enrolled in the registry in up to 8 clinical sites in the United States and Canada in the first 12-18 months and then open participation to other sites.

Epidemiology and Determinants of Outcomes of Hospital Acquired Blood Stream Infections in the Intensive Care

Principal Investigator: Dr. Wendy Sligl

This study aims to identify the microbiology, determinants, and outcomes of hospital acquired bloodstream infections (HA-BSIs) among patients admitted to ICUs worldwide.

Research Studies: RAH Critical Care Research Group



The RAH Critical Care Research and Quality Assurance Group was established in the mid 80's by Dr.'s T. Noseworthy, R. Johnston and A. Shustack. Today the group is led by Dr. J. Kutsogiannis. Dr. Kutsogiannis has been the Director of Research for just short of 20 years. He is a full Professor in the Department of Critical Care at the University of Alberta with a Masters of Health Science-Clinical Epidemiology, Adjunct Professor, School of Public Health, University of Alberta, and President, Canadian Neuro-Critical Care Society. Dr. Kutsogiannis is fully engaged with, and has supported the Canadian Critical Care Trials Group programs for over 25 years. The group has assisted in the advancement of individual researchers within AHS by providing ongoing support and/or mentorship with their projects and publications, provided knowledge translation of our research initiatives and those of other researchers (including quality assurance projects into improving the quality of care provided to patients), continues to expand our investigator initiated protocol development and increase our publication portfolio, supports career development of newer intensivists, cooperates with the Critical Care SCN to roll out provincial initiatives, and is currently working collaboratively with the neurosurgical department. The RAH Critical Care Research office consists of: Research Director (Jim Kutsogiannis, MD, MHS, FRCPC), Research Manager (Patricia Thompson RN, CCRP) and Administrative Assistant/Research Coordinator (Tayne Hewer, MSc).

Study descriptions with full study names from July 1st, 2019 to June 30, 2020

The measurement of Cough Peak Flows to predict liberation from mechanical ventilation or tracheostomy in respiratory and neurological subgroups of critically ill patients

Investigators: Kutsogiannis (PI) Marcushamer/Macintyre /Karvellas

To determine the predictive value of cough peak flow on extubation success at 96 hours in 7 large subgroups of critically ill patients.

The Use of Capnographic Late Dead Space Fraction and Clinical Prediction Rules in the Prediction of Pulmonary Embolism in Critically Ill Patients Undergoing Computed Tomography of the Chest or Ventilation Perfusion Scanning: Deadspace

Investigators: Kutsogiannis (PI) /Townsend

Dead space measurements have been shown to be useful in R/O dx of PE during acute resp failure; COVID-19 / ARDS will be identified at baseline in order to enable a subgroup analysis evaluating alveolar dead space

Sedation, Analgesia and Delirium Management: an international audit of adult medical, surgical, trauma, and neuro-intensive care patients

Principal Investigator: Dr. Demetrios J. Kutsogiannis

Observational study that will describe sedation, analgesia, and delirium strategies used in ICUs around the world

Neurological Complications of COVID 19 (NCC COVID)

Principal Investigator: Dr. Demetrios J. Kutsogiannis

Purpose is to determine the prevalence of neurological complications in hospitalized COVID19 positive or suspected positive patients admitted to critical care units over a 3-month period.

Canadian Severe Acute Infection Outbreak and Pandemic Preparedness Study: Short Period Incidence Study of Severe Acute Respiratory Infection (SPRINT-SARI)

Investigators: Rewa (PI)/Kutsogiannis

The primary aim of this study is to establish a research response capability for future epidemics / pandemics through a global SARI observational study. The secondary aim of this study is to describe the clinical epidemiology and microbiology profiles of patients with SARI. The tertiary aim of this study is to assess the Ethics, Administrative, Regulatory and Logistic (EARL) barriers to conducting pandemic research on a global level.

Randomized, Embedded, Multifactorial Adaptive Platform trial for Community-Acquired Pneumonia (REMAP-CAP):

Investigators: Kutsogiannis (PI)/Parker/Matheson/Chowdhury/Johnston/Markland/Davidow/Paton-Gay/Kim/Macala

The primary aim of the REMAP is, for patients with severe Community-acquired pneumonia (CAP) who are admitted to an ICU, to identify the effect of a range of interventions to improve outcome as defined by all-cause mortality at 90 days.

A Multi-centre, Adaptive, Randomized, Open-label, Controlled Clinical Trial of the Safety and Efficacy of Investigational Therapeutics for the Treatment of COVID-19 in Hospitalized Patients (CATCO)

Investigators: Singh, A (PI)/Kutsogiannis

The purpose of this clinical trial is to evaluate different treatments for CAP

A Multicentre Concealed-Allocation Parallel-Group Blinded Randomized Controlled Trial to Ascertain the Effect of High-Dose Intravenous Vitamin C Compared to Placebo on Mortality or Persistent Organ Dysfunction at 28 Days in Septic Intensive Care Unit Patients (LOVIT)

Investigators: Kutsogiannis (PI)/Parker/Matheson/Chowdhury/Johnston/Markland/Davidow/
Paton-Gay/Kim/Macala

The purpose of this parallel blinded randomized controlled study is to determine if the administration of vitamin C decreases the harmful effects of infections on organs and improve health status more quickly than placebo.

Lessening Organ Dysfunction with VITamin C; A Multicentre Concealed-Allocation Parallel-Group Blinded Randomized Controlled Trial to Ascertain the Effect of High-Dose Intravenous Vitamin C Compared to Placebo on Mortality or Persistent Organ Dysfunction at 28 Days in Hospitalized Patients with COVID-19

Investigators: Kutsogiannis (PI)/Parker/Matheson/Chowdhury/Johnston/Markland/Davidow/
Paton-Gay/Kim/Macala

The purpose of this parallel blinded randomized controlled study is to determine if the administration of vitamin C decreases mortality in patients with COVID 19.

PROTEST: PROphylaxis for Venous ThromboEmbolism in Severe Traumatic Brain Injury, a double-blind Randomized Controlled Trial (PROTEST)

Investigators: Kutsogiannis (PI)/Parker/Matheson/Chowdhury/Johnston/Markland/Davidow/
Paton-Gay/Kim/Macala/Jacka/Brindley

The purpose of this study is to identify the optimal approach to thromboprophylaxis after significant TBI

EUROBACT II: Epidemiology and determinants of outcomes of Hospital Acquired Blood Stream Infections in the Intensive Care. A multinational cohort study by the ESICM infection section

Investigators: Sligl (PI)/Kutsogiannis

This study aims to identify the microbiology, determinants, and outcomes of hospital acquired bloodstream infections (HA-BSIs) among patients admitted to ICUs worldwide.

HEMOglobin transfusion threshold in Traumatic brain Injury Optimization: The HEMOTION TRIAL PROTOCOL

Investigator (s): Kutsogiannis (PI)/Jacka/Parker

The primary objective is to evaluate the effect of red blood cell (RBC) transfusion thresholds on neurological functional outcome (Glasgow Outcome Scale extended) at 6 months.

The Frequency of Screening and SBT Technique Trial: The FAST Trial A North American Weaning Collaboration

Investigators: Kutsogiannis (PI)/Parker/Matheson/Chowdhury/Johnston/Markland/Davidow/
Paton-Gay/Kim/Macala

To demonstrate optimal invasive mechanical ventilation weaning strategies (screening frequency and SBT technique)

The New Edmonton Cervical Spine Board: (NECs Board) Trial

Principal Investigator(s): Fox (PI)/Kutsogiannis

The goal of this project is to achieve earlier decompression of the spinal cord with traction prior to transfer to a tertiary care facility

The Rick Hansen Spinal Cord Injury Registry

Investigator(s): Fox (PI)/Kutsogiannis/Broad/Lavoie/Huang/Kortbeek/Nataraj/Mahood/Hockley/Sanchez/Ho

The objective of the RHSCIR is to track specific outcome measures for people with traumatic SCI by providing researchers, clinicians and health care professionals with a research and quality improvement and administrative reporting tool that will collect and store comprehensive, national health data.

Liberation from mechanical ventilation in SCI: A national retrospective cohort study

Investigator(s): Kutsogiannis (PI)

The primary specific aim of this retrospective cohort study is to characterize the existing respiratory care practices including mechanical ventilation, non-invasive ventilation, mechanical insufflation/exsufflation, tracheostomy, bronchoscopy, and respiratory infections for cervical and thoracic SCI patients within an existing registry of SCI patients who have been cared for in Canadian acute and chronic spine injury centers.

Relaxation for Critically Ill Patient Outcomes and Stress-coping Enhancement (REPOSE): Pilot clinical trial of an integrative intervention to improve adult critically ill patients' delirium and related outcomes

Investigator: Papathanassoglou (PI)/Kutsogiannis

The purpose of this study is to see if a relaxation intervention, that does not involve medications, can prevent and treat psychological problems and pain in critically ill patients and improve well-being with very low risk of side-effects and low cost. As well it may help patients relax and retain a sense of control over their situation.

Research Studies Neurosciences ICU UAH

Coordinated/Managed by the RAH Critical Care Research Group

Study descriptions with full study names from July 1st, 2019 to June 30, 2020

Nimodipine Pharmacokinetic Variability and its Impact on Outcomes in Patients with Aneurysmal Subarachnoid Hemorrhage: A Prospective Observational Study

Investigator (s): Mahmoud (PI)/Kutsogiannis/O'Kelly

This study aims to determine Nimodipine PK variability among aSAH patients

PROTEST: PROphylaxis for Venous ThromboEmbolism in Severe Traumatic Brain Injury, a double-blind Randomized Controlled Trial (PROTEST)

Investigator(s): Kutsogiannis (PI)/O'Kelly/Jacka/Brindley

The purpose of this study is to identify the optimal approach to thromboprophylaxis after significant TBI

HEMOglobin transfusion threshold in Traumatic brain Injury Optimization: The HEMOTION TRIAL PROTOCOL

Investigator(s): Kutsogiannis (PI)/Jacka/Parker

The primary objective is to evaluate the effect of RBC transfusion thresholds on neurological functional outcome at 6 months.

Aneurysmal Subarachnoid Hemorrhage - Red Blood Cell Transfusion and Outcome (SAHaRA): A Randomized Controlled Trial

Investigator (s): Kutsogiannis (PI)/Jacka/Brindley/Zygun/Stephens/Henry/Hudson/Darsault/Chow, /O'Kelly/ Findlay/Parker

The purpose of this study is to examine the effects of a liberal compared to restrictive RBC transfusion strategy (Hb trigger $\leq 100\text{g/L}$ vs $\leq 80\text{g/L}$ respectively) in adult patients suffering from acute aSAH and anemia on 12 month functional neurological outcomes.

The measurement of Cough Peak Flows to predict liberation from mechanical ventilation or tracheostomy in respiratory and neurological subgroups of critically ill patients

Investigators: Kutsogiannis (PI)/Marcushamer/Macintyre/Karvellas

To determine the predictive value of cough peak flow on extubation success at 96 hours in 7 large subgroups of critically ill patients.

The Use of Capnographic Late Dead Space Fraction and Clinical Prediction Rules in the Prediction of Pulmonary Embolism in Critically Ill Patients Undergoing Computed Tomography of the Chest or Ventilation Perfusion Scanning: Deadspace

Investigators: Kutsogiannis (PI)/Townsend

Dead space measurements have been shown to be useful in R/O dx of PE during acute resp failure; COVID-19 / ARDS will be identified at baseline in order to enable a subgroup analysis evaluating alveolar dead space

The New Edmonton Cervical Spine Board: (NECs Board) Trial

Investigator(s): Fox(PI)/Kutsogiannis

The goal of this project is to achieve earlier decompression of the spinal cord with traction prior to transfer to a tertiary care facility

The Rick Hansen Spinal Cord Injury Registry

Investigator(s): Fox(PI)/Kutsogiannis/Broad/Lavoie/Huang/Kortbeek/Nataraj/Mahood/Hockley/Sanchez/Ho

The objective of the RHSCIR is to track specific outcome measures for people with traumatic SCI by providing researchers, clinicians and health care professionals with a research and quality improvement and administrative reporting tool that will collect and store comprehensive, national health data.

Liberation from mechanical ventilation in spinal cord injury: A national retrospective cohort study

Investigator(s): Kutsogiannis (PI)/Fox

The primary specific aim of this retrospective cohort study is to characterize the existing respiratory care practices including mechanical ventilation, non-invasive ventilation, mechanical insufflation/exsufflation, tracheostomy, bronchoscopy, and respiratory infections for cervical and thoracic SCI patients within an existing registry of SCI patients who have been cared for in Canadian acute and chronic spine injury centers.

Canadian Cerebral Perfusion Pressure Measurement and Treatment Practices for Acute Brain Injury: COMPARE Study

Investigator(s): Kutsogiannis (PI)

The COMPARE study is a multicentre prospective cohort study of CPP measurement practices for acutely brain injured patients and also includes a survey of critical care physicians' and nurses' understanding of current practices for measuring CPP.

Full List of Academic Half Day topics

Academic Half Day Topics included:

1. Welcome/information session
2. CBD session
3. AKI
4. PARA
5. Resuscitation Outcomes
6. Airway assessment and management
7. Coma and altered level of consciousness
8. Subarachnoid, intracerebral, and other intracranial hemorrhage
9. UGIB (Upper GI Bleeding)
10. Electrolyte Disorders
11. Hypoxemic Respiratory Failure
12. Hypertensive Emergencies
13. AHS Connect Care Session
14. Organ donation and donor management
15. Liver Transplantation
16. Decompensated Heart Failure/Cardiogenic Shock
17. Medical Legal Issues in the ICU
18. Introduction to Bedside Ultrasound in the ICU
19. Advanced cardiac life support
20. QI / Patient Safety Day
21. Hemodynamic monitoring / Shock Syndromes
22. Expenses Introduction
23. CRM Simulation # 1 UAH SITE
24. Ileus, Ogilvie's, toxic megacolon
25. Body temperature regulation and disorders, hypoglycemia
26. Ventilator Associated Pneumonia (VAP) "
27. Serotonin syndrome, neuroleptic malignant syndrome
28. Rapid Response Teams
29. End of life care, withholding/withdrawing care
30. Bronchoscopy in the ICU
31. Ultrasound Session 1: Intro, QPath expectations
32. Critical illness polyneuropathy
33. CRM Simulation # 2
34. Critical Appraisal
35. Cardiac Arrhythmias
36. Disclosure
37. Conflict Resolution
38. Empyema, massive effusion, pneumothorax, hemothorax
39. Ischemic enteritis
40. Mechanisms of antimicrobial resistance
41. Oncologic emergencies (spinal cord compression, SVC syndrome, febrile neutropenia)
42. Tetanus, botulism, and biodefense
43. Right Heart Failure (RV Failure)

44. Upper Airway Obstruction
45. Post-op respiratory failure
46. Pulmonary hemorrhage and massive hemoptysis
47. Burns including smoke inhalation / airway burns
48. Pulmonary, air, fat and amniotic fluid embolus
49. Ultrasound Session 2: Lung & Thoracic U/S
50. Cardiac tamponade and other pericardial diseases
51. Lung transplantation
52. Status epilepticus
53. SIM Session #3
54. Chest Imaging
55. COVID19 & Resident Well being Update with Dr. Romanovsky
56. Covid19 Discussion
57. ECG Interpretation
58. Acute Coronary Syndrome
59. RRT in Critically Ill
60. Heart Transplantation
61. RRT in Critically Ill
62. Thrombocytopenia including HITT, DIC, TTP, ITP
63. Acute hemolytic disorders (AIHA, HUS, TTP)
64. Hemodynamic Management of Valvular Heart Disease
65. Heart-lung interactions
66. SIM SESSION
67. RRT #3
68. Endocrine Emergencies (Thyroid & Adrenal)
69. Nutrition in critical illness (calorimetry, types of nutrition)
70. Acid-base Disorders
71. Evaluation of oliguria and interpretation of urine electrolytes
72. Txp ID - general principles including prophylaxis, fever in SOT
73. Pheochromocytoma
74. Disorders of calcium and magnesium
75. Patient Safety Day

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 is presented sessions, an academic trainee research competition, and a business meeting for ASICP members.

Past Events:

January 19 to 22, 2017 - 33 attendees

January 18 to 21, 2018 - 34 attendees

January 17 to 20, 2019 - 31 attendees

January 23 to 26, 2020 - 36 attendees

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.

Past Events:

- September 29-October 1, 2017
- September 28-30, 2018
- October 4-6, 2019
- October 2-4, 2020

DCCM Members in the News

[Matthew Douma - Avenue Magazine Top 40 Under 40](#)

Matthew Douma

He empowers people in the medical field.

BY KATERYNA DIDUKH | OCTOBER 29, 2019

Job title: Clinical Nurse Educator, Royal Alexandra Hospital; Assistant Adjunct Professor at Department of Critical Care Medicine, University of Alberta; Editor-in-Chief, Canadian Journal of Emergency Nursing



Why he's a 2019 Top 40 Under 40: He empowers people in the medical field.

Matthew Douma believes anyone can help save a life. But you won't learn the methods he promotes in typical first aid classes. By leading an online-based, international resuscitation science collaborative, he seeks to create a community of people who can provide and teach aid where conventional methods fail.

"Whether it's a man bleeding out in a parking lot, or a 38-year-old woman having a cardiac arrest in a mall... people often become bystanders. We want to turn them into rescuers," says Douma, who graduated with a Bachelor of Science in Nursing from the University of the Fraser Valley.

Seven years ago, Douma witnessed an incident that proved there was a huge research gap in resuscitation science that was costing people their lives. In an Edmonton parking lot, he came across a man bleeding out from gunshots to the abdomen, pelvis and thigh. Using an external aortic compression technique that he'd learned during his pre-deployment training with UNICEF, Douma kept the man alive until paramedics arrived. But the paramedics couldn't perform the same technique – and the man died in the hospital.

The problem was, the technique wasn't commonly taught in Canada. His solution? Assembling a team of researchers who are committed to spreading the word – to anyone who will listen. "We try to make our research as accessible as possible... to anyone with an internet connection," says Douma.

Now, his work is not only recognized nationwide – his team has collaborated with organizations in nine countries, bringing their research to over 100 publications worldwide.

This article appeared in the November 2019 issue of Avenue Edmonton.

MACLEAN'S Authors News Politics MORE

OPINION

Is it right for doctors to deny patients unproven anti-COVID-19 therapies?

Dr. Raiyan Chowdhury: The coronavirus crisis is a threat that needs urgent answers, but those answers cannot come fast enough for those who are sick right now

By Dr. Raiyan Chowdhury
April 13, 2020



A researcher works on a COVID-19 vaccine at Copenhagen's University research lab in Copenhagen, Denmark, on March 23, 2020 (THIBAUT SAVARY/AFP via Getty Images)

Dr. Raiyan Chowdhury is a critical care medicine specialist and an ENT surgeon, with research focus in Health Quality / Patient Safety at the Royal Alex ICU, a 30 bed tertiary care unit in Edmonton, and an assistant professor at the University of Alberta.

Throughout Canada, potential therapies against COVID-19 are being limited to only patients enrolled in clinical trials. For doctors and nurses treating COVID-19 patients, the question and moral dilemma of what to do with unproven therapies lingers. Should patients have a right to these unproven therapies?

U.S. President Donal Trump has outspokenly advocated for the use of hydroxychloroquine and azithromycin luxtaposed to his enthusiasm

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Full Comment

'Life in the trenches': An Edmonton ICU doctor describes the war against COVID-19

Peter G. Brindley: Things are clearly worsening rapidly. Like you, we health-care workers are scared as we prepare to 'go over the top'

Peter G. Brindley, National Post
Mar 31, 2020 • Last Updated 7 months ago • 7 minute read

By Peter G. Brindley

For over 70 years my lucky corner of this lovely planet has enjoyed relative peace and prosperity. Despite this, we health-care workers have rarely missed an opportunity to offer gratuitous military metaphors. For example, we have long claimed to “be on the frontlines” even though there was previously minimal risk of personal harm. We have banged on about the “war on disease” but likely did not fully believe our own propaganda. But in 2020 — *a year that shall live in infamy* — and when it comes to combating this viral contagion, no analogy but “total war” seems fit for the task. Accordingly, numerous politicians are using this language, too. After all, as in wartime, all activities are now cancelled unless vital to the effort, and industries are retooling for the fight. Finally, everyone knows why my “industry,” Intensive Care, matters. However, you may not understand what it’s like to be enrolled “in the unit,” and what you can do to help. If you can excuse yet more military comparisons, this ICU doctor will start by outlining life “in the trenches” as we await “the big push.”



Dr. Peter G. Brindley of the Department of Critical Care Medicine, Department of Anesthesiology and Pain Medicine, and the Dosseter Ethics Centre, at the University of Alberta in Edmonton. PHOTO BY UNIVERSITYHOSPITALFOUNDATION.AB.CA

Young Physician Program

Dr. Ying Cui was with us September 2019 - November 2019



UNIVERSITY OF ALBERTA
FACULTY OF MEDICINE & DENTISTRY
Department of Critical Care Medicine

Welcome Dr. Ying Cui



We would like to welcome Dr. Ying Cui to the Department of Critical Care Medicine, as part of the Young Physicians Program in the Faculty of Medicine and Dentistry.

Dr. Cui currently works as an intensivist in the Department of Intensive Care Medicine, Fourth Affiliated Hospital, School of Medicine, Zhejiang University, in China.

Dr. Cui will be visiting the University of Alberta for the next 3 months. During her time here, she will be observing in our ICUs, participating in our academic activities, as well as engaging in a number of FoMD activities focused on leadership and health system organization.