

IDCCM Newsletter

Winter 2019

Department News, Academic Events
Awards, Grants, & Recognition
Publications & many more...



Interdepartmental
Division of Critical
Care Medicine



CONTENTS

Message from the Director	3
Awards and Recognitions	4
Accomplishments	5
Announcement	6
TACTICS – THSC	7
In Memoriam – A. Kotsakis	8-9
Adult Education Update	10
Mechanical Ventilation Course	11
<i>“Cardiac Arrest & Ventilation...”</i>	12
<i>“Argentina –land of wine..steak..science..”</i>	13-14
IDCCM Adult International Fellowship	15
The Law of Acute Care Medicine in CA	16
Program updates	17-22
<i>(SANDMAN, Art Slutsky Day, End of Year Celebration, Alliance Day, NABOR etc.)</i>	
IDCCM publications	23-27



MESSAGE FROM THE DIRECTOR

Dear all,

When you will read these lines, all our ICUS will be flooded by suspected or confirmed cases infected with the Novel Coronavirus (nCOV-2019; <https://www.nejm.org/doi/full/10.1056/NEJMoa2001316>) and we will be experts in donning and doffing our personal protective equipment with both eyes shut, ... or not. This is hardly predictable today and we know that everything is done to prevent, contain and detect transmission. But as intensivists this does not come as a surprise for us.

We know it is part of our job to respond to an acute crisis and do our best to deliver the optimal care to the sickest while protecting ourselves, our families and friends at the same time.

Obviously, this has a special flavor for Toronto and add to the stress of our day-to-day clinical and academic responsibilities.

This comes on top of a very active time in critical care in Toronto. It is of concern to imagine that on top of the trauma patients, the high level of winter influenza activity and bronchiolitis, the ECMO patients or the intracranial hemorrhages just to cite a few examples, a new virus can be adding workload, burden and stress on the healthcare system, especially on those in charge of acute care. We are grateful to have an efficient organization in place and for the time spent by many of you in making things smoother and organized. John Marshall, Neill Adhikari, Rob fowler, the CC chiefs at each site are all active in this preparation.

Intensivists are at high risk of burn-out and our trainees are in the front line. From an academic standpoint, we have worked in the Division to ensure transparency, promote equity and offer support for well-being but periods of overload (work, decisions, pressure etc.) can be hard to manage for anybody and we should be careful (and care) about others but also about ourselves.

This issue of the Newsletter is full of good moments and successes which we love to celebrate; but it also reminds us of Afrothite. After Brian, their loss undoubtedly makes an immense difference at SickKids.

In this issue, we also wanted to celebrate and thank our international (clinical and research) fellows, who come from all over the world, work so hard and are the gems of our Division (with our own Canadian trainees, yes absolutely!). Welcome all of you and continue your hard work, we hope you are happy here! Winter is very mild in Toronto, as you can appreciate!

Last, we had an external review, highly positive, which we will comment further later in time. I am grateful to all of you for being the Division Director of such a fantastic group.

Enjoy reading this Newsletter and a big thank you to Fahima for her dedication in preparing it!

Laurent Brochard, MD
Division Director, Interdepartmental Division of Critical Care Medicine

Awards and Recognition



Dr. Karen Burns received The PSI-50 Mid-Career Clinical Research award. The PSI Foundation was initiated & funded by the physicians of Ontario in 1970; it supports physician-led medical research in Ontario. This award acknowledges that this phase of a researcher's career can be challenging, with additional academic roles and responsibilities, while clinical work continues. She received the award to support her research: "Advancing Conduct and Reporting of Sex and Gender Based Analysis in Critical Care: A Program of Research"



Dr. Patricia Houston received a major professional recognition from the Canadian Anesthesiologists' Society – the Gold Medal. The Gold Medal is the highest award of the Canadian Anesthesiologists' Society. It is an inscribed medal given in recognition of excellence in a career in service to anesthesiology.



Dr. Shelly Dev received a MD Program Teaching Award of Excellence for the 2018-2019 academic year in recognition of her excellent teaching evaluation scores. This award was introduced by University of Toronto medical students in 2017-18 to recognize faculty members in the MD Program that have attained Teaching Evaluation Scores in the top 10% in one or more of the teaching activities to which they have contributed.



Dr. Ewan Goligher received the Australian New Zealand Intensive Care Society (ANZICS) Global Rising Star award in Melbourne in October, 2019. The Intensive Care Global Rising Star Programme aims to identify promising and innovative young clinician/scientists. The recipients have the opportunity to present an overview of their past and on-going research activities during a dedicated symposium at the 2019 World Congress held in Melbourne, Victoria, 14 - 18 October 2019.

Accomplishments



Dr. Elizabeth Wilcox successfully defended her dissertation, “Sleep and Cognition After ICU Admission”, on 15th November 2019. In a multisite, prospective, longitudinal cohort study of sleep, EEG and cognitive outcome in survivors of critical illness (The COGWELL study; n=150), cognitive trajectories were similar to those previously published. At 7 days after ICU discharge, 58% were classified as having cognitive impairment. As expected, there was a significant increase in the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) summary score at long-term follow-up with the majority of gain seen by 6-months (increase in mean RBANS of 12 points). The main finding of this study was that actigraphy-inferred sleep fragmentation was associated with worse cognitive impairment shortly after ICU discharge.

This relationship, however, was not statistically significant at 6- and 12-months follow-up. Further, actigraphy-estimated sleep duration and circadian rhythmicity were not associated with global cognitive performance at any of the time points studied nor did actigraphy-estimated sleep duration at 7 days after ICU discharge predict cognitive impairment at 6- or 12-months after ICU discharge. We were unable to show a statistically significant association between APOE genotype and cognitive impairment due to a lack of power. Lastly, a statistically significant difference was seen consistently across time points between the mean summary RBANS scores between patients with normal and abnormal EEG scores; however, no significant correlation was found between EEG score at 7 days and future performance on the RBANS at 6 or 12 months. The COGWELL study has informed two follow-up studies looking at the more proximate relationship between sleep, circadian rhythm, and cognition: (1) the “24” study (supported by the IDCCM Scholar Award) investigating the association between sleep, circadian rhythm, and delirium in patients with sepsis, and, (2) the SOS study (co-PIs: Matteo Parotto and Ian Randall) describing the relationship between EEG synchrony, sedation, and incident delirium in a CVICU patient population.



Announcement

Dr. Robert Fowler appointed to the H. Barrie Fairley Professorship in Critical Care at UHN.



It is with great pleasure that we announce the appointment of Dr. Robert Fowler as the inaugural holder of the H. Barrie Fairley Professorship in Critical Care at University Health Network. This was a very competitive search with many strong candidates showcasing the amazing work they are doing, in collaboration with many colleagues, in the profession. We thank the applicants as well as the search committee for their time and efforts in this selection process.

Dr. Fowler grew up on Canada's East Coast, attended medical school at McGill University, completed his residency at the University of Toronto, and received critical care and graduate school training at Stanford University. Since 2002, he has been a physician at Sunnybrook Health Sciences Centre in the University of Toronto's Interdepartmental Division of Critical Care Medicine.

Rob's academic interests have focused upon access and outcomes of care for critically ill patients and those near the end of life, in a global context. He has had clinical and academic roles in various infectious diseases outbreaks leading to critical illness, including SARS, influenza and the Middle East Respiratory Syndrome. He was a clinical lead for the World Health Organization throughout the Ebola outbreak in West Africa. He is currently co-leading an international clinical trial of antibiotic duration for critically ill patients with bacteremia.

Rob has mentored graduate students as the director of Clinical Epidemiology and Health Care Research at the Dalla Lana School of Public Health - Institute of Health Policy, Management and Evaluation since 2015. In 2019 he became the chief of the Tory Trauma Program at Sunnybrook Health Sciences Centre and chair of the Canadian Critical Care Trials' Group. He lists being a father to Matthew and husband to his wife Eva as his most valued accomplishment and greatest reward.

For the inaugural 3-year term of this professorship, Rob has proposed that all professorship funds be directed towards supporting competitive scholarly projects within or touching the IDCCM and its patients.

TACTICS

Training & Assessment of Clinicians in Teams in Intensive Care through Simulation

On November 9, 2019, as a pre-CCCF conference event, SickKids hosted the 3rd annual TACTICS Simulation Day. TACTICS (Training & Assessment of Clinicians in Teams in Intensive Care through Simulation) is an intensive one-day national pediatric critical care simulation program for training and assessment of pediatric critical care trainees within a team context. Trainees from eight programs across the country attended and were joined by respiratory therapists and thirteen registered nurses from SickKids hospital. The attendees were divided into eight primary teams (two MDs, one RT and one RN) and rotated through eight high-fidelity simulation scenarios. The scenarios were developed, facilitated and assessed by local and visiting Canadian and international intensivists. In all, about 85 people participated, facilitated, and contributed to this year's event.

Examples of simulations included resuscitation of a patient with significant pulmonary hemorrhage, communication surrounding end-of-life care, observation and feedback of a junior trainee, troubleshooting ECMO de-cannulation and procedural skill performance. The facilitators observed and provided immediate high-level debriefing and feedback to the participants. Due to the high cognitive load on the facilitators we had multiple faculty focusing on specific assessment elements including team vs individual performance and critical steps performed.

During the extended debriefing session, all participants were asked for their evaluation of the various scenarios, facilitators and day overall. The highest-rated facilitators were given an award in honour of Afrothite Kotsakis, whose vision of a national simulation day was instrumental in the event's establishment and success.

The day was also made possible with the support and sponsorship of the CCCF and Baxter Canada as well as the Department of Pediatric Critical Care, The Learning Institute and the ECLS Program at SickKids.



Pictures from TACTICS 2019

WHEN GREAT TREES FALL

In memory of **Afrothite Kotsakis**

“When great souls die
The air around us becomes light, rare, sterile
We breathe briefly
Our eyes briefly see with a hurtful clarity
Our memory suddenly sharpened examines, gnaws on
kind words unsaid, promised walks never taken ...”
- Maya Angelou, “When Great Trees Fall”



Due to her prolonged illness, our friend and colleague Afrothite had a “long warning.” Despite that, we, her friends, left many things unsaid.

When I first met Afro, I was as impressed as everyone else was by her beauty, fashion sense, vibrant personality, positivity, passion for medicine, competence as a doctor, and her many accomplishments despite her young age. Shortly after finishing her training, she completed a Master’s of Education and led the Pediatric Critical Care Medicine Training Program, where she implemented innovative assessments and longitudinal mentorship and coaching (Essentials of CBME) years before other programs started to hear about it. At SickKids, she pioneered Inter-Professional Team Training in Simulation, instituted the Simulation Program for Trainees in the Critical Care Department and revamped ECMO Specialist Training. She was the Director of the new Critical Care Response Team and worked collaboratively with many partners to smoothly integrate the team into the organization.

As I got to know Afrothite better, what stood out to me among her many achievements was her ability to be a true friend to so many, even during the worst times of her illness. Most of us manage to be a true friend to only a few people in our lives.

I remember the day, the time and the place when Afrothite called to tell me that the cancer had returned with many metastases. I responded in a “selfish” way and burst into tears, letting her do the consolation instead of me. We arranged to see each other at Princess Margaret Hospital before her Radiation Planning. It was the first time I visited this Hospital, and while waiting to see Afrothite I walked around the basement, carefully observing my surroundings. There, I saw a couple in a waiting room, both with such deep, indescribable pain on their faces that I wondered: which one of them was ill? Shortly after, in another waiting room, I met Afrothite, who, as always, was accompanied by friends and family. She energized the room and kept everyone’s spirits up, including her own. There was so much laughter that I am certain people looking at us would have wondered: are any of them ill?

Later, I had to “take a number” to be able to sit with Afrothite during her infusions because there were many volunteers to keep her company. In contrast to solitary patients who sat with only their smartphones, Afrothite was surrounded by people.

So many friends wanted to talk to her – to share secrets, vent and ask for advice while she listened patiently, made jokes and emanated courage despite her position and her condition; despite the fact that her hopes for her health were shaken shortly after the birth of her daughter Athena. Her popularity and positivity did not go unnoticed. An observant nurse remarked: “Afrothite, you are an impressive person, you are always surrounded by people who love being in your company....” The nurse was right; during the three years that Afrothite continued treatment, she was never alone.

Afrothite was a good listener. You could trust her to keep your secrets. Despite having a large circle of friends, she kept the details of her friends’ lives private.

She was also honest and direct. You could trust her to tell you what she thought. I remember taking a walk with her and my younger son, who, just like everybody else, opened up in her company and started telling her in detail about the latest book he had read. She listened to him for a full hour, only sighing at the end: “I am glad you didn’t read War and Peace.”

She supported all her friends even when she was at her most fragile. Afrothite was there for me the day my partner died. She could hardly walk, but she sat with me for hours. She held and warmed my hand with her fragile hand while the hand of the one I loved cooled and grew blue.

Like everyone whose lives she touched, I feel lucky to have been her friend. For now, our memories of her shake us all violently like a thunderstorm. With time, I hope that they become a warm breeze that comforts all of her family and friends.

“When great souls die,
After a period peace blooms,
slowly and always
irregularly. Spaces fill
with a kind of
soothing electric vibration.
Our senses, restored, never
To be the same, whisper to us.
They existed. They existed.
We can be. Be and be
better. For they existed.”

Briseida Mema, MD, FRCPC
Associate Professor
Department of Paediatrics
University of Toronto

Adult Education Update

We are 6 months into our CBME launce and I want to thank everyone for their hard work. Thank you to our trainees for taking an active role in their education by collecting EPA's and asking for real time formative feedback and thank you to our faculty for filling out these forms.

We had a successful CaRMS match and we will be welcoming 9 trainees next year. It was a very competitive year and the applicant pool was a collection of truly stellar individuals with clear dedication to Critical Care.

Our incoming trainees are:

Dr. Ahmed Abdelbasit	Dr. Maha Al-Mandhari
Dr. Keith Gunaratne	Dr. Mathieu Hylands
Dr. Laith Ishaq	Dr. Cameron Landry
Dr. Alyssa Louis	Dr. Abhinay Sathya
Dr. Ann Zalucky	

Stephanie Nardella has moved on to a new position and Simon Chung has replaced her as Program Coordinator for Adult Critical Care Medicine. Simon was previously the Critical Care Education Coordinator at St. Michael's Hospital. The new Email for the program coordinator is: AdultCCMcoordinator@smh.ca



In November 2020 the Adult CCM residency program will have an on-site by the Royal College for our accreditation under the new CanRAC (Canadian Residency Accreditation Consortium). PGME has requested that all faculty be available to meet with the accreditors. **The on-site visit will take place on November 23-27, 2020. Please save these dates in your calendar! As the time approaches we will provide more specific times.**

David Hall MD PhD FRCPC

*Assistant Professor, Department of Medicine
Program Director for Adult Critical Care Medicine
University of Toronto*

IDCCM Mechanical Ventilation courses



The annual IDCCM mechanical ventilation course held in June 2019 was a resounding success. Now in its fourth iteration, the course continues to grow in its reach and impact. In 2019 we enrolled over 100 attendees and enrolment was closed more than 1 month prior to the course due to heavy demand. The three-day comprehensive overview of mechanical ventilation, focusing especially on the integration of clinical evidence and physiological rationale at the bedside, attracted attendees from across North America and beyond. This year, a substantial number of attendees were returning to take the course a second time to refresh and consolidate their skills and knowledge. The course is an outstanding opportunity to highlight the world-leading expertise in physiology, mechanical ventilation, ARDS, sedation, rehabilitation, and post-ICU outcomes represented in our faculty and allied health disciplines.

In 2020, the IDCCM is organizing two mechanical ventilation courses—a new one-day symposium in February focusing specifically on assisted mechanical ventilation and the annual three-day symposium in June. Both promise to be exciting, interactive, and highly informative events enabling our division to directly influence practice in both tertiary and community centres across the country and beyond.

Thanks,

Ewan Goligher MD, PhD, FRCPC
Assistant Professor, Department of Medicine
University of Toronto



Cardiac Arrest and Ventilation International Association for Research (CAVIAR)

The use of human cadavers in research has mostly involved surgical and procedural training. The traditional formalin based embalming method has mostly prevented the use of human cadavers for research involving ventilation due to hardening of tissue. However, the Thiel method of embalming uses fluid composed of water, glycerol, various salts, and with much lower concentrations of formaldehyde, chlorocresol, and morpholine. Thiel embalmed cadavers (TEC) are not only safer to work with but the tissue is very well preserved and retains its elastic properties.

The Cardiac Arrest and Ventilation International Association for Research (CAVIAR) group was the first to describe TEC as a new research model for studying the effect of chest compression and ventilation during cardiopulmonary resuscitation. Their work to date has contributed relevant insights into the effects of airway closure on chest compression-induced ventilation, interpretation of EtCO₂ signals, and the effects of continuous and intermittent chest compressions on gastric insufflation.

Animal models are routinely used in physiological studies of ARDS, and while biomarkers, perfusion and gas exchange in animals provide important information, the lung conditions of animal models are highly reproducible with predictable responses to PEEP. Animal models lack the variability that we see in clinical practice. The TEC has similar respiratory mechanics to that of ARDS patients, and recent work by the CAVIAR group has demonstrated TEC are highly variable in their recruitment potential and response to PEEP when assessed with electrical impedance



tomography, and lung ultrasound. The presences of unpredictable conditions such as airway closure, pleural effusions, and chronic lung diseases make the model unique for better understanding the response of respiratory system mechanics (lung and chest wall) and distribution of ventilation to things such as position changes (i.e. prone positioning), different ventilator strategies, or even new modes of ventilation when they are developed.

Finally, the role of TEC in the hands-on teaching of advanced ARDS management strategies such as lung and chest wall mechanics (esophageal pressure; transpulmonary pressure), lung ultrasound, prone positioning, and understanding electrical impedance tomography will be the focus of future work by the CAVIAR group.

Thomas Piraino RRT, FCSRT, FAARC
Clinical Specialist – Mechanical Ventilation
St. Michael's Hospital, Centre of Excellence in
Mechanical Ventilation (CoEMV)

Argentina - land of wine, steak & science!



Argentina and Canada are located in the Southern and Northern extremes of the Americas and have a similar historical background. Both are relatively new nations built after the European colonization of American Nations in the fifteen's century (first Nations in Canada and *Pueblos Originarios* in Argentina). Later on, both countries continued its growth with an open immigration policy and a big influence of European immigrants after the first and Second World War.

However, more recent history and current socioeconomical situation are considerably different. Canada is considered nowadays one of the world's more stable countries from a political and economic standpoint, while Argentina has spent around 30% of the time since 1950 in recession, going through cycles of crisis and recovery every 5 to 10 years, currently experiencing one with an annual inflation rate close to 50% and 35% of its population being poor. As a consequence, research infrastructure and budget allocated for research are scarce.

Interestingly, having public University and a strong tradition of middle class citizens pursuing University degrees results in a large segment of the Argentinian society being highly educated and motivated. In spite of this, the lack of structure, funding and mentorship often results in the lack of productivity in terms of new discoveries and publications, particularly in the field of clinical research. Collaboration in research allows for building bridges that help facilitating the structure necessary to overcome these barriers.

In the last 5 years Toronto and the IDCCM have been the place where a number of young intensivists from Argentina joined for their

clinical and research fellowship training and felt warmly welcome. Some, Drs Bruno Ferreyro, Federico Angriman, and myself decided to continue our research training pursuing doctoral degrees at the University of Toronto. We successfully received competitive training awards such as the Vanier Canada Graduate Scholarship and the CIHR Fellowship Award that will guarantee funding for our training and facilitate acquisition of more research funds for the Department.

Since 2018, Dr. Brochard's Research Lab has been collaborating closely with the respiratory section of the Argentinian Society of Intensive Care Medicine including clinicians (mainly respiratory therapists) with extensive expertise in using advanced respiratory physiology monitoring techniques. Argentinian centers have been actively participating in 2 large observational studies that require precise measurements of respiratory physiology within the Pleural Pressure Working Group (PLUG) led by our group in Toronto. Additionally, three Argentinian centers are participating with us in a randomized control trial that aims at comparing a strategy using proportional-assist ventilation (PAV+) vs pressure support on duration of mechanical ventilation (the PROMIZING study). In the near future, more Argentinian centers will participate in a pilot RCT evaluating feasibility and safety of a ventilatory strategy based on physiological targets and a new physiological study testing the use of electrical impedance tomography in clinical practice.

During that time, local investigators were invited to present their original work at international meetings, however time and money limited their participation. Because fruitful feedback from international experts is a key aspect of growth in

research, we thought that *“if the mountain will not come to Muhammad, Muhammad will go to the mountain”*. Dr. Laurent Brochard was one of the international guest speakers during the past Argentinian Conference of Intensive Care, therefore, to further foster local development, we organized two events during the meeting. The first was a special session for presentation of original research in applied physiology from local groups within the meeting chaired by Dr Brochard. Attendance and participation were fantastic, having 8 original presentations with dedicated time for questions and discussion! The second was a day of science, wine, and barbecue in a winery close to the city where the congress was held; other international guest speakers also attended (Drs John Marini, Sheldon Magder and Glenn Hernandez) together with local investigators. In the morning, we extensively

discussed 3 original presentations, from Buenos Aires, Toronto and Santiago de Chile. In the afternoon, we enjoyed delicious wine tasting, barbecue ... and continued discussing science and how to build collaborative bridges in a more relaxed environment.

Together with other collaborative initiatives within the IDCCM or IDCCM members such as the International Clinical Fellowship at the different Toronto University Hospitals and Methods in Epidemiologic, Clinical and Operations Research from the American Thoracic Society, where Drs. Ferreyro and Angriman are key members, we hope to contribute to the sustainable development of research capacity in Latin American low and middle income countries such as Argentina with fantastic human resources and poor infrastructure.

Irene Telias, MD

Research Fellow

UHN & St. Michael hospital



Some pictures from Argentinian Conference of Intensive Care Medicine 2019

IDCCM ADULT INTERNATIONAL FELLOWSHIP

The Interdepartmental Division of Critical Care Medicine has always attracted many clinical fellows from all over the world. The process to come to Canada takes planning and can often take more than a year from application to the final arrival. For fellows, this transition to a new country and new health care system can also be challenging.

Over the years, the Interdepartmental Division of Critical Care Medicine had trained over than 200 Clinical and Research fellows from over 50 countries around the world. We are very proud to have so many amazing fellows within our program. The ability to attract this number and caliber of fellows speaks to the quality of Research and Education provided within our Division. We are happy that all of you have decided to come to Toronto to continue your training and look forward to working with you in the coming year.

Please join me in welcoming all of our New 2019-2020 fellows!

UHN/SHS Clinical Fellows:

Dr. Neelmani Ahuja (India)	Dr. Joanna Bouez (Lebanon)
Dr. Elizabeth Caroline Bullen (United Kingdom)	Dr. Javier Chavarria Campos (Costa Rica)
Dr. Jose Dianti (Research Fellow –Argentina)	Dr. Barry Johnston (Australia)
Dr. David Kraunik (Chile)	Dr. Riddhi Kundu (India)
Dr. Diana Morales Castro (Costa Rica)	Dr. Maria Veronica Nieves (Argentina)
Dr. Seyedhossein Ojaghiahghi (Iran)	Dr. Hayley Robinson (Australia)
Dr. Sabri Soussi (France)	Dr. Esther Tan (Singapore)
Dr. Manuel Tisminetzky (Argentina)	Dr. Olivier Felix Umuhire (Rwanda)
Dr. Irene Telias (Clinical & research fellow – Argentina)	

SMH Clinical Fellows:

Dr. Fernanda Aguiar (Brazil)	Dr. Meshal Al-Bassam(KSA)
Dr. Hassan Al-Habeeb (KSA)	Dr. Fahad Al-Rubayan(KSA)
Dr. Annia Schreiber (Research fellow - Italy)	Dr. Dekel Stavi (Israel)
Dr. Anand Thakur (Nepal)	Dr. Gudekar Vinayak (India)
Dr. Annemijn Jonkman (Research Fellow – Netherlands)	Dr. Fernando Vieira (Brazil)

SBH Clinical Fellows:

Dr. Nuri Abdurraheim (Lybia)	Dr. Andrew Achilleos (United Kingdom)
Dr. Neville Burke (Guyana)	Dr. Elif Cizmeci (Turkey)
Dr. Bruno Manetti Previero (Brasil)	Dr. Vusala Rzayeva (Azerbaijan)
Dr. Jun Jack Wong (Malaysia)	Dr. Per Person (Sweden)

Christie M. Lee MSc. MD. FRCPC

*Program Director, UHN/MSH Critical Care Fellowship
Education Director, MSH Critical Care Medicine
University of Toronto*



The Law of Acute Care Medicine in Canada



Laura Hawryluck MSc. MD FRCPC., Michael B. Fraleigh LLB, Head Health Law Group, Fogler Rubinoff LLP



Dr. Hawryluck and Mr. Fraleigh are very pleased to announce ***The Law of Acute Care Medicine in Canada*** will be released by Carswell, a division of Thomson Reuters, on **April 10, 2020**.

This new book is the first to focus specifically on the needs of acute care professionals caring for rapidly deteriorating patients and those providing legal advice to them. The treatment of acutely deteriorating patients is among the greatest medical, legal and ethical challenges of modern medicine. When urgent decisions and rapid initiation of treatments are needed, either in an attempt to save a person's life or, if this is not possible, to provide high quality end of life care, the legal issues that arise have broad implications for society's access to and use of healthcare services. Yet, many healthcare teams across Canada do not have a clear understanding of the legal framework that is engaged or the application of that framework to everyday clinical practice. Conversely, many health law professionals do not have a clear understanding of the medical challenges that arise in treating such patients nor of the quick timeframes in which decisions must be taken.

Using a practical approach, this book addresses the complex topics that all healthcare and legal professionals working in acute care settings need to understand. From the most challenging aspects of the application of the standard of care, capacity, consent, substitute decision-making, confidentiality to controversies in end of life care, the book answers frequently asked questions and provides clinical tools to improve practice. Case based discussions clarify how the law is applied in clinical practice across different hospital wards and are designed to be used as teaching tools for both healthcare and legal professionals at different levels of training, whether as independent learners or in classroom settings.

These are interesting times for the practice of medicine and law in Canada. As scientific advances continue, the medico-legal issues associated with complex care in an acute setting will be more challenging. This book is designed to serve as a readily accessible, practical guide.

Moments from CCCF 2019



Dr. Sangeeta Mehta and her co-PI Dr. Lara Prisco (University of Oxford) are leading the SANDMAN Study

SANDMAN is an international observational study that will describe patterns of sedative and analgesic use, as well as the local availability and use of sedation, analgesia and delirium protocols for the management of critically ill, mechanically ventilated patients.

SANDMAN is sponsored by the ESICM and received an ESICM Trials Group Award in 2018.

To date we have more than 250 centers registered in more than 50 countries, and we are actively seeking more!

Study information and documents, as well as a link for site registration can be found here:

<https://www.esicm.org/research/trials/trials-group-2/sandman/>

IDCCM Research Alliance & Collaborations

The IDCCM Alliance is an initiative of the IDCCM research executive that is designed to foster collaborative research across adult and pediatric ICU research groups across the University of Toronto. Our inaugural Alliance meeting (2018) encouraged collaborative groupings focused on Building and Managing City-wide databases for the IDCCM and fostering a City-wide IDCCM Pediatric-Adult Neurocritical Care group. Alliance Day 2019 highlighted Oncology Critical Care and Education.

IDCCM Alliance Day 2020 will be held on Tuesday April 21 at the Munk Centre. The Program will focus on a Continuum of Care for Critical Illness with an emphasis on building basic and translational collaborations with ongoing longitudinal programs in adult and paediatric critical care. More details to follow as the program is finalized. See flyer below.

The flyer features a background image of several hands of different skin tones being clasped together in a supportive grip. At the top left is the University of Toronto crest and name. To its right is the text 'Interdepartmental Division of Critical Care Medicine' next to a small icon of a person with a heart. The main title 'IDCCM ALLIANCE DAY' is centered in large, bold, black letters. Below it is a subtitle: 'Fostering integration and research excellence across our University of Toronto Critical Care and interprofessional community'. The date and time 'Thursday, April 21, 2020 12:00 P.M. – 5:00 P.M.' are centered in bold. The location 'Location: Vivian & David Campbell Conference Facility Munk School of Global Affairs and Public Policy Trinity Site, [1 Devonshire Place](#)' is centered. At the bottom, the RSVP information 'RSVP: [Fahima Nasreen](#)' is centered.

UNIVERSITY OF
TORONTO

Interdepartmental
Division of Critical
Care Medicine

IDCCM ALLIANCE DAY

Fostering integration and research excellence across our
University of Toronto Critical Care and interprofessional
community

**Thursday, April 21, 2020
12:00 P.M. – 5:00 P.M.**

Location: Vivian & David Campbell Conference Facility
Munk School of Global Affairs and Public Policy
Trinity Site, [1 Devonshire Place](#)

RSVP: [Fahima Nasreen](#)



Annual Brew Pub Evening

Each year, we launch the Art Slutsky Day festivities with a very special event the evening before to celebrate the graduating critical care fellow group and our Alumnae! It is a fun evening designed to bring trainees, alumnae, faculty and friends together for some final good-byes, good wishes and good cheer! The Brew Pub evening is held at the Mill St Brew Pub -Beer Hall- in the Distillery District and has already become a highlight and yearly tradition!

PLEASE JOIN US AND MORE DETAILS TO FOLLOW!



IDCCM End of Year Celebration

**IDCCM FACULTY, TRAINEES AND ALUMNI ARE
WELCOME!!**

MONDAY JUNE 15, 2020

AT 6:00PM

Mill St. Brew Pub – The Beer Hall
[21 Tank House Lane, Distillery District](#)

Sponsored by:
IDCCM Research & Education Executive
RSVP to: [Fahima Nasreen](#)

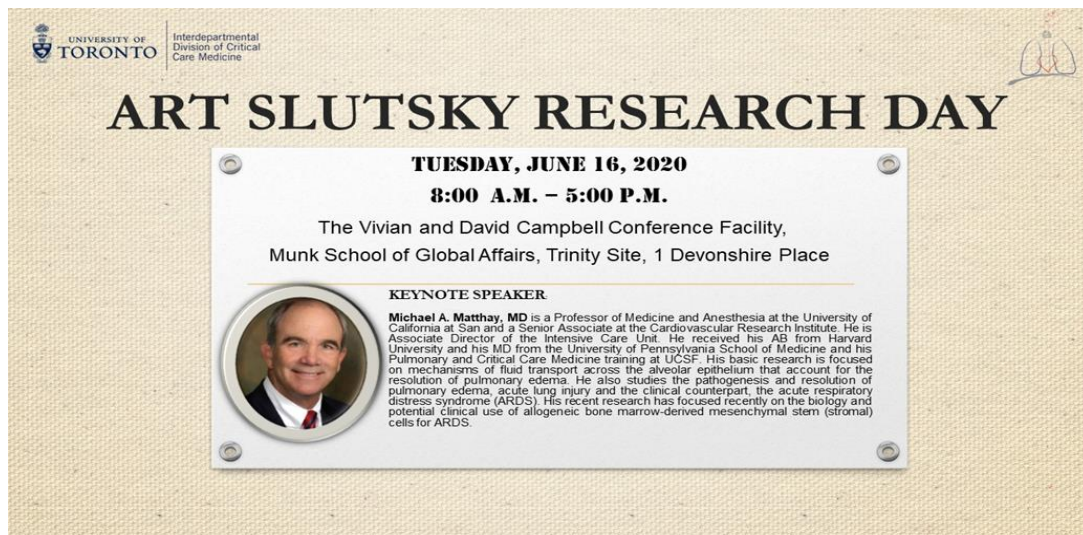
Art Slutsky Day

We had another memorable AS Day in 2019!

We had an impressive attendance of 160 faculty, trainees, and other colleagues. Faculty judges vetted 58 abstracts encompassing basic and clinical science, quality improvement, physiology and education contributed by our adult and pediatric trainees. The quality and breadth of the academic work remains exceptional and we have so much to celebrate as an interdepartmental group.

We were greatly honoured this past year to host **Dr. Elie Azoulay** who spoke on 'Acute Respiratory Failure in Immunocompromised Patients: What's New?'. His visit was enthusiastically received by all! We have been so fortunate to date to host other very eminent international leaders in critical care for AS Day including: **Dr. Marc Moss (2018)** and **Dr. Danny Talmor (2017)**.

Please join us for for another exciting **AS Day 2020 scheduled for Tuesday June 16!** This year, the **AS Day Visiting Professor will be Dr. Michael Matthay**. The flyer is enclosed and we will continue to provide updates on this exciting visit!



Thank you!

Margaret Herridge MSc. MD, FRCPC, MPH, FCCP
Professor, University of Toronto

NABOR: Grant writing workshop

Organized by Hannah Wunsch

This fall, the IDCCM Nuts and Bolts of Research (NABOR) was a two-part workshop on grant writing. We had 5 participants and a faculty panel who convened on two afternoons for both general feedback on grant structure and content, and specific feedback on individual grants. Thank you to everyone who helped to make it such a success.

This spring we are kicking off two grant writing initiatives.

1. We will continue to offer opportunities to have your grants read and critiqued on two different dates this spring. These will be stand-alone sessions (you don't need to sign up for both) for up to 5 people (with at least 2-3 senior faculty) where there will be peer review and feedback. You can submit a whole grant or just part of a grant for discussion. This is open to any trainees and junior faculty/members of the IDCCM within their first 6 years of academic appointment.

Dates:

- Thursday, March 12 (4-6 p.m.). Sign up by Feb 12.
 - Thursday, June 18 (4-6 p.m.). Sign up by May 18.
2. We will now offer a rolling, individual grant feedback opportunity for any trainees and junior faculty/members of the IDCCM within their first 6 years of academic appointment. The mechanism for this is to let me know that you would like to have your grant reviewed. You must have the full draft of a grant ready 2 months before the actual grant deadline (this will be strict). I will convene a committee of 2-3 senior faculty to read it and we will schedule a 1 hour session to provide feedback. Any grant that gets funded that is reviewed by this mechanism will need to have a small line-item for support of the IDCCM (\$500 for grants under \$100,000 and \$1,000 for grants more than \$100,000).



Picture: NABOR session 2018

Clinical Research in Progress (CRIP)

A unique aspect of the IDCCM, CRIP is held approximately once a month from September through May. These sessions are hosted by different faculty, who invite all members of the IDCCM to their home for an evening of pizza and research. Each session provides an opportunity for two research presentations, with moderated discussion and feedback regarding the proposed research projects. Presentations are encouraged from both junior (trainee) and senior members of the IDCCM.



Picture: CRIP session on Dec 3, 2019

Please email Hannah Wunsch with any question for NABOR and or CRIP!
Thank you!



Hannah Wunsch, MD
Associate Professor
University of Toronto

High-Impact IDCCM PUBLICATIONS

(Aug-Dec 2019)

[Early Neuromuscular Blockade in the Acute Respiratory Distress Syndrome.](#)

National Heart, Lung, and Blood Institute PETAL Clinical Trials Network, Moss M, Huang DT, Brower RG, Ferguson ND, Ginde AA, Gong MN, Grissom CK, Gundel S, Hayden D, Hite RD, Hou PC, Hough CL, Iwashyna TJ, Khan A, Liu KD, Talmor D, Thompson BT, Ulysse CA, Yealy DM, Angus DC.

N Engl J Med. 2019 May 23;380(21):1997-2008. doi: 10.1056/NEJMoa1901686. Epub 2019 May 19.

[Characterisation of serum total tau following paediatric traumatic brain injury: a case-control study.](#)

Stukas S, Higgins V, Frndova H, Gill J, Hubara E, Guerguerian AM, Boutis K, Beauchamp M, Farrell C, Babl FE, Delzoppo C, Greenham M, Wilkinson AA, Crichton A, Anderson V, Adeli K, Hutchison J, Wellington C; Serum Biomarkers and Quality of Life in Children with Traumatic Brain Injury investigators; National Biobank and Database for Patients with Traumatic Brain Injury investigators; Canadian **Critical Care** Translation Biology Group, and the Canadian Traumatic Brain Injury Research Consortium.

Lancet Child Adolesc Health. 2019 Aug;3(8):558-567.

[Association Between the Implementation of Hospital-Based Palliative Care and Use of Intensive Care During Terminal Hospitalizations.](#)

Hua M, Lu Y, Ma X, Morrison RS, Li G, Wunsch H.

JAMA Netw Open. 2020 Jan 3;3(1):e1918675.

[Effect of Fibrinogen Concentrate vs Cryoprecipitate on Blood Component Transfusion After Cardiac Surgery: The FIBRES Randomized Clinical Trial.](#)

Callum J, Farkouh ME, Scales DC, Heddle NM, Crowther M, Rao V, Hucke HP, Carroll J, Grewal D, Brar S, Bussi res J, Grocott H, Harle C, Pavenski K, Rochon A, Saha T, Shepherd L, Syed S, Tran D, Wong D, Zeller M, Karkouti K; FIBRES Research Group.

JAMA. 2019 Oct 21;1-11.

[Added Benefit of Noninvasive Ventilation to High-Flow Nasal Oxygen to Prevent Reintubation in Higher-Risk Patients.](#)

Telias I, Ferguson ND.

JAMA. 2019 Oct 2. doi: 10.1001/jama.2019.14609

[Opioid Prescribing After Surgery in the United States, Canada, and Sweden.](#)

Ladha KS, Neuman MD, Broms G, Bethell J, Bateman BT, Wijeyesundera DN, Bell M, Hallqvist L, Svensson T, Newcomb CW, Brensinger CM, Gaskins LJ, Wunsch H.

JAMA Netw Open. 2019 Sep 4;2(9):e1910734.

[Association of Maternal Age With Severe Maternal Morbidity and Mortality in Canada.](#)

Aoyama K, Pinto R, Ray JG, Hill AD, Scales DC, Lapinsky SE, Hladunewich MA, Seaward GR, Fowler RA.

JAMA Netw Open. 2019 Aug 2;2(8):e199875.

[Extracorporeal Life Support for Adults With Respiratory Failure and Related Indications: A Review.](#)

Brodie D, Slutsky AS, Combes A.

JAMA. 2019 Aug 13;322(6):580-582.

[Assessment of Therapeutic Interventions and Lung Protective Ventilation in Patients With Moderate to Severe Acute Respiratory Distress Syndrome: A Systematic Review and Network Meta-analysis.](#)

Aoyama H, Uchida K, Aoyama K, Pechlivanoglou P, Englesakis M, Yamada Y, Fan E.

JAMA Netw Open. **2019** Jul 3;2(7):e198116

[End-of-Life Care Received by Physicians Compared With Nonphysicians.](#)

Wunsch H, Scales D, Gershengorn HB, Hua M, Hill AD, Fu L, Stukel TA, Rubenfeld G, Fowler RA.

JAMA Netw Open. **2019** Jul 3;2(7):e197650.

[How Should We Apply the Wisdom of the Crowd to Clinical Trials With Exception From Informed Consent?](#)

Lanspa MJ, Fan E, Morris AH.

JAMA Netw Open. **2019** Jul 3;2(7):e197569.

[Demographics, Care Patterns, and Outcomes of Patients Admitted to Cardiac Intensive Care Units: The Critical Care Cardiology Trials Network Prospective North American Multicenter Registry of Cardiac Critical Illness.](#)

Bohula EA, Katz JN, van Diepen S, Alviar CL, Baird-Zars VM, Park JG, Barnett CF, Bhattal G, Barsness GW, Burke JA, Cremer PC, Cruz J, Daniels LB, DeFilippis A, Granger CB, Hollenberg S, Horowitz JM, Keller N, Kontos MC, Lawler PR, Menon V, Metkus TS, Ng J, Orgel R, Overgaard CB, Phreaner N, Roswell RO, Schulman SP, Snell RJ, Solomon MA, Ternus B, Tymchak W, Vikram F, Morrow DA; **Critical Care Cardiology Trials Network.**

JAMA Cardiol. **2019** Jul 24. doi: 10.1001/jamacardio.2019.2467. [Epub ahead of print]

[Association of Surrogate Decision-making Interventions for Critically Ill Adults With Patient, Family, and Resource Use Outcomes: A Systematic Review and Meta-analysis.](#)

Bibas L, Peretz-Larochelle M, Adhikari NK, Goldfarb MJ, Luk A, Englesakis M, Detsky ME, Lawler PR.

JAMA Netw Open. **2019** Jul 3;2(7):e197229.

[Mechanical Ventilation for ARDS During Extracorporeal Life Support: Research and Practice.](#)

Abrams D, Schmidt M, Pham T, Beitler JR, Fan E, Goligher EC, McNamee JJ, Patroniti N, Wilcox ME, Combes A, Ferguson ND, McAuley DF, Pesenti A, Quintel M, Fraser J, Hodgson CL, Hough CL, Mercat A, Mueller T, Pellegrino V, Ranieri VM, Rowan K, Shekar K, Brochard L, Brodie D; International ECMO Network (ECMONet).

Am J Respir Crit Care Med. **2019** Nov 14. doi: 10.1164/rccm.201907-1283CI

[Inflammation without Vascular Leakage. Science Fiction No Longer?](#)

Filewod NC, Lee WL.

Am J Respir Crit Care Med. **2019** Dec 15;200(12):1472-1476

[Understanding and Enhancing Sepsis Survivorship. Priorities for Research and Practice.](#)

Prescott HC, Iwashyna TJ, Blackwood B, Calandra T, Chlan LL, Choong K, Connolly B, Dark P, Ferrucci L, Finfer S, Girard TD, Hodgson C, Hopkins RO, Hough CL, Jackson JC, Machado FR, Marshall JC, Misak C, Needham DM, Panigrahi P, Reinhart K, Yende S, Zafonte R, Rowan KM, Angus DC.

Am J Respir Crit Care Med. **2019** Oct 15;200(8):972-981.

[Mechanical Ventilation Management during Extracorporeal Membrane Oxygenation for Acute Respiratory Distress Syndrome. An International Multicenter Prospective Cohort.](#)

Schmidt M, Pham T, Arcadipane A, Agerstrand C, Ohshimo S, Pellegrino V, Vuylsteke A, Guervilly C, McGuinness S, Pierard S, Breeding J, Stewart C, Ching SSW, Camuso JM, Stephens RS, King B, Herr D, Schultz MJ, Neuville M, Zogheib E, Mira JP, Rozé H, Pierrot M, Tobin A, Hodgson C, Chevret S, Brodie D, Combes A.

Am J Respir Crit Care Med. **2019** Oct 15;200(8):1002-1012.

[Selective decontamination of the digestive tract \(SDD\) in critically ill patients: a narrative review.](#)

Wittekamp BHJ, Oostdijk EAN, Cuthbertson BH, Brun-Buisson C, Bonten MJM.

Intensive Care Med. 2019 Dec 9. doi: 10.1007/s00134-019-05883-9.

[Improvement in Pediatric Cardiac Surgical Outcomes Through Interhospital Collaboration.](#)

Gaies M, Pasquali SK, Banerjee M, Dimick JB, Birkmeyer JD, Zhang W, Alten JA, Chanani N, Cooper DS, Costello JM, Gaynor JW, Ghanayem N, Jacobs JP, Mayer JE, Ohye RG, Scheurer MA, Schwartz SM, Tabbutt S, Charpie JR. **J Am Coll Cardiol.** 2019 Dec 3;74(22):2786-2795.

[Bleeding and Thrombosis in the Future of Pediatric Extracorporeal Life Support: A Roadmap From the Pediatric Cardiac Intensive Care Society.](#)

Annich GM, Ratano D, Edwards L.

Pediatr Crit Care Med. 2019 Nov;20(11):1089-1091.

[Characterization and validation of a novel measure of septic shock severity.](#)

Bosch NA, Teja B, Wunsch H, Walkey AJ.

Intensive Care Med. 2020 Jan;46(1):135-137.

[The harm of high-frequency oscillatory ventilation \(HFOV\) in ARDS is not related to a high baseline risk of acute cor pulmonale or short-term changes in hemodynamics.](#)

Angriman F, Ferreyro BL, Donaldson L, Cuthbertson BH, Ferguson ND, Bollen CW, Bachman TE, Lamontagne F, Adhikari NKJ.

Intensive Care Med. 2020 Jan;46(1):132-134.

[Focus on ventilation and ARDS: recent insights.](#)

De Jong A, Jaber S, Ferguson ND.

Intensive Care Med. 2019 Nov;45(11):1635-1638.

[Frailty and invasive mechanical ventilation: association with outcomes, extubation failure, and tracheostomy.](#)

Fernando SM, McIsaac DI, Rochwerf B, Bagshaw SM, Muscedere J, Munshi L, Ferguson ND, Seely AJE, Cook DJ, Dave C, Tanuseputro P, Kyeremanteng K.

Intensive Care Med. 2019 Dec;45(12):1742-1752

[Revisiting oxygen dissociation curves and bedside measured arterial saturation in critically ill children.](#)

Eytan D, Mazwi ML, Goodwin AJ, Goodfellow SD, Assadi A, Greer RW, Jegatheeswaran A, Laussen PC.

Intensive Care Med. 2019 Dec;45(12):1832-1834.

["Hang on, I haven't seen this patient yet...": near simultaneous admissions to the ICU.](#)

Anstey MH, Gershengorn HB, Hawryluck L.

Intensive Care Med. 2019 Nov;45(11):1642-1644.

[Expert statement on the ICU management of patients with thrombotic thrombocytopenic purpura.](#)

Azoulay E, Bauer PR, Mariotte E, Russell L, Knoebl P, Martin-Loeches I, Pène F, Puxty K, Povoas P, Barratt-Due A, Garnacho-Montero J, Wendon J, Munshi L, Benoit D, von Bergwelt-Baildon M, Maggiorini M, Coppo P, Cataland S, Veyradier A, Van de Louw A; Nine-i Investigators.

Intensive Care Med. 2019 Nov;45(11):1518-1539.

[Effects of levosimendan on respiratory muscle function in patients weaning from mechanical ventilation.](#)

Roesthuis L, van der Hoeven H, Sinderby C, Frenzel T, Ottenheim C, Brochard L, Doorduyn J, Heunks L.

Intensive Care Med. 2019 Oct;45(10):1372-1381

[Mortality and costs following extracorporeal membrane oxygenation in critically ill adults: a population-based cohort study.](#)

Fernando SM, Qureshi D, Tanuseputro P, Fan E, Munshi L, Rochwerf B, Talarico R, Scales DC, Brodie D, Dhanani S, Guerguerian AM, Shemie SD, Thavorn K, Kyeremanteng K.

Intensive Care Med. 2019 Nov;45(11):1580-1589.

[Mental illness after admission to an intensive care unit.](#)

Sivanathan L, Wunsch H, Vigod S, Hill A, Pinto R, Scales DC.

Intensive Care Med. 2019 Nov;45(11):1550-1558.

[Less is More: not \(always\) simple-the case of extracorporeal devices in critical care.](#)

Fan E, Karagiannidis C.

Intensive Care Med. 2019 Oct;45(10):1451-1453.

[Determinants of the effect of extracorporeal carbon dioxide removal in the SUPERNOVA trial: implications for trial design.](#)

Goligher EC, Combes A, Brodie D, Ferguson ND, Pesenti AM, Ranieri VM, Slutsky AS; SUPERNOVA investigators (European Society of Intensive Care Medicine trials group) and for the International ECMO Network (ECMONet).

Intensive Care Med. 2019 Sep;45(9):1219-1230.

[Alveolar recruitment in acute respiratory distress syndrome: should we open the lung \(no matter what\) or may accept \(part of\) the lung closed?](#)

Del Sorbo L, Tonetti T, Ranieri VM.

Intensive Care Med. 2019 Oct;45(10):1436-1439.

[Core Outcome Measures for Research in Critically Ill Patients Receiving Extracorporeal Membrane Oxygenation for Acute Respiratory or Cardiac Failure: An International, Multidisciplinary, Modified Delphi Consensus Study.](#)

Hodgson CL, Burrell AJC, Engeler DM, Pellegrino VA, Brodie D, Fan E; International ECMO Network.

Crit Care Med. 2019 Nov;47(11):1557-1563

[Practice Patterns and Ethical Considerations in the Management of Venovenous Extracorporeal Membrane Oxygenation Patients: An International Survey.](#)

Abrams D, Pham T, Burns KEA, Combes A, Curtis JR, Mueller T, Prager KM, Serra A, Slutsky AS, Brodie D, Schmidt M; International ECMO Network (ECMONet).

Crit Care Med. 2019 Oct;47(10):1346-1355.

[Inadequate oxygen delivery index dose is associated with cardiac arrest risk in neonates following cardiopulmonary bypass surgery.](#)

Futterman C, Salvin JW, McManus M, Lowry AW, Baronov D, Almodovar MC, Pineda JA, Nadkarni VM, Laussen PC, Gazit AZ.

Resuscitation. 2019 Sep;142:74-80.

[External Validation of Two Models to Predict Delirium in Critically Ill Adults Using Either the Confusion Assessment Method-ICU or the Intensive Care Delirium Screening Checklist for Delirium Assessment.](#)

Wassenaar A, Schoonhoven L, Devlin JW, van Haren FMP, Slooter AJC, Jorens PG, van der Jagt M, Simons KS, Egerod I, Burry LD, Beishuizen A, Matos J, Donders ART, Pickkers P, van den Boogaard M.

Crit Care Med. 2019 Oct;47(10):e827-e835

[Expiratory muscle dysfunction in critically ill patients: towards improved understanding.](#)

Shi ZH, Jonkman A, de Vries H, Jansen D, Ottenheijm C, Girbes A, Spoelstra-de Man A, Zhou JX, Brochard L, Heunks L.

Intensive Care Med. 2019 Aug;45(8):1061-1071

[Untangling Infusion Confusion: A Comparative Evaluation of Interventions in a Simulated Intensive Care Setting.](#)

Pinkney SJ, Fan M, Koczmara C, Trbovich PL.

Crit Care Med. 2019 Jul;47(7):e597-e601.

[Impact of Early Acute Kidney Injury on Management and Outcome in Patients With Acute Respiratory Distress Syndrome: A Secondary Analysis of a Multicenter Observational Study.](#)

McNicholas BA, Rezoagli E, Pham T, Madotto F, Guiard E, Fanelli V, Bellani G, Griffin MD, Ranieri M, Laffey JG; ESICM Trials Group and the Large observational study to UNDERstand the Global impact of Severe Acute respiratory Failure (LUNG SAFE) Investigators.

Crit Care Med. 2019 Sep;47(9):1216-1225.

[Bubble study from the upper limb? Watch out for Eustachius!](#)

Cai S, Ratano D, Douflé G.

Intensive Care Med. 2019 Nov;45(11):1649-1650.





Editor: Dr. Laurent Brochard



Design & prepared by Fahima
Nasreen

Contact:

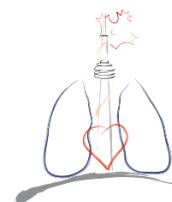
Li Ka Shing Knowledge Institute - St. Michael's Hospital
209 Victoria Street, 4th Floor, Room 411, Toronto, ON M5B 1T8
T: 416 864 5686 | F: 416 864 5698

Website: <http://www.criticalcare.utoronto.ca/>



UNIVERSITY OF
TORONTO

Interdepartmental
Division of Critical
Care Medicine



Thank you everyone and have a happy 2020!