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**INTERDEPARTMENTAL
DIVISION OF CRITICAL CARE**

Department of Medicine, Surgery, Anaesthesia, and Paediatrics

ANNUAL REPORT

Table of Contents

Message from the Division Director	2
Members of the Executive Committee	3
Executive Summary	4
Organizational Charts	18
Departmental Reports	20
APPENDIXES	24
APPENDIX I: Faculty List	25
APPENDIX II: Summary Activity Reports	31
The Hospital for Sick Children	32
Sinai Health System	72
St. Michael's Hospital	94
Sunnybrook Hospital	175
University Health Network	246
Toronto General Hospital & Toronto Western Hospital	

MESSAGE FROM THE DIVISION DIRECTOR



Laurent Brochard, MD

The Interdepartmental Division of Critical Care Medicine continues to follow the vision that we collectively described during our strategic planning. As you will see, on the one hand we continue to maintain excellence in research (publications, grants and awards despite a very competitive context), education, quality of care and international outreach, but on the other hand we are also working hard to reorganize our Division to better address this vision.

We value our differences and diversity in background, origins and interests, having members coming from four different Departments of the University of Toronto; we enjoy having adult and paediatric critical care in the same division, and we also want to better reflect the diversity of Toronto and Canada.

2016 is like a transition year during which we decided, after a very successful retreat, to move to a different organization for education and being better prepared to a number of important challenges. We also prepare ourselves for having a new website, for starting our Alliance projects and developing quite a significant number of innovations in research in order to reinforce our collaborations within IDCCM and beyond our own discipline. We are really looking for cross-fertilization, multidisciplinary and multi-professional team work.

As usual, you will find in these pages a brief reflection of the extraordinary vitality of our members. Each hospital site had to face major clinical activity and also develop specific projects but we always come at the same common table.

It remains for me a huge privilege and pleasure to work with such a talented group of individuals, trying to lead the group towards a continuous search for excellence.

Thanks to all our members for their incredible work!

Laurent Brochard, MD
Division Director, Interdepartmental Division of Critical Care Medicine
Department of Medicine, University of Toronto

MEMBERS OF THE EXECUTIVE COMMITTEE

Chair

Dr. Laurent Brochard, St. Michael's Hospital

Department Heads

Dr. Andrew Baker, St. Michael's Hospital

Dr. Brian Cuthbertson, Sunnybrook Hospital

Dr. Niall Ferguson, University Health Network and Sinai Health System

Dr. Peter Laussen, The Hospital for Sick Children

MEMBERS OF THE STEERING COMMITTEE

Dr. Andre Carlos Amaral, Sunnybrook Hospital, Staff Intensivist

Dr. Claudia dos Santos, St. Michael's Hospital, Staff Intensivist

Dr. Robert Fowler, Sunnybrook Hospital, Staff Intensivist

Dr. Margaret Herridge, IDCCM Research Director

Dr. Brian Kavanagh, The Hospital for Sick Children, Staff Intensivist

Dr. Afrothite Kotsakis, The Hospital for Sick Children, Paediatric Education Program Director

Dr. John Laffey, St. Michael's Hospital, Chief Anesthetist

Dr. John Marshall, St. Michael's Hospital, Staff Intensivist

Dr. Sangeeta Mehta, Sinai Health System, Staff Intensivist

Dr. Christopher Parshuram, The Hospital for Sick Children, Paediatric Intensivist Representative

Dr. Dominique Piquette, Sunnybrook Hospital, IDCCM Associate Director

Dr. Gordon Rubinfeld, Sunnybrook Hospital, Staff Intensivist

Dr. Damon Scales, Sunnybrook Hospital, Staff Intensivist

Dr. Jeffrey Singh, University Health Network – Toronto Western Hospital, Staff Intensivist

Dr. Arthur Slutsky, St. Michael's Hospital, IDCCM Ex-chair

Dr. Andrew Steel, IDCCM Program Director Adult Critical Care Medicine Resident & Clinical Fellowships

Dr. Hannah Wunsch, IDCCM Associate Research Director

University of Toronto Critical Care Training Programs, 2016



Andrew Steel, BSc, MBBS, MRCP, FRCA, FFICM, FRCPC

IDCCM Education Program 2015-16

The University of Toronto is a premier centre in Canada for sub-specialty training in Critical Care Medicine and with more than 65 registered trainees it is likely to remain the largest. The IDCCM Adult Residency Program now comprises 16.5% of trainees registered (2015-16 CAPER Census Data) with the Royal College. Over the past decade, we have been fortunate in attracting some of the best physicians in the world to our programs. Approximately 25% are from Canada, joining our Residency, and clinical fellows from more than 50 countries – with significant representation from the UK, Brazil, India, and Saudi Arabia.

In the 2015-16 academic year, we made deliberate changes to the Education Program to attempt to break down the longstanding divisions between our learners. These have historically existed based upon appointment status, country of origin, and hospital base. Critical to this philosophy was that all of our trainees felt they are all part of a single educational program, with identical opportunities and governance. I continue to be grateful to the entire Faculty who supported this and enabled all clinical fellows to rotate outside traditional practice plan silos, attend teaching events with equal opportunity, participate in formative evaluations, and enjoy mentorship and support of the education leadership.

Trauma and Critical Care Training

Dr. Michael Kim was among our successful graduating class of the Residency Program in June 2016. His completion of the training program represented a continued commitment and hard work on his part, and also a very successful collaboration between the IDCCM and the Division of Trauma Surgery. Following this cross-appointment Dr. David Paskar began and completed his first year of CCM training in 2015-16, and Drs. Markus Ziesmann and Dylan Pannel joined the Program in July 2016. The combined Trauma Surgery and Critical Care Fellowship is highly competitive with other programs in Canada and the United States and will continue to draw outstanding surgeons. To the IDCCM it represents an important innovation in critical care education, adding breadth to our program, and with benefits not limited only to our surgical trainees.

Art Slutsky Day 2016

One of the highlights of the academic year continues to be Art Slutsky Day – the annual event that includes and celebrates the breadth of academic activity and achievement of the Faculty and trainees of the Division. This year was the 14th such event and was the first to be attended by a Dean of the Faculty of Medicine. In addition to Dr. Young's presentation we hosted other distinguished speakers with key portfolios in the Faculty of Medicine: Dr. Lisa Robinson, Chief Diversity Officer, and Dr. Doug Campbell, Lead for Simulation Education Integration.

The Abstract Section received 45 entries from trainees within or with supervisors in the Division this year. The Abstract Committee was chaired by Dr. Alex Floh, (Hospital for Sick Children), who together with Dr. Gerard Curley (St. Michael's Hospital), Dr. Kevin Shore (Chief Resident) and Dr. Laurent Brochard (Head of Division) chose the winner of the coveted *Art Slutsky Award for Best Abstract*. As previously reported in the 2016 Summer newsletter the award winner was **Dr. Luciana Vieira** (Senior Author: Dr. Gerson Cipriano) for her research titled "*Early Neuromuscular Electrical Stimulation Preserves Skeletal Muscle Size and Echogenicity in Mechanically Ventilated Polytrauma Patients*".

This year Dr. Brochard bestowed a much-deserved honour on **Dr. Neill Adhikari**. He was awarded the Humanitarian Award for continued and outstanding contribution to improving the welfare of others through patient care and scholarly activity.

The residents and clinical fellows awarded the *John Granton Award*, for outstanding contribution to Critical Care Education, to **Dr. Alberto Goffi** in recognition of his support for education at Toronto Western Hospital, and for progressing the city-wide delivery and development of the Ultrasound Education Program.

The Education Program Committee awarded the *Simon Abrahamson Award*, for outstanding academic performance in Critical Care Medicine, to **Dr. Kevin Shore** for his leadership at the Divisional and University level, as well as for his commitment as Chief Resident and performance throughout his clinical training. Dr. Shore placed second amongst the Canadian candidates sitting the SCCM MCKAP examination this year.

The site-specific winners for excellence in teaching were: **Corrine Balit** (Hospital for Sick Children), **Christie Lee** (Sinai Health Systems), **David Hall** (St. Michael's Hospital), **Lorraine Tremblay** (Sunnybrook Health Science Centre), **John Granton** (Toronto General Hospital), **Alberto Goffi** (Toronto Western Hospital), and **Phil Shin** (U of T-affiliated community hospitals, North York General Hospital).

We concluded the year graduating **Drs. Edmund Chau, Michael Kim, Andrew Kuhl, Jonathan Marhong, Kevin Shore, Marcello Schmidt, and Michael Tylee** from the IDCCM Residency Program. (**Dr. Ingrid Morgan** completing her training in early 2017.) I look forward to following their continued career development and success, and working with many of them as close colleagues at our UofT teaching sites.

The Future

There are some significant challenges ahead for us in the Division related to education. The transition to RCPSC *competency-by-design* has become a reality for the first tranche of programs across Canada. Critical Care will follow and there is no debate. Achieving successful transition will need the support and expertise of the entire Faculty, not just the site education leads. Fundamental to this is timely workplace based assessment. Although we will have several new evaluation tools in 2017 we must continue to support the existing ITER process and currently approximately 50% are completed within 30 days of rotations.

I am pleased that the following physicians have joined in the Adult Critical Care Medicine Residency Program: **Dr. James East** (University of Toronto), **Dr. Brian Buchan** (University of Toronto), **Dr. James Lee** (University of Alberta), **Dr. Pierre-Alexis Lepine** (Universite Laval), **Dr. Dylan Pannell** (University of Toronto), **Dr. Maxime Pichette** (Universite de Montreal), **Dr. Julien Viau-Lapointe** (Universite de Montreal).

I would like to thank **Ms. Stephanie Nardella** who joined us as IDCCM Education Coordinator in January 2016. She is simply an outstanding colleague and support for both the Education Program and the trainees this year. Her enthusiasm and experience has been invaluable in maintaining the smooth running and high quality of the Program's operations. I would also like to thank **Dr. David Katz** (Chief Resident) and **Dr. Mika Hamilton** (Chief Fellow). They were elected to their respective positions by their peers and have demonstrated excellent leadership and loyalty representing our trainees, and have been wonderful ambassadors for the IDCCM.

The consistent priority will remain training better doctors for our patients' needs. We will continue to deliver a high-quality, scientifically based, curriculum, be enthusiastic educators at the University of Toronto, and leaders in change at the Royal College. We must be constantly innovating and taking all opportunities to improve our trainees' educational experience, address weaknesses, and ensure the delivery of a truly world-class educational program, for all of our trainees.

I am pleased that Dr. David Hall has taken the helm of the Residency Program and look forward to his successful leadership of the Education Committee.

Department of Critical Care Medicine, St. Michael's Hospital



Andrew Baker, MD, FRCPC

St. Michael's Hospital Department of Critical Care has continued to strive for success in all fields of activity, actively pursued by its staff. With endeavors in the areas of education, research, and clinical activity, the successes of the Department's members have been recognized through the awards and appointments they have received in the past year.

We were sad to say goodbye to one of our Faculty and expert in Quality and Patient Safety at St. Michael's Hospital, Dr. Chris Hayes.

The physicians in the Critical Care Department have continued their consistent contributions to research by publishing 159 articles in peer-reviewed journals in the past year. Peer-reviewed grants were received by – Drs. Najma Ahmed, Andrew Baker, Laurent Brochard, Karen Burns, Claudia dos Santos, Warren Lee, John Marshall, Sandro Rizoli and Haibo Zhang. Our faculty also participated in the presentation of their research findings. There was a total of 36 local, 24 national and 114 international presentations by the faculty in the Department of Critical Care at St. Michael's Hospital in 2016.

Congratulations to the following SMH CCD Faculty for the Honours/Awards and Promotions they have received!

1. **Najma Ahmed** for her **Royal College AMS/Donald Richards Wilson Award** from the Royal College of Physicians and Surgeons of Canada in recognition for her excellence in leadership in Post Graduate Education. She also received the Jameel Ali Teaching Award Excellence in Continuing Education recognizing her exceptional contributions to the residents' training locally and nationally.
2. **Andrew Baker** for the 3 prestigious awards he received this year!
 - A) In May 2016, Andrew Baker was awarded the **Trillium Gift of Life Network Lifetime Achievement Award** for his contributions to the advancement of organ donation in Ontario and research in donation science.
 - B) In October 2016, **Andrew Baker** was named the inaugural winner of the **Keenan Legacy Award** at the Keenan Research Centre for Biomedical Science at St. Michael's. This award is awarded to a scientist who exemplifies the mission of the Keenan Research Centre for Biomedical Science— generating new knowledge and translating scientific discoveries to improve patient health.

C) In November, **Andrew Baker** was named the winner of the **2016 Jeffrey C. Lozon Physician Leadership Award**, given annually to a St. Michael's physician who has demonstrated outstanding leadership skills and exemplifies the Mission and Values of the hospital.

3. **Laurent Brochard** for the **Post Doc Awards** for his international fellows: Irene Telias, Luana Melo, Tai Olivier Pham.
4. **Sara Gray** was promoted to Associate Professor as of July 1, 2016.
5. **David Hall** for his award as **Outstanding Teacher** for the Critical Care Medicine, Critical Care Medicine, University of Toronto.
6. **Chris Hayes** who was one of the recipients of the **William Goldie Prize and Travel Award in Quality and Innovation**.
7. **Patricia Houston** for her **Student Experience Award** from St. Michael's Hospital.
8. **Warren Lee** for his Canada Research Chair (Tier II) – Mechanisms of Endothelial Permeability as well as for his PhD student, Michael Sugiyama - **Award of Excellence** (Gold Category) from CIHR, his student, V Tokarz for **Graduate Studentship** from Banting and Best Diabetes Centre.
9. **Natalie Wong** won **The Robert H Hyland Teacher of the Year Award**, the highest honour a physician in the Department of Medicine can receive.

Department of Critical Care Medicine, Sunnybrook Hospital



Brian Cuthbertson, MD, ChB, FRCA

The leadership team for Critical Care Medicine at Sunnybrook Health Sciences Centre remained unchanged in 2016 with Dr. Brian Cuthbertson as the Chief of Critical Care Medicine and Dr. Gordon Rubinfeld as the Chief of the Trauma, Emergency and Critical Care Program. Dr. Shelly Dev continued to lead the education programme as our Residency Director and Co-Director with Dr. Cameron Guest of the International Fellowship Program. Dr. Dominique Piquette continued her role as the Associate Director, Education Research & Scholar Development for IDCCM. Dr. Barbara Haas joined our department in July 2016, cross-appointed to General Surgery. Dr. Bourke Tillmann joined our department in October 2016 as a Clinical Associate.

Research

In research the department enjoyed a number of notable academic accomplishments.

In 2016, Dr. Brian Cuthbertson main research focus was on the SuDDICU study. He worked closely with the Australia and New Zealand collaborative group to launch the study in those areas. He also worked on acquiring further remaining funding for SuDDICU including applications to the CIHR for Foundation Grant and project grant funding. The multi-national METS study (cardio-pulmonary exercise testing in patients before major surgery) is now at its final stages after recruiting 1700 patients and will report final results in 2017. Dr Cuthbertson also launched the CHORAL study of chlorhexidine withdrawal and oral health care intervention which he has applied to CIHR for funding with an interprofessional team of investigators.

Dr. Gordon Rubinfeld is busy planning for an expected sabbatical in London UK for 2017/18 as he wraps up his administrative leadership role at Sunnybrook.

Dr. Damon Scales published the results of the PremaTOR stepped-wedge cluster RCT in the American Journal of Respiratory Medicine (AJRCCM; PMID 27115286). This large undertaking involved 18 hospitals and showed that a multicentre quality improvement intervention can improve rates of appropriate neurological prognostication after cardiac arrest, and reduce premature withdrawal of life-sustaining treatments. The results of the POC-TACS RCT were also published in the journal Circulation. POC-TACS was another large stepped-wedge cluster RCT conducted in 12 hospitals that showed that the implementation of intraoperative point-of-care hemostatic testing reduces red blood cell transfusions, platelet transfusions, and major bleeding following cardiac surgery (PMID 27654344).

Dr. Scales also concluded enrolment in the ICEPACS RCT, a large pragmatic RCT comparing prehospital cooling after cardiac arrest to usual resuscitation and transport. The preliminary results of this trial were presented at the Critical Care Canada Forum. He also successfully obtained bridge funding from CIHR to start the PROTEST RCT, a future large pragmatic RCT comparing the safety and effectiveness of early versus delayed thromboembolic prophylaxis using anticoagulants in patients with traumatic brain injury. He continued to prepare for the launch of two large trials that were recently funded by CIHR: (1) The Paramedic Initiated Treatment of Sepsis Targeting Out-of-hospital Patients (PITSTOP) trial, which is a 2x2 factorial RCT evaluating the prompt administration by paramedics of antibiotics and intravenous fluids to patients with sepsis; and (2) the The NEUROlogically-impaired Extubation Timing Trial (NEURO-ETT), which is an RCT that will determine the optimal airway management strategy for patients who are weaned to minimal ventilator settings but remain intubated due to underlying neurological injury.

Dr. Neill Adhikari contributed to 19 publications in 2016 and helped to develop the InFACT-sponsored BASIC research methods course, which was delivered in Karachi in November.

Dr. Barbara Haas' research program focused on trauma and emergency surgery in the elderly. Her work aims to optimize long-term outcomes in this patient population, as well as to improve inter-specialty communication regarding these patients. As the Principal Applicant she received a CIHR Project Grant, \$92,500 for "The changing face of trauma care: a comprehensive evaluation of the impact of severe injury on elderly patients."

Aside from clinical work in the ICUs at Sunnybrook, Dr. Rob Fowler has been happily busy as Director of the Clinical Epidemiology and Health Care Research Program at IHPME (<http://ihpme.utoronto.ca/academics/rd/cehcr-mscphd/>); working on the Bacteremia Antibiotic Length Actually Needed for Clinical Effectiveness (BALANCE) Research Program that seeks to define the optimal treatment duration for patients with bloodstream infection (<http://balance.ccctq.ca/>); examining care delivered to patients at the end of life in Ontario; and working as a consultant with the World Health Organization, helping to improve care delivery to the critically ill in resource-challenged settings.

Dr. Hannah Wunsch' research focused on using large databases to assess questions of resource use and long-term outcomes after critical illness. She is currently focused on a CIHR grant to examine re-hospitalizations in critically ill patients in Ontario, and comparing these rates with patients in the United States. She is also working on research about medication use after hospitalization for critically ill patients. Dr. Hannah Wunsch received a CIHR project grant in 2016: Role: PI. \$183,000 [2 yrs] "Opioid use after critical illness" (2016-2018). Dr. Wunsch published 17 original publications, including two in JAMA. She continued in her role as an Associate Editor of the American Journal of Respiratory and Critical Care Medicine and took on the role in the IDCCM of Associate Director of Research.

During 2016, Dr. Taz Sinuff' most significant achievement was as a co-investigator/site investigator and methods expert in the CIHR Late-in-Life Team Grant. This was a highly competitive granting process, in which only 2 grants were awarded out of 8 LOI's invited to submit full grants. Dr. Sinuff was successful as a co-investigator in acquiring 3 additional grants. Dr. Sinuff co-authored 10 published papers in peer review journals (including 2 national guidelines) and was senior author in 1 book chapter.

Dr. Martin Chapman continues to remain focused on neurocritical care and management of brain injury, with several ongoing research projects: RESCUE-ASDH - Initiated from the UK, this international RCT is trying to answer the question as to whether employing craniectomy routinely following evacuation of an acute sub-dural hematoma leads to improved outcomes. Sunnybrook will become an active site in 2017 with Martin as a co-investigator. PROPEL - Martin is the site PI on this industry health technology study on feeding tolerance.

In 2016, Dr. Louise Rose was successful in securing three competitive grants as a principal investigator. These include: (1) Cough Assist: use education needs, health service utilization, and outcomes funded by the Post-Polio health International and the International Ventilator Users Network; (2) Development & pilot evaluation of an online peer support program for family caregivers of ventilator-assisted individuals with neuromuscular disease living in the community funded by Muscular Dystrophy Canada; and (3) Quality metrics for patients experiencing persistent critical illness: a program of research funded by the Michael Garron Hospital Community Based Research Fund. Dr. Rose also received MITACS funding for Dr. Marina Bastawrous-Wasilewski for a postdoctoral fellowship to support the development of the online peer support program. She also has two PhD students within the Lawrence S. Bloomberg Faculty of Nursing. In addition, Dr. Rose is a co-investigator on three successful CIHR project grants. Dr. Rose authored 17 publications in 2016, five as first author and seven as senior author with a further five accepted for publication. Dr. Rose was invited to speak at several international and national conferences including the UK Intensive Care Society State of the Art Meeting and the Canada Critical Care Forum. In January to April of 2016, Dr. Rose completed a sabbatical at the Lane Fox Respiratory Unit at St. Thomas's Hospital in London. This has resulted in her receiving an ongoing honorary visiting professor status with further work planned in collaboration with this team.

Dr. Bourke Tillmann is a Clinical Associate in Critical Care Medicine at Sunnybrook Health Sciences Centre. He is currently about to enter an MSc in clinical epidemiology, with a focus on healthcare resource utilization. His general interests include trauma, cardiac arrest, and brain injury.

The Visiting Professorship Program organized by Dr. Gordon Rubinfeld/Dr. Hannah Wunsch and Meredith Malloy continues to be tremendously successful in attracting international experts in Critical Care to the IDCCM. In 2016 we hosted ten Visiting Professors from across North America. The Clinical Research in Progress sessions (CRIP) continue to provide a supportive environment where investigators can bring research projects for critical evaluation and discussion.

The Critical Care Research Department, led by our Research Director Dr. Neill Adhikari and Research Manager Nicole Marinoff RN continue to support the IDCCM with their participation in industry and academic trials. They contributed to the success of 14 academic and investigator initiated studies resulting in several presentations and publications for the DCCM. For 2016-17, they are collaborating on one industry sponsored study and 10+ academic funded studies. They continue to support the Department of Critical Care Medicine through research feasibility review, regulatory submissions, budgets, study implementation, education and compliance.

Congratulations to Meredith Malloy and Ruxandra Pinto, they celebrated ten years with the Department of Critical Care in 2016.

Education and Quality Improvement

We pride ourselves on our high quality clinical teaching and in the 2015-2016 academic year, the Department has continued to receive high scores for teaching assessments from both resident and fellowship training attachments.

Our leadership in Education Innovation continues with great momentum. Dr. Shelly Dev continues to work on independent and collaborative multimedia projects, acting as producer and consultant with colleagues across the Faculty of Medicine. Her latest New England Journal Publication will be on Performance of a Skin Biopsy; several other projects for the NEJM are in various stages of production in collaboration with colleagues across the IDCCM on topics such as Video Laryngoscopy and Esophageal Balloon Insertion. In partnership with Dr. Andre Amaral, over the last year Shelly has developed and continues to develop video-based materials to be used by families of ICU patients as a way of improving the content and quality of communication between these families and ICU staff members. She also developed the media for the multi-site LUNG-SAFE project and Damon Scales' study on the use of early antibiotics by Paramedics in the field. Also on the radar is the plan to focus the camera on the diverse staff and departments of our own IDCCM as Shelly works with Dr. Laurent Brochard to push the creative limits of the IDCCM website.

In Quality Improvement the Department continues to collect data on key quality indicators reflecting our performance. A Process of Care Database was developed and validated based on data collected through the iCORE registry, led by Dr. Eddy Fan. We currently report on early mobility, lung protective ventilation, DVT prophylaxis, delirium screening, sedation management and spontaneous breathing trials. This is now being reported for all units collecting data on iCORE and quality reports are posted on a monthly basis. Further work continues to expand the database to community hospitals, and Drs. Amaral and Fan have been actively engaged with stakeholders to increase adoption. We continue to present projects and share ideas in a biannual multi-professional quality meeting across all of critical care central with encouraging feedback. In association with the Canadian Critical Care Society Dr. Amaral has also been leading the Choosing Wisely Campaign for Critical Care in Canada; the final draft was presented at CCCF 2016 and will be publicly available in 2017 after feedback from the CWC leadership. Following the IDCCM strategic plan, Drs. Amaral, Goddard and Dhar are supervising fellows and residents in a Quality Improvement workshop. Trainees attend a workshop provided by Dr. Brian Wong from Department of Medicine and, as a group, work on a quality improvement project throughout the year. One of the projects from last year, devoted to consent for common ICU procedures, has received awards in several international meetings.

In July 2016, the University of Toronto Adult Critical Care Medicine Residency Program started the implementation of a new program of formative, workplace-based assessments for our critical care residents facilitated by Dr. Dominique Piquette. Each resident has received an assessment schedule detailing an individualized, structured series of workplace-based assessments that must be completed by the end of each core ICU rotation. The residents have also been paired with Faculty advisors who are meeting with them on a quarterly basis to review their completed assessments and to develop individualized learning plans. Over the next few months, feedback will be sought from trainees, educators, and faculty in order to further improve the assessment program.

Facilitated by Dr. Dominique Piquette, two new initiatives were also implemented in 2016 to foster the development and dissemination of high-quality scholarly projects. In May 2016, the second-year critical care residents presented their scholarly projects to their peers and to a panel of critical care Faculty. The diversity and quality of the projects presented was truly outstanding. In December 2016, the first-year critical care residents also had the opportunity to discuss their preliminary ideas and plans for their scholarly projects in progress with an engaged group of peers and faculty. The breath and degree of development of the projects was impressive, as was the quality of the presentations. We are looking forward to repeat these activities this year.

Department of Critical Care Medicine, The Hospital for Sick Children



Peter Laussen, MD, BS, FCICM

The Pediatric and Cardiac Intensive Care Divisions continue to be extremely busy with over 2,200 admissions for the past academic year. Outcomes remain excellent and comparable to any benchmark for mortality and quality. The quality and safety initiatives within the department continue to be amplified and successful. Despite the increase in total admissions, patient and ventilation days have not increased in parallel which reflects a dedicated approach to cost-efficient care.

We successfully hired 2 new outstanding faculty. Dr. Mjaye Mazwi is Board certified in Pediatrics, Pediatric Cardiology and Pediatric Critical Care and we were very fortunate to be able to recruit him from Lurie Children's Hospital in Chicago. Mjaye is an experienced critical care physician and his clinical duties will be in the CCCU. He has considerable experience with data science in critical care and will be leading Computational Physiology and Translational Engineering in the Department. Dr. Haifa Mtaweh has joined as a Clinical Associate for the next 6 months and then will assume a full staff position in the PICU from July 1, 2017. Haifa completed her Pediatric Critical Care training at Pittsburgh Children's Hospital and joined us as a Research Fellow 2 years ago. She is a spectacular addition to the PICU and will be continuing her research related to nutrition, metabolism and neurologic injury.

The education mission has continued under the leadership of Dr. Tilman Humpl in an interim position while Dr. Afrothite Kotsakis is on maternity leave. We continue to train Fellows from across the world (25 for academic year 2016) and plan to continue our close relationship with trainees through our Alumni Association.

Our research team led by Dr. Jamie Hutchison has had a productive year. We have expanded our team to better support the research being done within the department. Our research team members now include a research manager, 4 data programmers and 2 analysts, Research Fellows, PhD students, Post-graduate students, project manager and several research assistants and summer students. In this past year we have had 68 publications and \$100,000 CIHR Project Grant Award. There are currently 82 active studies in varying stages. Some of our team members attended the Canadian Critical Care Trials Group (CCCTG) 3 scientific meetings this year and provided updates on current active studies at our site that are being conducted locally and nationally. Our research coordinator group presented at CCCTG in Halifax on Informed Consent for Research in Pediatrics. Members of our research team also attended the Canadian Critical Care Translational Biology Group (CCCTBG) which coincides with the CCCTG meetings. There were also many presentations from our department at the 8th World

Congress in Pediatric Intensive and Critical Care in June which was repeated on a smaller scale here on campus for staff who were unable to attend.

As I currently prepare a 5 year report on the Department activities, I am grateful and appreciative for the wonderful clinical, educational and research contributions from faculty, trainees and all clinicians across the department who day-in and day-out provide the highest quality of care for the sickest of children.

Department of Critical Care Medicine University Health Network and Sinai Health System



Niall Ferguson, MD, MSc, FRCPC

Critical Care Medicine, University Health Network & Sinai Health System

The Critical Care programme at University Health Network and Mount Sinai Hospital is a complex structure involving the provision of intensive care across 4 physically separate geographic sites and 2 separate hospital organizations. We have over 20 intensivists working in our three Level-3 medical-surgical ICUs (our MSICU group), and also count on the involvement of our colleagues in the Peter Munk Cardiac Centre who provide care for patients in the CardioVascular ICU (CVICU) and Coronary ICU (CICU) at Toronto General Hospital.

Personnel

Over the course of 2016 several important personnel changes occurred within our group.

New Faculty: Dr. Laveena Munshi, Clinician-Investigator, MSH
 Dr. Lorenzo Del Sorbo, Clinician-Investigator, TGH
 Dr. Victoria McCredie, Clinician-Scientist, TWH

We are excited to welcome our new team members and look forward to their future successes. In 2016, Dr. Neil Lazar stepped down as Site Lead for the Toronto General MSICU, having completed 13 years in that role; Dr. Niall Ferguson is filling in as interim site lead at the current time. The executive committee for our group in 2016 was comprised of Drs. Neil Lazar, Jeff Singh, and Stephen Lapinsky serving as Site Directors for Toronto General, Toronto Western, and Mount Sinai, respectively, along with Dr. John Granton as Head, Division of Respiriology, Dr. Geeta Mehta as member-at-large, and Dr. Niall Ferguson, Head of Critical Care Medicine.

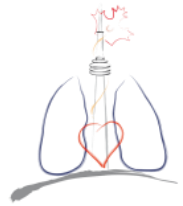
Research

Our research enterprise is overseen by Dr. Eddy Fan as tri-site Research Director. He is supported locally by research leads from each site - Drs. Wilcox, Detsky, and Del Sorbo. We are also delighted to congratulate and work closely with Drs. Margaret Herridge and Hannah Wunsch as Research Director and Deputy-Director for the University of Toronto IDCCM.

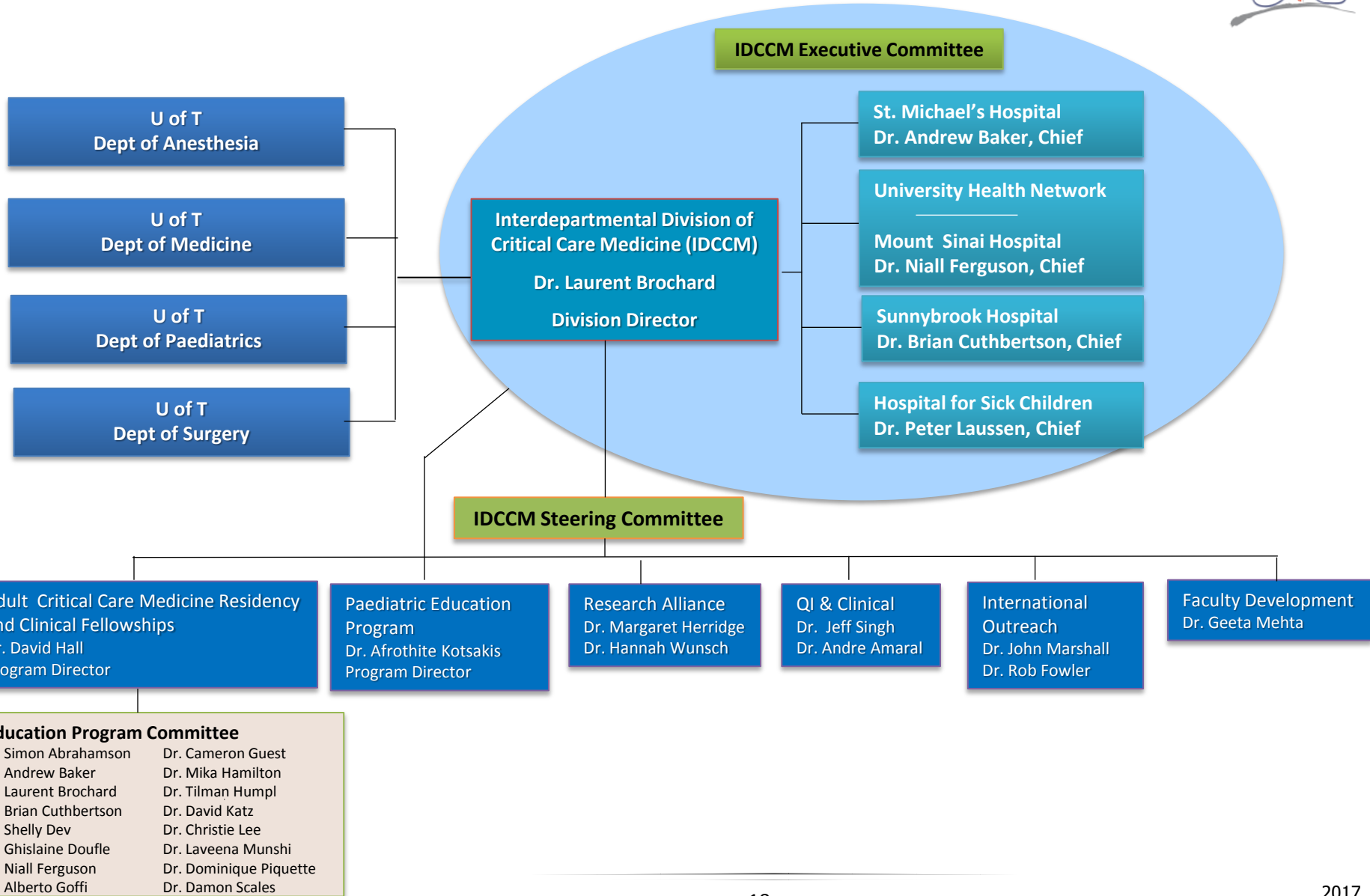
2016 was another excellent year for our research group. Our group of 13 faculty clinician-investigators and scientists published over 100 unique papers in 2016, with more than 20% being in high impact journals including the New England Journal, JAMA, and ARJCCM. Our grant capture was also strong (see individual reports). Key research programmatic themes arising from within our group include: ARDS & Mechanical Ventilation; Long-Term Outcomes after ICU; Extra-Corporeal Life Support; Diaphragm Dysfunction; Neuro-critical Care; and Critical Care Oncology.

Education

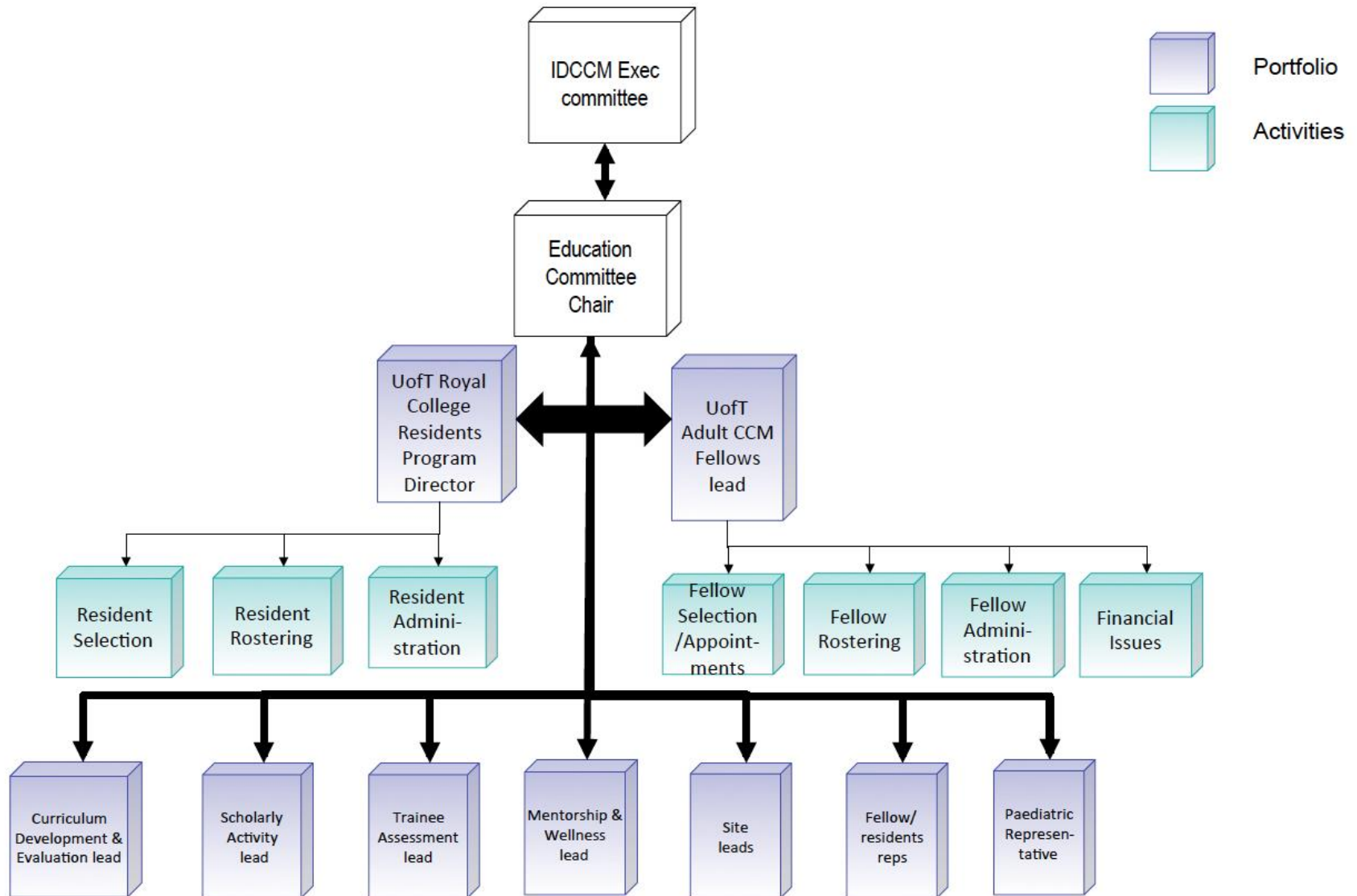
In 2016, Dr. Ghislaine Douflé assumed responsibility as education lead for TGH, and works closely with Drs. Christie Lee and Alberto Goffi at MSH and TWH – collectively have done a phenomenal job of reinvigorating the educational experience for trainees of all levels at these sites. Dr. Andrew Steel stepped down from his role as Program Director for the IDCCM and from his role as Director of our International Fellowship Program having filled that role for 7 years. We thank Andrew for his dedicated service and commitment to education. Dr. Christie Lee has now taken on the role of International Fellowship Director at UHN/SHS.



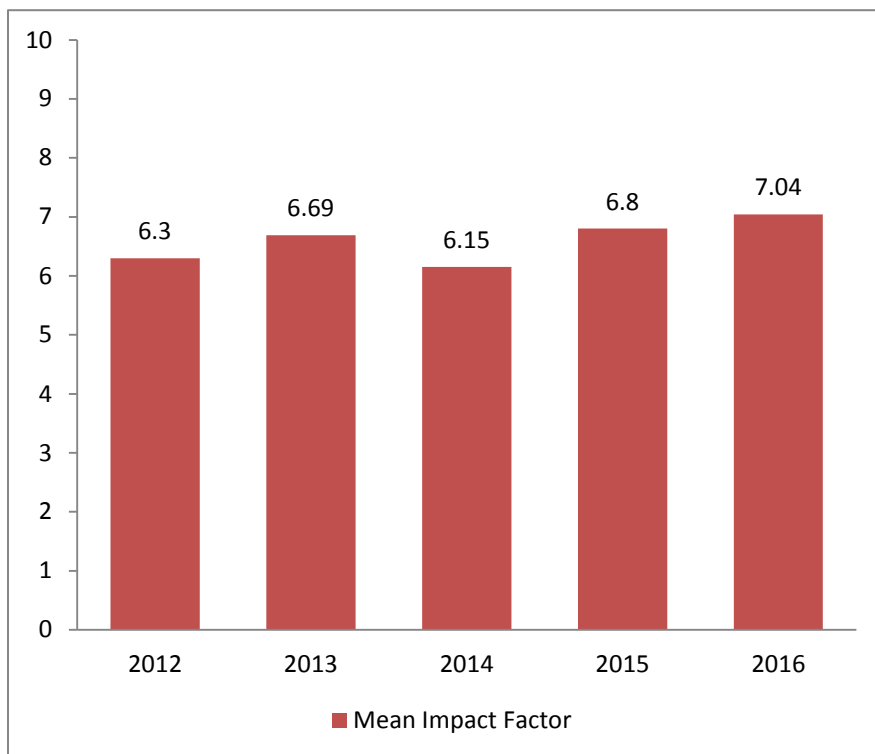
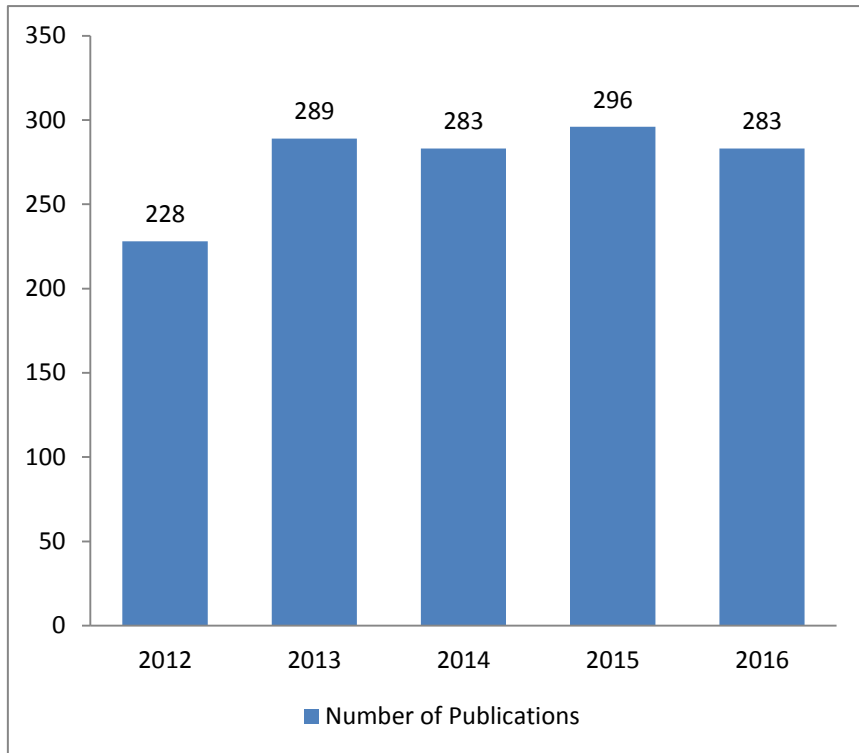
U of T IDCCM Organization Chart



U of T IDCCM Education Committee Organization Chart

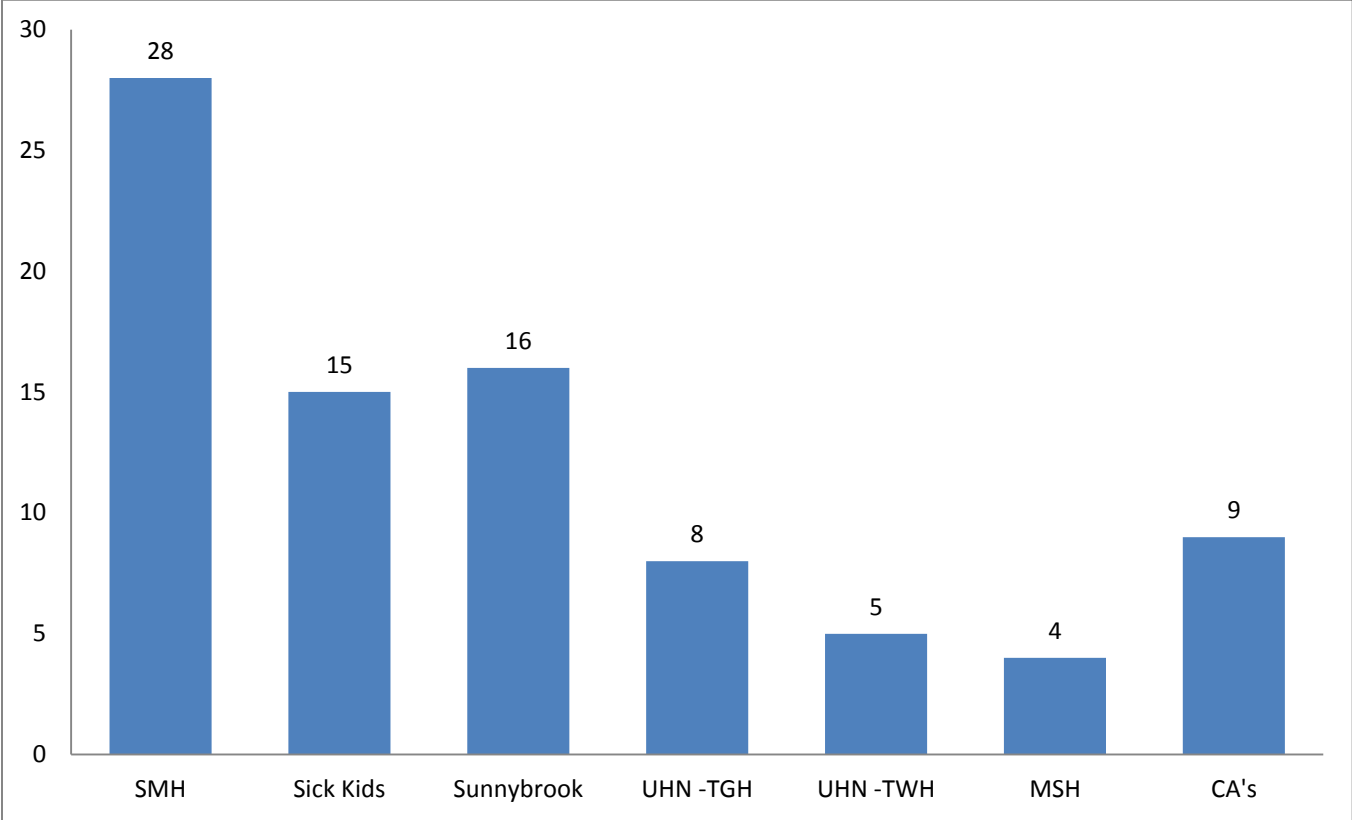


5 Year Impact Factor Publication Analysis



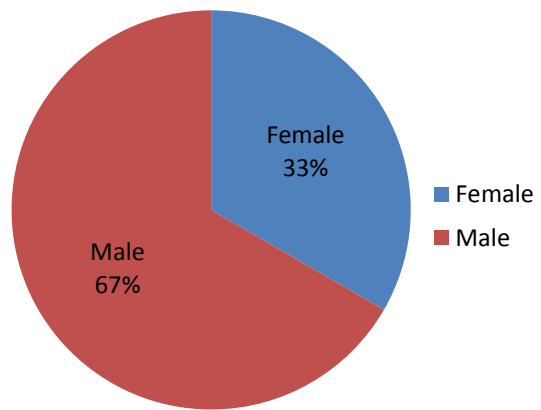
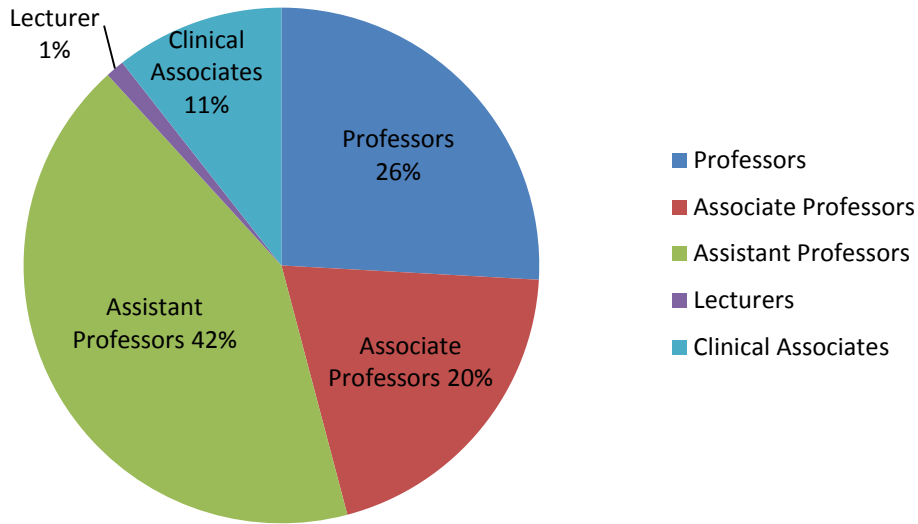
Overall Interdepartmental Summary

Our interdepartmental division consists of 76 faculty members and 9 clinical associates.



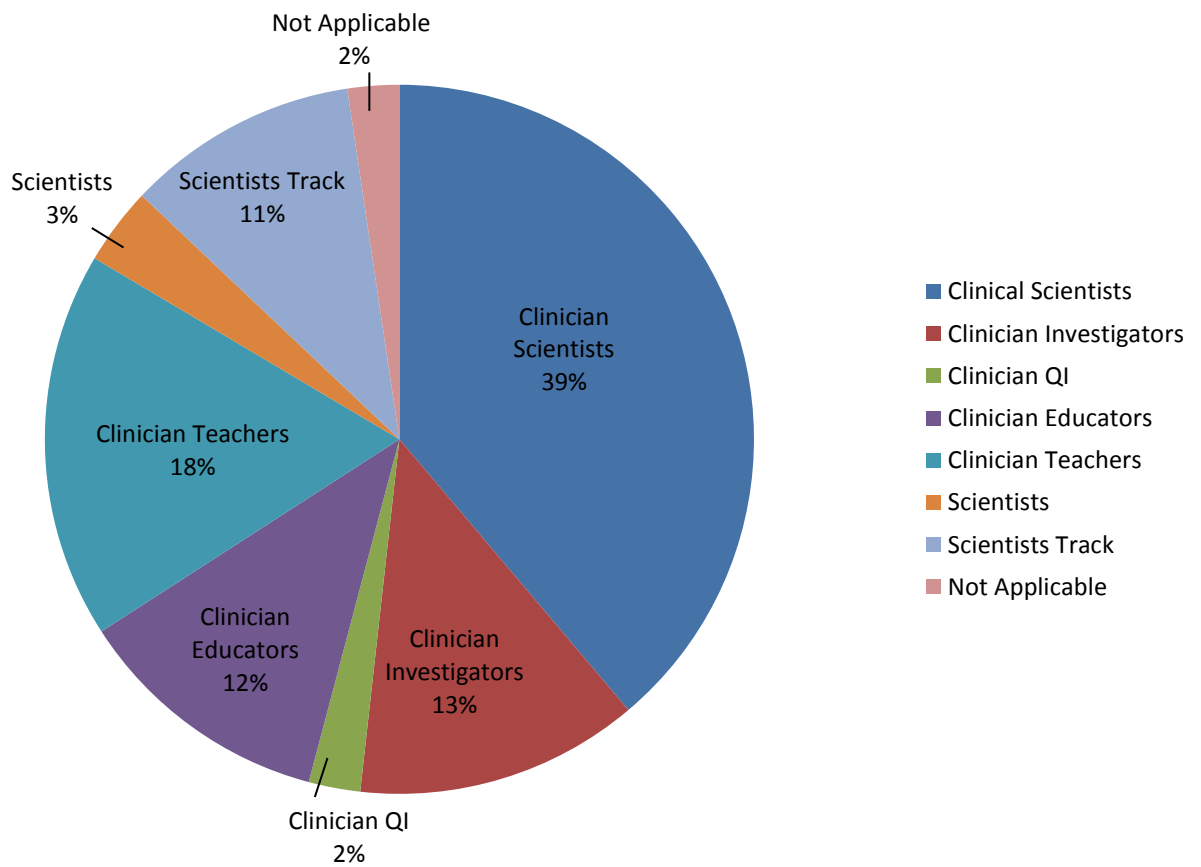
University Rank Full-Time Faculty

Professors	22
Associate Professors	17
Assistant Professors	36
Lecturer	1
Clinical Associates	9



Research Job Description Faculty

Clinical Scientists	33
Clinician Investigators	11
Clinician QI	2
Clinician Educators	10
Clinician Teachers	15
Scientists	3
Scientists Track	9
Not Applicable	2



APPENDICES

Appendix I: Faculty List, 2016

Hospital for Sick Children

Name	University Rank	Research Rank
Annich, Gail	Professor	Clinician Investigator
Cox, Peter	Professor	Clinician Scientist
Floh, Alejandro	Assistant Professor	Clinician Investigator
Guerguerian, Anne-Marie	Assistant Professor	Clinician Scientist
Huang, Lennox	Associate Professor	Clinician Scientist
Humpl, Tilman	Associate Professor	Clinician Investigator
Hutchison, Jamie	Professor	Clinician Scientist
Kavanagh, Brian	Professor	Clinician Scientist
Kirsch, Roxanne	Assistant Professor	Clinician Scientist
Kotsakis, Afrothite	Assistant Professor	Clinician Educator
Laussen, Peter	Professor	Clinician Scientist
Mema, Briseida	Assistant Professor	Clinician Educator
Moga, Michael-Alice	Assistant Professor	Clinician Scientist
Parshuram, Christopher	Professor	Clinician Scientist
Schwartz, Steven	Associate Professor	Clinician Investigator

Sinai Health System

Name	University Rank	Research Rank
Detsky, Michael	Assistant Professor	Clinician Investigator
Lapinsky, Stephen	Professor	Clinician Investigator
Lee, Christie	Assistant Professor	Clinician Teacher
Mehta, Sangeeta	Professor	Clinician Investigator

St. Michael's Hospital

Name	University Rank	Research Rank
Abrahamson, Simon	Associate Professor	Clinician Educator
Ahmed, Najma	Associate Professor	Clinician Educator
Baker, Andrew	Professor	Clinician Scientist
Brochard, Laurent	Professor	Clinician Scientist
Burns, Karen	Associate Professor	Clinician Scientist
Darraah, William	Assistant Professor	Clinician Teacher
Dos Santos, Claudia	Associate Professor	Clinician Scientist
Friedrich, Jan	Associate Professor	Clinician Scientist
Gray, Sara	Assistant Professor	Clinician Teacher
Hall, David	Assistant Professor	Clinician Teacher
Hayes, Christopher	Assistant Professor	Clinician Quality & Innovation
Houston, Patricia	Professor	Clinician Scientist
Kataoka, Mark	Assistant Professor	Clinician Teacher
Klein, David	Assistant Professor	Clinician Teacher
Laffey, John	Professor	Clinician Scientist
Lawless, Bernard	Assistant Professor	Clinician Teacher
Lee, Warren	Assistant Professor	Clinician Scientist
Levene, Richard	Assistant Professor	Clinician Teacher
Marshall, John	Professor	Clinician Scientist
Mazer, David	Professor	Clinician Scientist
Pronovost, Antoine	Assistant Professor	Clinician Scientist
Rigamonti, Andrea	Assistant Professor	Clinician Scientist
Rizoli, Sandro	Professor	Clinician Scientist
Sinderby, Christer	Assistant Professor	Scientist
Slutsky, Arthur	Professor	Scientist
Tousignant, Claude	Assistant Professor	Clinician Educator
Wong, Natalie	Assistant Professor	Clinician Teacher
Zhang, Haibo	Professor	Scientist

Sunnybrook Hospital

Name	University Rank	Research Rank
Adhikari, Neill	Lecturer	Clinician Scientist
Amaral, Andre	Assistant Professor	Clinician Quality & Innovation
Chapman, Martin	Assistant Professor	Clinician Educator
Cuthbertson, Brian	Professor	Clinician Scientist
Dev, Shelly	Assistant Professor	Clinician Teacher
Fowler, Robert	Associate Professor	Clinician Investigator
Guest, Cameron	Associate Professor	-
Haas, Barbara	Assistant Professor	Clinician Scientist
Piquette, Dominique	Assistant Professor	Clinician Educator
Rose, Louise	Associate Professor	Clinician Scientist
Rubinfeld, Gordon	Professor	Clinician Scientist
Scales, Damon	Associate Professor	Clinician Scientist
Sinuff, Tasnim	Associate Professor	Clinician Scientist
Smith, Terry	Assistant Professor	Clinician Teacher
Tremblay, Lorraine	Assistant Professor	-
Wunsch, Hannah	Associate Professor	Clinician Scientist

University Health Network

Toronto General Hospital

Name	University Rank	Research Rank
Del Sorbo, Lorenzo	Assistant Professor	Clinician Investigator
Downar, James	Associate Professor	Clinician Teacher
Fan, Eddy	Assistant Professor	Clinician Scientist
Ferguson, Niall	Professor	Clinician Scientist
Granton, John	Professor	Clinician Investigator
Herridge, Margaret	Professor	Clinician Scientist
Lazar, Neil	Associate Professor	Clinician Educator
Steel, Andrew	Assistant Professor	Clinician Educator

Toronto Western Hospital

Name	University Rank	Research Rank
Demajo, Wilf	Assistant Professor	Clinician Teacher
Goffi, Alberto	Assistant Professor	Clinician Teacher
Hawryluck, Laura	Associate Professor	Clinician Educator
Singh, Jeff	Associate Professor	Clinician Investigator
Wilcox, Elizabeth	Assistant Professor	Clinician Scientist

Clinical Associates

Name	Hospital	Research Rank
Dhar, Preeti	Toronto General Hospital	Scientist Track
Goddard, Shannon	Sunnybrook Hospital	Scientist Track
Golan, Eyal	Toronto Western Hospital	Scientist Track
Goligher, Ewan	Sinai Health System	Scientist Track
Leligdowicz, Aleksandra	Toronto Western Hospital	Scientist Track
Man, Jeffrey	Toronto Western Hospital	Scientist Track
McCredie, Victoria	Sunnybrook Hospital	Scientist Track
Munshi, Laveena	Sinai Health System	Scientist Track
Tillmann, Bourke	Sunnybrook Hospital	Scientist Track

Appendix II: Summary Activity Reports

DR. GAIL ANNICH, HOSPITAL FOR SICK CHILDREN

Peer-Reviewed Publications

Journal Articles

1. Barbaro RP, Bartlett RH, Chapman RL, Paden ML, Roberts LA, Gebremaniam A, **Annich GM**, Davis MM. Development and Validation of the Neonatal Risk Estimate Score for Children Using Extracorporeal Respiratory Support. *Pediatrics*. 2016 June. Published. **Coauthor or Collaborator**.
2. Barbaro RP, Boonstra PS, Paden ML, Roberts LA, **Annich GM**, Bartlett RH, Moler FW, Davis MM. Development and Validation of the Pediatric Risk Estimate Score for Children using Extracorporeal Respiratory Support (Ped- Rescuers). *Intensive Care Medicine*. 2016 May. Published. **Coauthor or Collaborator**.
3. Yu J, Brisbois E, Handa H, **Annich GM**, Meyerhoff M, Bartlett R, Major T. The Immobilization of a Direct Thrombin Inhibitor to a Polyurethane as a Nonthrombogenic Surface Coating for Extracorporeal Circulation. *Journal of Materials Chemistry B*. 2016 April. Published. **Coauthor or Collaborator**.
4. **Annich GM**, Barbaro R, Robba R, Chapman R, Paden M, Roberts L. Neonatal Risk Estimate Score for Children Using Extracorporeal Respiratory Support (Neo-RESCUERS). *Pediatrics*. 2016 Feb 19. **Principal Author**.

Book Chapters

1. **Annich GM**, Barbaro R, Cornell T, Reynolds M, Massicote P. Adverse Effects of Extracorporeal Life Support: The Blood Biomaterial Interaction. In: *ECMO Red Book*. 5th Edition. 2016. **Principal Author**.

Peer-Reviewed Grants

Funded

2015 Mar-2017 Jun **Consultant**. Pediatric Implantable Lung. National Institutes of Health (NIH) (USA). 5R01HD015434-30. PI: Dr. RH Bartlett. 3,000,000 USD. [Grants]

Invited Lectures and Presentations

International

- 2016 Jun 2-3 **Invited Speaker.** Alternative Anticoagulants: What, when and how to monitor; Circuit of the Future. Euro ELSO. Glasgow City, United Kingdom.
- 2016 Mar 10 **Invited Speaker.** Weird and Confounding Pediatric Cases that Confuse the Best of Us. Survival Flight Conference. Ann Arbor, Michigan, USA.
- 2016 Mar 1 **Moderator.** Coagulation Abstract Poster Review APRES. 32nd Annual Children's National Symposium: ECMO and the Advances Therapies for Respiratory Failure (Children's National Health System). Co-Moderator(s): Maslach-Hubbard A.
- Moderator.** Breakout session: Coagulation/ Anticoagulation on ECLS: Studies, Unique Management. 32nd Annual Children's National Symposium: ECMO and the Advances Therapies for Respiratory Failure: Children's National Health System. Co-Moderator(s): Barbaro R, Fortenberry J.
- Moderator.** Cultural Differences in ECLS. 32nd Annual Children's National Symposium: ECMO and the Advances Therapies for Respiratory Failure (Children's National Health System). Co-Moderator(s): Janco J.
- Keystone, Colorado, USA.
- 2016 Jan 21 **Invited Lecturer.** Extracorporeal Life Support: Where we were, Where we are, Where will we be? Grand Rounds: Heinrich Werner Lecture. Kentucky, USA.

National

- 2016 Jun 7 **Invited Speaker.** Parallel Session: Mechanical Support - Respiratory ECMO. World Congress on Paediatric Intensive and Critical Care. Co-Speaker(s): Guerguerian AM. Toronto, Ontario, Canada.
- 2016 Jun 6 **Invited Speaker.** Sunrise Session: How to set up a Safety Program in your ICU. World Congress on Paediatric Intensive and Critical Care. Toronto, Ontario, Canada.

2016 Jun 4 **Facilitator.** ECLS Workshop: Build a Circuit and Components of a Circuit.Co-Facilitator(s): Burgman C,Perfusionist.

Invited Lecturer. Anticoagulation. World Congress on Paediatric Intensive and Critical Care.

Panelist. Risky Business: The Changing Face of Risk Over Time. World Congress on Paediatric Intensive and Critical Care.

World Congress on Paediatric Intensive and Critical Care. Toronto, Ontario, Canada.

Local

2016 Sep 22 **Invited Lecturer.** ECMO Specialist Training Course. Anticoagulation. The Hospital for Sick Children. Toronto, Ontario, Canada.

2016 Sep 21 **Invited Lecturer.** ECMO Specialist Training Course. VA VV ECMO. The Hospital for Sick Children. Toronto, Ontario, Canada.

2016 Jul 19 **Invited Speaker.** Management of the acutely-deteriorating patients in the wards and Bedside PEWS. Orientation for New Paediatric Clinical Fellows and Subspecialty Fellows Department of Paediatrics, The Hospital for Sick Children. Ontario, Canada.

2016 Jul 7 **Speaker.** Quality & Safety in Critical Care – Orientation for New Trainees. Department of Critical Care Medicine. The Hospital for Sick Children. Ontario, Canada.

DR. PETER COX, HOSPITAL FOR SICK CHILDREN

Invited Lectures and Presentations

International

- 2016 Nov **Invited Speaker.** Understanding and Measuring Pulmonary Dead Space; Nuts and Bolts of Quality improvement; Pulmonary Physiology for Mechanical Ventilation. National Pediatric Critical Care Conference, Mumbai, India.
- 2016 Sept **Invited Speaker.** Challenges of Neonatal Pulmonary Physiology during Transport 2nd Edition of the High Risk Transport of Neonates Congress, Copenhagen.
- 2016 June **Invited Speaker.** Is Hypoxia or Hyperoxia really dangerous?; Enhancing the quality of the care we deliver; Respiratory Mechanics in ARDS. The 14th Brazilian Congress of Pediatric Intensive Care, Brazil.
- 2016 Jan **Invited Speaker.** Evolution of oxygen. Patient Safety Summit. Los Angeles, California, USA.

National

- 2016 Jun 5 **Chairman, Organizing Committee.** 8th World Congress on Pediatric Intensive and Critical Care. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. Burch PT, Ravishankar C, Newburger JW, Lambert LM, Pemberton VL, Granger S, **Floh AA**, Anderson JB, Hill GD, Hill KD, Oster ME, Lewis AB, Schumacher KR, Zyblewski SC, Davies RR, Jacobs JP, Lai WW, Minich LL. Assessment of Growth 6 Years after the Norwood Procedure. *J Pediatr* 2016 Nov 14. **Coauthor or Collaborator.**
2. **Floh AA**, Slicker J, Schwartz SM. Nutrition and Mesenteric Issues in Pediatric Cardiac Critical Care. *Pediatr Crit Care Med*. 2016 Aug;17(8 Suppl 1):S243-9. **Principal Author.**
3. McBride ME, **Floh AA**, Krishnamurthy G, Checchia P, Kulgman D. Advancing Cardiac Critical Care: A call for training, collaboration and family engagement. *World Journal of Pediatric and Congenital Heart Surgery*. 2016 Mar 1; 7(2):135-8. **Coauthor or Collaborator.**
4. **Floh AA**, Slicker J, Schwartz S. Nutrition and Mesenteric Issues in Pediatric Critical Care. *Pediatric Critical Care*. 2016 Aug;17(8 Suppl 1):S243-9. **Principal Author.**
5. Mouzaki M, Schwartz SM, Mtwah H, La Rotta G, Mah K, Van Arsdell G, Parshuram CF, **Floh AA**. Can VCO₂-based estimates of resting energy expenditure replace the need of indirect calorimetry in critically-ill children? *JPEN J. Parenter Enteral Nutr*. 2016 Feb 2. **Senior Principal Author.**
6. Schwartz SM, **Floh AA**, Laussen PC. Pharmacological Manipulation of Peripheral Vascular Resistance in Single Ventricle Patients (Stages I, II, and III of Palliation). *Curr Vasc Pharmacol*. 2016 Jan 1;14(1):58-62. **Coauthor or Collaborator.**

Invited Lectures and Presentations

International

- 2016 Dec 9 **Invited Speaker.** Can feeding improve outcomes beyond providing nutrients? 2016 Annual International Meeting. The Pediatric Cardiac Intensive Care Society. Loews Hotel. Miami Beach, Florida.
- 2016 Feb 27 **Invited Speaker.** De-Escalation: ICU discharge risk. 3rd International Bedside. PEWS Meeting. Rome, Italy.

National

- 2016 June 14 **Moderator.** Session 4: Abstracts Presentation. University of Toronto, Interdepartmental Division of Critical Care Medicine Art Slutsky Day 2016. Co-Moderator(s): Curley G. Toronto, Ontario, Canada.
- 2016 Jun 8 **Invited Speaker.** Stop, start feeding – Should NPO orders be notified in the ICU? 8th World Congress on Pediatric and Intensive Care. Metro Toronto Convention Centre. Toronto, Ontario, Canada.
- 2016 Jan 14 **Invited Speaker:** Congenital Heart Disease. Canadian Paediatric Review. Department of Medicine. McMaster University. Hamilton, Ontario, Canada.

Local

- 2016 Nov 23 **Invited Lecturer.** Acute Fulminant Myocarditis. Sick Kids Cardiology Program, The Hospital for Sick Children. Toronto, Ontario, Canada.
- 2016 Nov 7 **Invited Speaker.** Stop, start feeding. 8th World Congress of Pediatric Critical Care Interprofessional Education Day. Peter Gilgan Centre for Research & Learning. The Hospital for Sick Children. Toronto, Ontario, Canada.
- 2016 Oct 26 **Invited Lecturer.** How to write a research question. Research Course with cardiac fellows. Heart Centre – Cardiology Division. The Hospital for Sick Children. Toronto, Ontario, Canada.
- 2016 Sep 26 **Moderator.** Quick Hits Session: New Approaches to Heart Failure Management. 4th Paediatric Heart. Failure Summit. Peter Gilgan Centre for Research & Learning. The Hospital for Sick Children. Toronto, Ontario, Canada.

- 2016 Sep 21 **Invited Lecturer.** Cardiac Patient on ECMO. ECMO Specialists' Training Course. The Hospital for Sick Children. Toronto, Ontario, Canada
- 2016 Sep 9 **Invited Lecturer.** ECG and Pacemakers. Department of Anaesthesia Daily Rounds, The Hospital for Sick Children. Toronto, Ontario, Canada.
- 2016 Jun 14 **Invited Lecturer.** Complex Cardiac Kids – 4D codes. Code Blue Leaders' Course. The Hospital for Sick Children. Toronto, Ontario, Canada.
- 2016 Mar 16 **Invited Lecturer.** Understanding Laboratory Values – Electrolytes, LFTs, CBC and Differential, Coagulation studies, SvO2 and Lactates. Cardiac Education Days. The Hospital for Sick Children. Toronto, Ontario, Canada.
- 2016 Mar 9 **Invited Lecturer.** How many ventricles in a repair (1 or 2 or 1 ½ ventricle repair). Cardiac Education Days. The Hospital for Sick Children. Toronto, Ontario, Canada.
- 2016 Feb 17 **Facilitator.** SIM Day with CCM fellows. Station ECMO. The Hospital for Sick Children. Toronto, Ontario, Canada.
- 2016 Feb 9 **Facilitator.** ECLS Education Day/ Simulation. The Hospital for Sick Children. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. The American Heart Association's Get With the Guidelines–Resuscitation Investigators: Bhanji F, Topjian AA, Nadkarni VM, Praestgaard AH, Hunt EA, Cheng A, Meaney PA, Berg RA, Raymond TT, Foglia E, Sutton R, Allen E, Bembea M, Fink E, Gaies MG, **Guerguerian AM**, Parshuram C, Kleinman M, Knight LJ, Laussen PC, Sawyer T, Schexnayder, SM. Survival rates following pediatric in-hospital cardiac arrests during nights and weekends. *JAMA Pediatrics*. 2016 Nov 7. Published online November 7, 2016. Available from:doi:10.1001/jamapediatrics.2016.2535. **Coauthor or Collaborator**.
2. Maconochie IK, de Caen AR, Aickin R, Atkins DL, Biarent D, **Guerguerian AM**, Kleinman ME, Kloeck DA, Meaney PA, Nadkarni VM, Ng KC, Nuthall G, Reis AG, Shimizu N, Tibballs J, Pintos RV; Pediatric Basic Life Support and Pediatric Advanced Life Support Chapter Collaborators.(2015). Correction to: Part 6: Pediatric basic life support and pediatric advanced life support: 2015 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations. *Circulation*. 2016 Aug 30;134(9):e121. **Coauthor or Collaborator**.
3. Crichton A, Anderson V, Oakley E, Greenham M, Hearps S, Delzoppo C, Beauchamp M, Hutchison J, **Guerguerian AM**, Boutis K, Babl F. Fatigue following traumatic brain injury in children: the clinical course 6-12 months post-injury. *Journal of Neurotrauma*. 2016 Aug. **Coauthor or Collaborator**.
4. Buompadre M, Andres K, Slater LA, Mohseni-Bod H, Branson H, **Guerguerian AM**, Laughlin S, Armstrong D, Moharir M, deVeber G, Humpl T, Honjo O, Keshavjee S, Ichord R, Pereira VM, Dlamini N. Thrombectomy for acute stroke in a child on a lung assist device: a case report, literature review, and recommendations. *Pediatric Neurology*. 2016 Sep 14;2016.09.007. pii: S0887-8994(16)30397-6. **Coauthor or Collaborator**.
5. Honjo O, Merklinger S, Poe J, **Guerguerian AM**, Zhang H, Taylor K, Van Arsdell GS. Mechanically-assisted primary bidirectional cavopulmonary shunt in neonates and infants: an acute human pilot study (Mechanically-Assisted BCPS). *The Journal of Thoracic and Cardiovascular Surgery*. 2016 Sep. pii: S0022- 5223(16)31166-7. **Coauthor or Collaborator**.

6. Kato A, Lo Rito M, Lee KJ, Haller C, **Guerguerian AM**, Sivarajan VB, Honjo O. Impacts of early cardiac catheterization for children with congenital heart disease supported by extracorporeal membrane oxygenation. *Catheterization and Cardiovascular Interventions*. 2016 Jul 14. doi: 10.1002/ccd.26632. [Epub ahead of print]. **Coauthor or Collaborator**.
7. Eytan D, Pang EW, Doesburg S, Nenadovic V, Gavrilovic B, Laussen PC, **Guerguerian AM**. Bedside functional brain imaging in critically-ill patients using high-density EEG source modeling and multi-modal sensory stimulation. *NeuroImage: Clinical*. 2016 Jul;4(12):198-211 (Trainee publication, Dr. Danny Eytan MD PhD is a clinical fellow in PCCM). **Senior Responsible Author**
8. Haller C, Zhao L, Parker R, Saedi A, Kato A, Kotsakis A, Mertens L, **Guerguerian AM**, Honjo O. Ventricular functional recovery and neurologic function after in-hospital cardiac arrest in pediatric patients. *Journal of the American Heart Association*. 2016 Jun 12. **Coauthor or Collaborator**.
9. Wilkinson AA, Simic N, Frndova H, Taylor MJ, Chong K, Fraser D, Campbell C, Dhanani S, Kuehn S, BeauchampMH, Farrell C, Anderson V, **Guerguerian AM**, Dennis M, Schachar R, Hutchison JS. Serum biomarkers help predictattention problems in critically ill children with traumatic brain injury. *Pediatric Critical Care Medicine*. 2016Jul;17(7):638-648. Epub 2016 May 10. (Trainee publication, Amy Wilkinson is a doctoral student in psychology). **Coauthor or Collaborator**.
10. Bamaga AK, Riazi S, Amburgey K, Ong S, Halliday W, Diamandis P, **Guerguerian AM**, Dowling JJ, Yoon G. Neuromuscular conditions associated with malignant hyperthermia in paediatric patients: a 25-year retrospective study. *Neuromuscular Disorders*. 2016 Mar;26(3):201-206. Available from: www.sciencedirect.com (Trainee publication, Dr. Ahmed Bamaga is a paediatric neurology neuromuscular post-doctoral fellow). **Coauthor or Collaborator**.
11. Wilkinson AA, Simic N, Dennis M, Taylor MJ, Morgan BR, Frndova F, Choong K, Campbell C, Fraser D, Anderson V, **Guerguerian AM**, Schachar R, Hutchison JS. Brain biomarkers and preinjury cognition are associated with long-term cognitive outcome in children with traumatic brain injury. *BioMed Central-Pediatrics*. 2016 Mar. **Coauthor or Collaborator**.
12. Raymond TT, Bonafide CP, Praestgaard A, Nadkarni VM, Berg RA Parshuram CS, Hunt EA; American Heart Association Get With the Guidelines-Resuscitation Investigators. Collaborators: Raymond TT, Nadkarni VM, Parshuram CS, Bembea M, de Caen A, Fink E, Gaies MG, **Guerguerian AM**, Hunt EA, Kleinman M, Laussen PC, Schexnayder SM, Sutton R, Allen E, Topjian AA. Pediatric medical emergency team events and outcomes: A report of 3647 events from the American Heart Association's Get With the Guidelines-Resuscitation Registry. *Hospital Pediatrics*. 2016 Feb;6(2):57-64. **Coauthor or Collaborator**.

13. Goyal A, Samadani AA, **Guerguerian AM**, Chau T. An online three-class transcranial Doppler ultrasound brain computer interface. *Neuroscience Research*. 2016 Jan 18;107:47-56. S0168-0102(15)00304-1. Available from: <http://dx.doi.org/10.1016/j.neures.2015.12.013> (Trainee publication, Master Student). **Coauthor or Collaborator**.
14. Eytan D, Goodwin A, Laussen P, **Guerguerian AM**. Insights from multi-dimensional physiological signals to predict and prevent cardiac arrests. *Pediatric Critical Care Medicine*. 2016 Jan;17(1):81-2 (Trainee publication, Dr. Danny Eytan is a Clinical Fellow in PCCM). **Coauthor or Collaborator**.

Book Chapters

1. Larson C, Butt W, **Guerguerian AM**. Acute brain injury management chapter in Section 8 The acute or critically ill child. In: Rudolph's Pediatrics. 23rd. McGraw Hill Education; 2016. In Press. **Coauthor or Collaborator**.
2. **Guerguerian AM**, Ganeshalingham A. Neuromonitoring of cerebral blood flow and metabolism. In: Hahn C., Wusthoff C., editor(s). *Neuromonitoring in Neonatology and Critical Care*. 1st. Cambridge (United Kingdom); 2016. **Principal Author**.

Editorials

1. Morrison LJ, DeCaen A, Bhanji F, Bigham BL, Blanchard IE, Brooks SC, **Guerguerian AM**, Jensen JL, Travers AH, Vaillancourt C, Welsford M, Woolfrey K. What is new in the 2015 American Heart Association (AHA) guidelines, what is recycled from 2010, and what is relevant for emergency medicine in Canada. *Canadian Journal of Emergency Medicine*. 2016 May;18(3):223-9. Submission number CJEM-15-0362. **Coauthor or Collaborator**.

Peer-Reviewed Grants

Funded

2015 Dec-2019 Nov **Co-Investigator**. Canadian traumatic brain injury research consortium (CTRC). Canadian Institutes of Health Research (CIHR). CIHR Team Grant. PI: Hutchison J, Turgeon A, Wellington C, Gagnon I, Emery C. Collaborator(s): Archambault P, Baker A, Barlow K, Bayley MT, Beauchamp MH, Chapman MG, Chasse M, Clarke DB, Colantonio A, Cusimano MD, Emeriaud G, English SW, Esser MJ, Fraser DD, Griesdale D, Lacroix J, Lauzier F, Marshall SC, McCredie VA, Mcfadyen BJ, Panenka WJ, Ptitto A, Reed N, Winston BW, Yeates KO, Zarychanski R, Zemek R, Zygun DA, Fox-Robichaud AE. 1,924,513 CAD. [Grants]

- 2015 Apr-2020 Apr **Co-Investigator.** CanROC - Canadian resuscitation outcomes consortium: Toward a national resuscitation clinical research network. Canadian Institutes of Health Research (CIHR). ICRH Community Development Program Grants. PI: Morrison LJ, Christenson J, Stiell I. Collaborator(s): Atkinson P, Bhanji F, Brooks S, Cheskes S, Dainty N, de Caen A, Dorian P, Hutchison J, Kirkpatrick W, Lin S, Nascimento B, Osmond H, Parker J, Ramanathan K, Rizoli B, Scales C, Travers H, Vaillancourt C, Verbeek P, Wells A. 1,499,760 CAD. [Grants]
- 2014 Oct-2018 Sep **Principal Applicant.** Quantifying brain injury on computed tomography in hospitalized children: a prospective trial. Canadian Institutes of Health Research (CIHR). Open operating grant. 325310. Collaborator(s): Kulkarni A, Hutchison J, Laughlin S, Parshuram C, Raybaud C, Bigler E. 617,192 CAD. [Grants]
- 2014 Jul-2017 Jun **Co-Investigator.** A national biobank and database for patients with traumatic brain injury. Brain Canada. Technology and Platform Application. PI: Hutchison J. Collaborator(s): Baker A, Barlow K, Clarke D, Esser M, Green R, Lacroix J, Ptito A, Walley K. 3,000,000 CAD. [Grants]

Invited Lectures and Presentations

International

- 2016 Oct 11 **Invited Participant.** Get-With-The-Guidelines-Resuscitation Clinical Work Group Chicago Meeting. Chicago, Illinois, USA.
- 2016 Apr 25 **Invited Participant.** Johns Hopkins Armstrong Institute for Patient Safety and Quality. Symposium - Johns Hopkins' Extracorporeal Life Support Learning Lab. Baltimore, Maryland, USA.

Abstracts

- 2016 Dec 12 Functional brain imaging in critically-ill children at the bedside by combining high-density EEG recordings, source modeling and multi-modal sensory stimulation. Artificial Intelligence in Medicine. Presenter(s): Eytan D, **Guerguerian AM.** Winning Abstract. (Trainee Presentation). California, USA.

- 2016 Nov 12 Ventricular functional recovery and neurologic function after in-hospital cardiac arrest in pediatric patients. American Heart Association (AHA) Resuscitation Science Symposium (ReSS). Presenter(s): Haller C. Poster abstract. Authors: Haller C, Honjo O, Zhao R, Saedi A, Parker RN, Kato A, **Guerguerian AM**, Kotsakis A, Mertens L. (Trainee Presentation).
- Predicting survival from pediatric out-of-hospital cardiac arrest. American Heart Association (AHA) Resuscitation Science Symposium (ReSS). Presenter(s): Drennan I. Poster abstract. Authors: Drennan I, Scales D, Morrison L, Thorpe K, Mamdani M, Cheskes S, **Guerguerian AM**. (Trainee Presentation).
- New Orleans, Louisiana, USA.

National

- 2016 Oct 30-Nov 2 **Invited Speaker**. Session: NeuroCritical Care - Monitoring Therapies: Brain Resuscitation. Critical Care Canada Forum. Toronto, Ontario, Canada.
- 2016 Oct 19 **Invited Speaker**. SickKids experience with E-CPR. SPARC Network Meeting, Sunnybrook Hospital. Presenter(s): Todd M. Toronto, Ontario, Canada.
- 2016 Jun 8 **Chair**. Neuro Session 2: Status Epilepticus, Infections. 8th World Federation Congress on Pediatric Intensive and Critical Care. Toronto, Ontario, Canada.
- 2016 Jun 7 **Chair**. Mechanical Support: Respiratory extracorporeal membrane oxygenation. 8th World Federation Congress on Pediatric Intensive and Critical Care. Toronto, Ontario, Canada.
- 2016 Jun 6 **Invited Speaker**. Neuro Session. Head and Spinal Cord Trauma - Systems approach to management using guidelines; Extracorporeal Life Support Workshop: Venovenous extracorporeal membrane oxygenation - Didactic. 8th World Federation Congress on Pediatric Intensive and Critical Care. Toronto, Ontario, Canada.
- 2016 Jun **Facilitator**. Extracorporeal Life Support Workshop. 8th World Federation Congress on Pediatric Intensive and Critical Care. Toronto, Ontario, Canada.

- 2016 May 19 **Invited Panelist.** 2016 Collaborative Program in Neuroscience (CPIN) Research Day, University of Toronto, Oral Sessions. Ontario, Canada. Judging Oral Presentations. (Trainee Presentation).
- 2016 May 3 **Invited Faculty.** 2016 CanROC Canadian Resuscitation Outcomes Consortium Annual Meeting, Heart and Stroke Foundation of Canada and the Canadian Institutes of Health Research. Toronto, Ontario, Canada.
- 2016 May 2 **Invited Provocateur.** Resuscitation in Motion (RiM) 2016 - Li Ka Shing Knowledge Institute, St. Michael's Hospital, University of Toronto, Faculty of Medicine. Toronto, Ontario, Canada.
- 2016 Feb 23 **Invited Speaker.** Extracorporeal membranous oxygen pediatrics and adult. Canadian Emergency Care Conference 2016. Toronto, Ontario, Canada.

Abstracts

- 2016 Jun 16 QBlct: Quantifying brain injury on computed tomography: a prospective trial. Canadian Critical Care Trials Group (CCCTG), Spring 2016 Scientific Sessions. Presenter(s): **Guerguerian AM.** Toronto, Ontario, Canada.
- 2016 Jun 8 The Brain: Digital measurement of grey-white matter density and functional outcome after pediatric traumatic brain injury. 8th World Congress on Pediatric Intensive and Critical Care. Presenter(s): Ta E, Kulkarni A, Laughlin S, Parshuram C, Schachar R, Hutchison J, **Guerguerian AM.** (Trainee Presentation). Toronto, Ontario, Canada.
- 2016 Jun 7 Extracorporeal Support: The use of electroencephalogram during extracorporeal membrane oxygenation to diagnose and predict brain injury: A systematic review. Presenter(s): de Lama Caro-Paton. Authors: de Lama Caro-Paton G, Laussen P, Honjo O, **Guerguerian AM**, Nickel C. (Trainee Presentation).
- Extracorporeal Support: Outcome of children after a second support of extracorporeal membrane oxygenation. Presenter(s): Dekate P. Authors: Dekate P, Singhal N, **Guerguerian AM**, Honjo O, Humpl T.
- Extracorporeal Support: An approach to the safe mobilization and early rehabilitation of patients on ECLS with mediastinal cannulation using time-out. Presenter(s): Lati J. Authors: Lati J, **Guerguerian AM**, Ames K, Todd M, West R, Katz P.

Extracorporeal Support: The development of a levelling platform for the safe and effective use of an interventional lung assist membrane oxygenator. Presenter(s): Lati J, **Guerguerian AM**, Niles E, Granger C, Todd M.

Extracorporeal Support: ECLS follow-up program: Essential support after childhood critical illness. Presenter(s): Dryden-Palmer K, Fazari L, Sananes R, Papaioannou V, **Guerguerian AM**.

8th World Congress on Pediatric Intensive and Critical Care. Toronto, Ontario, Canada.

2016 Jun 6

Critical Care Response Teams / Rapid Response Teams / Resuscitation: Quality improvement of E-CPR process: Deconstructing intervals of care to understand the sources of delays in the initiation of E-CPR. Presenter(s): Katira B. Authors: Katira B, Smith R, Verma N, Todd, M, Gaiteiro R, Kotsakis A, Humpl P, Honjo O, Hickey E, **Guerguerian AM**. (Trainee Presentation). 8th World Congress on Pediatric Intensive and Critical Care. Toronto, Ontario, Canada.

2016 Jun 14

Education / Simulation and Technology / Innovations and Administration: Usability evaluation of critical care monitoring software from three perspectives of team care: physician nurse and respiratory therapist. University of Toronto Interdepartmental Division of Critical Care Medicine - Art Slutsky Day. Presenter(s): Lin YL. Poster Abstract. (Trainee Presentation). Toronto, Ontario, Canada.

DR. TILMAN HUMPL, HOSPITAL FOR SICK CHILDREN

Peer-Reviewed Publications

Journal Articles

1. Buompadre MC, Andres K, Slater LA, Mohseni-Bod H, Guerguerian AM, Branson H, Laughlin S, Armstrong D, Moharir M, DeVeber G, **Humpl T**, Honjo O, Keshavjee S, Ichord R, Pereira V, Dlamini N. Thrombectomy for Acute Stroke in Childhood: A Case Report, Literature Review and Recommendation. *Pediatr Neurol*. 2016 Sep 14. **Coauthor or Collaborator**.
2. Caro-Domínguez P, Compton G, **Humpl T**, Manson DE. Pulmonary arterial hypertension in children: diagnosis using ratio of main pulmonary artery to ascending aorta diameter as determined by multi-detector computed tomography. *Pediatr Radiol*. 2016 Sept;46(10): 1378-83. **Coauthor or Collaborator**.
3. King SK, Alfaraj M, Gaiteiro R, O'Brien K, Moraes T, **Humpl T**, Marcon M, Chiang M, Reyes J, Haliburton B, Ryan G, Cox P, Chiu PP. Congenital diaphragmatic hernia: Observed/expected lung-to-head ratio as a predictor of long-term morbidity. *J Pediatr Surg*. 2016 May 1;51(5):699-702. **Coauthor or Collaborator**.
4. Ploegstra MJ, Ivy DD, Wheeler JG, Brand M, Beghetti M, Rosenzweig EB, **Humpl T**, Iriart X, Rouzic EM, Bonnet D, Berger RM. Growth in children with pulmonary arterial hypertension: a longitudinal retrospective multiregistry study. *Lancet Respir Med*. 2016 Apr 1;4(4):281-90. **Coauthor or Collaborator**.
5. Douwes JM, **Humpl T**, Bonnet D, Beghetti M, Ivy DD, Berger RM, TOPP Investigators. Acute Vasodilator Response in Pediatric Pulmonary Arterial Hypertension: Current Clinical Practice From the TOPP Registry. *J Am Coll Cardiol*. 2016 Mar 22;67(11):1312-23. **Coauthor or Collaborator**.
6. Kinsella JP, Steinhorn RH, Krishnan US, Feinstein JA, Adatia I, Austin ED, Rosenzweig EB, Everett AD, Fineman JR, Hanna BD, Hopper RK, **Humpl T**, Ivy DD, Keller RL, Mullen MP, Raj JU, Wessel DL, Abman SH. Recommendations for the Use of Inhaled Nitric Oxide Therapy in Premature Newborns with Severe Pulmonary Hypertension. *J Pediatr*. 2016 Mar 1;170:312-4. **Coauthor or Collaborator**.
7. Beghetti M, Berger RM, Ivy DD, Bonnet D, **Humpl T**. To “Cath” or Not in Pediatric Pulmonary Hypertension? *J Am Coll Cardiol*. 2016 Mar 1;67(8): 1010-1. **Senior Responsible Author**.

8. Del Cerro MJ, Moledina S, Haworth SG, Ivy D, Al Dabbagh M, Banjar H, Diaz G, Heath-Freudenthal A, Galal AN, **Humpl T**, Kulkarni S, Lopes A, Mocumbi AO, Puri GD, Rossouw B, Harikrishnan S, Saxena A, Udo P, Caicedo L, Tamimi O, Adatia I. Cardiac catheterization in children with pulmonary hypertensive vascular disease: consensus statement from the Pulmonary Vascular Research Institute, Pediatric and Congenital Heart Disease Task Forces. *Pulm Circ*. 2016 Mar 1;6(1):118-25. **Coauthor or Collaborator**.

Letters to Editor

1. Beghetti M, Berger RM, Ivy DD, Bonnet D, **Humpl T**. To “Cath” or Not in Pediatric Pulmonary Hypertension? *J Am Coll Cardiol*. 2016 Mar 1;67(8):1010-1. **Coauthor or Collaborator**.

Invited Lectures and Presentations

National

Abstracts

2016 Jun Quality Improvement of E-CPR process: Deconstructing intervals of care to understand the sources of delays in the initiation of E-CPR. Presenter(s): Katira B. Poster Presentation – Smith R, Verma N, Todd M, Gaiterio R, Kotsakis K, **Humpl T**, Honjo O, Hickey E, Guerguerian AM. (Trainee Presentation).

Outcome of children after a second support of extra corporeal membrane oxygenation. Presenter(s): Dekate P. Poster Presentation – Singhal N, Guerguerian AM, Honjo O, **Humpl T**. (Trainee Presentation).

World Congress Pediatric Intensive Critical Care 2016. Toronto, Ontario, Canada.

DR. JAMIE HUTCHISON, HOSPITAL FOR SICK CHILDREN

Peer-Reviewed Publications

Journal Articles

1. Crichton AJ, Babl F, Oakley E, Greenham M, Hearps S, Delzoppo C, **Hutchison JS**, Beauchamp M, Anderson VA. Prediction of Multidimensional Fatigue After Childhood Brain Injury. *J Head Trauma Rehabil.* 2016 Oct 7. **Coauthor or Collaborator.**
2. Moler FW, **Hutchison JS**, Nadkarni VM, Silverstein FS, Meert KL, Holubkov R, Page K, Slomine BS, Christensen JR, Dean JM, Therapeutic Hypothermia After Pediatric Cardiac Arrest Out-of-Hospital Trial Investigators. Targeted Temperature Management After Pediatric Cardiac Arrest Due To Drowning: Outcomes and Complications. *Pediatr Crit Care Med.* 2016 Aug 1;17(8):712-20. **Coauthor or Collaborator.**
3. Wilkinson AA, Simic N, Frndova H, Taylor MJ, Choong K, Fraser D, Campbell C, Dhanani S, Kuehn S, Beauchamp MH, Farrell C, Anderson V, Guerguerian AM, Dennis M, Schachar R, **Hutchison JS**, Attention and Traumatic Brain Injury Investigators, the Canadian Critical Care Trials Group, and the Canadian Critical Care Translational Biology Group. Serum Biomarkers Help Predict Attention Problems in Critically Ill Children With Traumatic Brain Injury. *Pediatr Crit Care Med.* 2016 May 10. **Senior Responsible Author.**
4. Delaney JW, Pinto R, Long J, Lamontagne F, Adhikari NK, Kumar A, Marshall JC, Cook DJ, Jouvett P, Ferguson ND, Griesdale D, Burry LD, Burns KE, **Hutchison JS**, Mehta S, Menon K, Fowler RA, Canadian Critical Care Trials Group H1N1 Collaborative. The influence of corticosteroid treatment on the outcome of influenza A(H1N1pdm09)-related critical illness. *Crit Care.* 2016 Mar 30;20(1):75. **Coauthor or Collaborator.**
5. McBain KL, Payne ET, Sharma R, Frndova H, Abend NS, Sánchez SM, Gallentine WB, Cornett KM, Nash KB, Snead OC, Parshuram CS, **Hutchison JS**, Hahn CD. Strategies to Maximize Enrollment in a Prospective Study of Comatose Children in the PICU. *Pediatr Crit Care Med.* 2016 Mar 1;17(3):246-50. **Coauthor or Collaborator.**

Comment, Editorials

1. **Hutchison J.** Research in Pediatric Intensive Care. *Pediatr Crit Care Med.* 2016 Jan 1;17(1):97. **Principal Author.**

Peer-Reviewed Grants

Funded

- 2015 Dec-2019 Nov **Principal Investigator.** Canadian Traumatic Brain Injury Research Consortium (CTRC). Canadian Institutes of Health Research (CIHR). Team Grant. 1,999,513 CAD. [Grants]
- 2015 Jul-2018 Jun **Principal Investigator.** A national biobank and database for patients with traumatic brain injury. Brain Canada. Brain Canada Technology and Platform Application. Collaborator(s): Baker A, Barlow K, Clarke D, Esser M, Green R, Lacroix J, Ptito A, Walley K. 3,000,000 CAD. [Grants]
- 2015 Jan-2019 Dec **Co-Investigator.** The Canadian Critical Care Trials Group. Canadian Institutes of Health Research (CIHR). PI: Burns K. Collaborator(s): Choong K, Cook D, Fowler R, Gilfoyle E, Lamontagne F, Marshall J, McIntyre L, Meade M, Muscadere J, Seely, A, Sinuff T, Turgeon A, Hall R, Herridge M, Tucci M. 3,744,942 CAD. [Grants]
- 2014 Oct-2018 Sep **Co-Investigator.** Quantifying brain injury on computed tomography in hospitalized children: a prospective trial. Canadian Institutes of Health Research (CIHR). Open operating grant. PI: Guerguerian AM. 600,000 CAD. [Grants]
- 2013 Jul-2018 Jun **Co-Investigator.** +Approaches and decisions for Acute pediatric TBI (ADAPT). National Institutes of Health (NIH). PI: Bell M. 16,147,544 CAD. [Grants]
- 2013 Jan-2018 Mar **Site Investigator.** ABC PICU Study - Age of Blood in Children in Pediatric Intensive Care Units Inclusion - Exclusion Criteria. Canadian Institutes of Health Research (CIHR) PI: Tucci M [Grants]
- 2010 Jan-2016 Dec **Co-Investigator.** From Bench to Bedside to Curbside. Clinical Research Consortium to improve Resuscitation Outcomes. Heart and Stroke Foundation of Canada (HSFC). PI: Morrison L. 15,000,000 CAD. [Grants]
- 2009 Jan-2016 Dec **Co-Investigator.** From Bench to Bedside to Curbside. Clinical Research Consortium to improve Resuscitation Outcomes. Canadian Institutes of Health Research (CIHR). PI: Morrison L. 1,057,000 CAD. [Grants]

Invited Lectures and Presentations

International

2016 Apr 22 **Invited Speaker.** Concussion in children and youth: What you need to know and the pediatric trauma patient: State-of-the-art care. Neonatal & Pediatric Cruise Conference. Saint Maarten (Dutch Part).

2016 Apr 19 **Keynote Speaker.** Birth asphyxia and pediatric cardiac arrest: What's the good news?; What's new in birth trauma and traumatic brain injury management? Neonatal & Pediatric Cruise Conference. Saint Maarten (Dutch Part).

National

2016 Jun 6 **Chair.** Parallel Session: Neuro Session 1: Head and Spinal Cord Trauma.

Invited Speaker. Severe TBI Inflicted Injury.

8th World Congress on Pediatric Intensive and Critical Care (PICC).
Toronto, Ontario, Canada.

Abstracts

2016 Jun 6 Children's psychological and behavioural responses following PICU hospitalization: The caring intensively study. Presenter(s): Rennick J, Dryden-Palmer K, **Hutchison J**, et al. 8th World Congress on Pediatric Intensive and Critical Care. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. T Yoshida, D Engelberts, G Otulakowski, B Katira, M Post, ND Ferguson, L Brochard, MBP Amato, **BP Kavanagh**. Continuous Abdominal Negative Pressure: Recruitment by a different Mechanism than Positive Pressure. 2016. **Senior Responsible Author**.
2. BH Katira, RE Giesinger, D Engelberts, D Zabini, A Kornecki, G Otulakowski, T Yoshida, WM Kuebler, PJ McNamara, **BP Kavanagh**. Lung Injury in the Classic Study by Webb and Tierney is Largely due to Heart Failure. 2016. **Senior Responsible Author**.
3. M Cereda, Y Xin, H Hamedani, G Bellani, S Kadlecsek, J Clapp, L Guerra, N Meeder, J Rajaei, NJ Tustison, JC Gee, **BP Kavanagh**, RR Rizi. Unstable Inflation on Computed Tomography Predicts Progression in Experimental ARDS. 2016. **Coauthor or Collaborator**.
4. JG Laffey, **BP Kavanagh**. Does this Patient have ARDS? – A Potentially Life-Saving Question. 2016. **Senior Responsible Author**.
5. JG Laffey, **BP Kavanagh**. Insight into ARDS – From Models to Patients. **Senior Responsible Author**.
6. C McCaul, **BP Kavanagh**. Lethal and sublethal hypoxaemia – The consequences of failed airway management (Review). Br J Anaesthesia. **Senior Responsible Author**.
7. G Otulakowski, D Engelberts, H Arima, H Hirate, H Bayir, M Post, **BP Kavanagh**. α -Tocopherol transfer protein mediates protective hypercapnia in ventilator-induced lung injury. Thorax. 2016. **Senior Responsible Author**.
8. T Yoshida, S Nakahashi, M Aparecida, M Nakamura, Y Koyama, R Roldan, V Torsani, RR DeSantis, S Gomes, A Uchiyama, MBP Amato, **BP Kavanagh**, Y Fujino. Volume Controlled Ventilation does not Prevent Injurious Inflation during Spontaneous Effort. Am J Respir Crit Care Med. 2016. **Coauthor or Collaborator**.
9. T Yoshida, Y Fusion, MBP Amato, **BP Kavanagh**. Spontaneous breathing during mechanical ventilation – risks, mechanisms & management. Am J Respir Crit Care Med. 2016. **Senior Responsible Author**.

10. T Yoshida, R Roldan, MA Beraldo, V Torsani, S Gomes, RR DeSantis, ELV Costa, MR Tucci, RG Lima, **BP Kavanagh**, MBP Amato. Spontaneous effort during mechanical ventilation – maximal injury with less PEEP. *Critical Care Medicine*. 44:e678-88. 2016. **Coauthor or Collaborator**.
11. M Cereda, Y Xin, H Hamedani, J. Clapp, S Kadlecsek, N Meeder, J Zeng, H Profka, **BP Kavanagh**, R Rizi. Mild loss of lung aeration augments stretch in healthy lung regions. *J Appl Physiol*. 120:444-54. 2016. **Coauthor or Collaborator**.
12. E Siu, P Tenenbein, **BP Kavanagh**. Job shortages in anesthesia: a pro or con? *Can J Anaesth*. 63:529-36. 2016. **Senior Responsible Author**.
13. T Yoshida, JF Boylan, **BP Kavanagh**. What do we treat when we treat ARDS? *Intensive Care Medicine*. 42:284-6. 2016. **Senior Responsible Author**.
14. **BP Kavanagh**, M Nurok. Standardized intensive care – protocol misalignment and impact misattribution. *Am J Respir Crit Care Med*. 193:17-22. 2016. **Principal Author**.
15. M Cereda, Y Xin, N Meeder, J Zeng, Y Jiang, H Hamedani, H Profka, S Kadlecsek, J Clapp, CG Deshpande, J Wu, JC Gee, **BP Kavanagh**, RR Rizi. Visualizing the propagation of acute lung injury. *Anesthesiology*. 124:121-31. 2016. **Coauthor or Collaborator**.

Book Chapters

1. **BP Kavanagh**, JG Laffey. Hypercapnia in the Critically Ill. *Oxford Textbook of Critical Care (2nd Edition)* Editors: A Webb, D Angus, S Finfer, L Gattinoni & M Singer. Oxford University Press, 2016, pp 394-398.
2. G Curley, **BP Kavanagh**, JG Laffey. Hypocapnia and Hypercapnia. *Murray and Nadel's Textbook of Respiratory Medicine (6th Edition)* Editors: VC Broaddus, RJ Mason, JD Ernst, TE King Jr, SC Lazarus, JF Murray, JA Nadel, AS Slutsky & MB Gotway. Saunders-Elsevier, Philadelphia, 2016, Vol 2, pp 1527-1546.

Peer-Reviewed Grants

Funded

- 2015-2017 **Co-Investigator**. Diaphragm Activity and Function During Mechanical Ventilation. Ontario Thoracic Society. PI(s): Ferguson N, Goligher E. 100,000 CAD. [Grants]
- 2015-2017 **Co-Investigator**. Physiology of Negative Pressure Ventilation. Canadian Institutes of Health Research (CIHR). PI: Yoshida T. 100,000 CAD. [Grants]

- 2014-2019 **Principal Applicant.** Ventilator-Induced Lung Injury: Linking gene activation, physiology and outcome. Canadian Institutes of Health Research (CIHR) Collaborator(s): Post M, Santyr G, Amato M. 718,000 CAD. [Operating Grant]
- 2013- 2018 **Co-Investigator.** Linking Ventilator-induced diaphragm Dysfunction and Weaning Failure to Diaphragm Inactivity During Mechanical Ventilation: A Physiological Clinical Research Program. Canadian Institutes of Health Research (CIHR). PI: Goligher E. 275,000 CAD. [Grants]

Invited Lectures and Presentations

International

- 2016 Nov **Invited Speaker.** Evidence based practices in HFV, NO and ECMO; What do we do to the lungs when we ventilate them?; Hypercapnia: From bench to bedside.
- Panelist.** How Do I Recruit the Lungs?
- National Conference on Pediatric Critical Care. Mumbai, India.
- 2016 Oct **Invited Speaker.** ARDS: Have we really made a difference? American Society of Anesthesiologists (ASA). Chicago, USA.
- 2016 Jul **Invited Speaker.** Can CO2 protect in critical care? 38th Annual Meeting of the Japanese Society of Respiratory Care Medicine. Nagoya, Japan.
- 2016 Jun **Invited Speaker.** Critical Care Update for the Anesthesiologist. Canadian Anesthesiologists Society. Vancouver, British Columbia, Canada.
- 2016 May **Keynote Speaker.** ARDS, Mechanisms and Professional Societies. American Thoracic Society International Conference, San Francisco, USA.
- 2016 May **Invited Speaker.** Guidelines and Protocols.
- Co-Moderator.** Celebration of the Science of Anesthesiology Symposium: Protective Lung Ventilation in the Operating Room International Anesthesia Research Society (IARS) & International Science Symposium.
- San Francisco, California, USA.

- 2016 May **Invited Speaker.** Protocols in Professional Practice – Prospects and Pitfalls. The 15th Gordon Jackson Rees Lecture. Association of Paediatric Anaesthetists of Great Britain and Ireland (APAGBI) Annual Scientific Meeting. Belfast, UK.
- 2016 Apr **Invited Speaker.** CO2 in Critical Care. Beth Israel Deaconess Medical Center. Boston, USA.
- 2016 Apr **Invited Speaker.** Guidelines in anesthesia practice. 41st Annual Regional Anesthesiology and Acute Pain Medicine Meeting (ASRA). New Orleans, USA.
- 2016 Mar **Invited Speaker.** How CO2 may both protect and harm; Protocols and guidelines: Misaligned and misattributed; Molecular mechanisms; A place for negative pressure ventilation?; Although children are less susceptible to lung injury. 36th International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium.
- 2016 Mar **Invited Speaker.** How do ventilators injure lungs; What's the evidence for evidence-based medicine. NEICS Spring Meeting. Darlington, UK.
- 2016 Jan **Invited Speaker.** Perspectives on protocols; How CO2 may help in ICU Cedars-Sinai Medical Center. Los Angeles, California, USA.

National

- 2016 Oct **Invited Speaker.** Protocols – Alignment and Attribution; Spontaneous Ventilation – Risks/Benefits.
- Co-Moderator.** Opening Plenary; ARDS – Basics; Plenary Session: The Brian Death Concept – History and Controversies.
- Critical Care Canada Forum. Toronto, Ontario, Canada.
- 2016 Jun **Invited Speaker.** Mentorship – An essential foundation for success; TRALI and other complications; ARDS: Wet or Dry?
- Co-Chair.** Modes, Strategies and Targets of Mechanical Ventilation in Various Settings; Late Breakers.
- 8th World Congress on Pediatric Intensive and Critical Care. Toronto, Ontario, Canada.

DR. ROXANNE KIRSCH, HOSPITAL FOR SICK CHILDREN

Peer Reviewed Publications

Journal Articles

1. Rossano JW, Hoffman TM, Jefferies JL, Lorts A, **Kirsch RE**, Thiagarajan RR. Clinical Issues and Controversies in Heart Failure and Transplantation. World Journal for Pediatric and Congenital Heart Surgery. Jan 2016, Vol. 7;(1): 63-71. **Coauthor or Collaborator.**
2. Misfeldt AM, **Kirsch RE**, Goldberg DJ, Mascio CE, Naim MY, Zhang X, Mott AR, Ravishankar C, Rossano JW. Outcomes of Single Ventricle Patients Supported with ECMO. PCCM. 2016 March; 17(3):194-202. 2016 Jan 16. **Coauthor or Collaborator.**

Abstracts

1. Lin J, Dlugos D, Donnelly M, Ichord R, Kilbaugh T, **Kirsch RE**, Kirschen M, Licht DJ, Massey SL, Naim MY, Rintoul NE, Topjian A, Abend NS. Electrographic seizures in children undergoing ECMO. American Clinical Neurophysiology Society. 2016. **Co-Author.**

Invited Lectures and Presentations

International

- 2016 Dec 10 **Moderator.** What are the Ethical Implications of Offering Therapy in the Face of Likely 'Poor Outcome'? Special Session 2 – Ethics – The Burdens of Offering. (Panel with an Intensivist, Surgeon, RN, Cardiologist), PCICS 12th Annual International Meeting. Miami Beach, Florida, USA.
- 2016 Jun 17 **Invited Speaker.** Is Everyone an ECMO Candidate? Ethical Practices Can It Be Too Expensive to Survive? ASAIO – Science, Medicine & Industry Innovating for the Future, 62nd Annual Conference. San Francisco, California, USA.

2016 Mar 2-3 **Invited Speaker.** The Difficult Patient: Ethical Issues in ECLS – Crestone / Red Cloud.

Panelist. Cultural Differences in ECLS. 32nd Annual CNMC Symposium: ECMO & the Advanced Therapies.

Keystone, Colorado, USA.

2016 Feb 24 **Invited Speaker.** Early Postoperative Management.

Moderator. When Is Care Futile?

19th Annual Update on Pediatric and Congenital Cardiovascular Disease.

Lowes Royal Pacific Resort. Orlando, USA.

Provincial

2016 Mar 8-13 **Invited Speaker.** Helping Families Prepare for the Worst while Hoping for the Best: Palliative Care in VAD and Transplant. Alberta Transplant Institute, ATI Seminar Series, Edmonton, Alberta.

National

2016 Oct 31 **Invited Speaker.** ICU Care is not a Buffet: Problems with Shared Decision Making.

Moderator. End of Life – Decisions and Support.

Critical Care Canada Forum. Toronto, Ontario, Canada.

2016 Jun 7-8 **Invited Speaker.** Ethical Practices Can It Be Too Expensive to Survive? Parallel Session: Palliative Care and End of Life.

Invited Speaker. Novel Approaches to Ethics Education: Educating the Multiprofessional Team to Reduce Moral Distress. Ethics and Moral Distress Session 2: Moral Distress & Ethics Education.

Panel. How to Prepare for Difficult Conversations. Sunrise Session.

8th World Congress on Pediatric Intensive and Critical Care. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. Haller C, Zhao L, Parker R, Saedi A, Kato A, **Kotsakis A**, Mertens L, Guerguerian AM, Honjo O. Ventricular Functional Recovery and Neurologic Function after In-hospital Cardiac Arrest in Pediatric Patients. 2016 Jun 6. **Coauthor or Collaborator**.
2. **Kotsakis A**, Stevens D, Frndova H, Neal R, Williamson G, Mohseni-Bod H, Parshuram CS. A Description of Paediatric Intensive Care Unit Unplanned Readmission. *Pediatric Critical Care Medicine*. 2016 Jun;17(6):558-62. **Principal Author**.
3. Mema B, Park YS, **Kotsakis A**. Validity and Feasibility Evidence of Objective Structured Clinical Examination to Assess Competencies of Pediatric Critical Care Trainees. *Critical Care Medicine*. 2016 May;44(5):948-53. **Senior Responsible Author**.

Books

1. Yanchar N, Lopushinsky S, Mehta S, Beno S, Bishop J, Brody D, Bhanji F, Barton G, **Kotsakis A**, Lalani A, Clark M, Kontio K, Al-Harhi F, Dhanani S, Lévy A, Tse S, Alnaji F. TRIK Trauma Care Providers Guide 1st, Edition. The Royal College of Physicians and Surgeons of Canada. **Coauthor or Collaborator**.

Book Chapters

1. Levy A, **Kotsakis A**, Varshney, T Allain, D. Mannequin Based Simulators. In: The Comprehensive Textbook of Healthcare Simulation: Paediatric Edition. USA. Springer. **Coauthor or Collaborator**.

DR. PETER LAUSSEN, HOSPITAL FOR SICK CHILDREN

Peer-Reviewed Publications

Journal Articles

1. Checchia PA, **Laussen PC**, Macrae D, Bohn D, Cheng AC, Wessel DL. Pediatric Cardiac Intensive Care: A Transition to Maturity. *Pediatric Critical Care Medicine*. 2016 Aug;17(8 Suppl 1):S110-1. **Coauthor or Collaborator**.
2. Eytan D, Pang EW, Doesburg SM, Nenadovic V, Gavrilovic B, **Laussen P**, Guerguerian AM. Bedside functional brain imaging in critically-ill children using high-density EEG source modelling and multi-modal sensory stimulation. *NeuroImage Clin*. 2016 Jul;12:198-211. **Coauthor or Collaborator**.
3. **Laussen PC**. Modes and causes of death in pediatric cardiac intensive care: digging deeper. *Pediatric Critical Care Medicine*. 2016 May;17(5):461-2. **Principal Author**.
4. Raymond TT, Bonafide CP, Praestgaard A, Nadkarni VM, Berg RA, Parshuram CS, Hunt EA; American Heart Association's Get With The Guidelines-Resuscitation Investigators. Pediatric medical emergency team events and outcomes: a report of 3647 events from the American Heart Association's Get With The Guidelines - Resuscitation Registry. *Hosp Pediatr*. 2016 Feb;6(2):57-64. **Coauthor or Collaborator**.
5. Lasa JJ, Rogers RS, Localio R, Shults J, Raymond T, Gaies M, Thiagarajan R, **Laussen PC**, Kilbaugh T, Berg RA, Nadkarni V, Topjian A. Extracorporeal cardiopulmonary resuscitation (E-CPR) rescue during pediatric in-hospital cardiopulmonary arrest is associated with improved survival to discharge: a report from the American Heart Association's Get With the Guidelines-Resuscitation Registry (GWTG-R). *Circulation*. 2016 Feb;133(2):165-76. **Coauthor or Collaborator**.
6. Cheng HH, Carmona F, McDavitt E, Wigmore D, Perez-Rossello JM, Gordon CM, Pigula FA, **Laussen PC**, Rajagopal SK. Fractures related to metabolic bone disease in children with congenital heart disease. *Congenital Heart Disease*. 2016 Jan;11(1):80-6. **Coauthor or Collaborator**.
7. Eytan D, Goodwin A, **Laussen PC**, Guerguerian AM. Insights from multi-dimensional physiological signals to predict and prevent cardiac arrests. *Pediatric Critical Care Medicine*. 2016 Jan;17(1):81-2. **Coauthor or Collaborator**.

8. Schwartz SM, Floh AA, **Laussen PC**. Pharmacological Manipulation of peripheral vascular resistance in singleventricle patients (stages I, II and III of palliation). *Curr Vasc Pharmacol*. 2016 Jan;14(1):58-62. **Coauthor or Collaborator**.

Book Chapters

1. Cassidy J, **Laussen PC**. Congenital cardiac disease and cardiac surgery - postoperative care. In: *Oxford Textbook of Paediatric Intensive and Critical Care*. Ali T, Argent A, Barry P, Hon E, Morris K, Rimensberger P, Singhi S, Yung M, editor(s). Oxford University Press; 2016. *In Press*. **Senior Responsible Author**.

Peer-Reviewed Grants

Funded

- 2015 Jul-2017 Jun **Principal Applicant**. Validating a hemodynamic early warning system in pediatric critical care. University of Toronto. Department of Anesthesia Merit Award. 60,000 CAD. [Grants]
- 2015 Apr-2017 Mar **Principal Site Investigator**. Risk Assessment Using Noninvasive Measurements in Postoperative Pediatric Patients. NIH - National Heart, Lung, and Blood Institute. Small Business Innovation Research Program. 2,000,000 USD. [Grants]

Invited Lectures and Presentations

International

- 2016 Dec 13 **Invited Speaker**. "Making Sense of Monitors and Devices: Utilizing Physiologic Data". First International Multidisciplinary Symposium on Artificial Intelligence in Medicine (AIMed). Laguna Beach, California, USA.
- 2016 Oct 21 **Keynote Speaker**. "Recent Advances in the CVICU". 4th Annual Rene Arcilla Symposium on Pediatric Cardiology and Cardiovascular Surgery. Oak Lawn, Illinois, USA.
- 2016 Sep 13 **Keynote Speaker**. "National View on Why Harm Repeats". Child Health Patient Safety Organization's Annual Meeting. Orlando, Florida, USA.

- 2016 Mar 4 **Invited Speaker.** Human work-arounds: The illegal normal; Fast cars and fast lessons; Panel discussion and Q&A. Patient Safety & Quality Symposium 2016: Hardwiring for High Reliability. St. Louis, Missouri, USA.
- 2016 Jan 9 **Invited Speaker.** Five on Five Session: Future of Medical Intelligence; Five on Five Session: Applications in Pediatrics Pediatrics 2040: Trends and Innovations for the Next 25 Years. Dana Point, California, USA.

Professional Educational Media Presentations

- 2016 **Invited Speaker.** “Two Decades of Managing Myocarditis” (online video). OPENPediatrics. Boston, Massachusetts, USA.
Available from:
<https://www.openpediatrics.org/assets/video/two-decadesmanaging-myocarditis>. (Continuing Education).

Abstracts

- 2016 Dec 13 Functional brain imaging in critically ill children at the bedside by combining high density EEG recordings, source modeling and multi-modal sensory stimulation. First International Multidisciplinary Symposium on Artificial Intelligence in Medicine (AIMed). Presenter(s): Eytan D, Pang EW, Doesburg S, Nenadovic V, Guerguerian AM, **Laussen PC.**
- Effective quality metrics for physiological data. First International Multidisciplinary Symposium on Artificial Intelligence in Medicine (AIMed). Presenter(s): Goodwin A, Greer R, Thommandram A, Eytan D, **Laussen PC.**
- Solving storage: A system for cost-effective permanent storage and high-speed processing of physiological data signals. First International Multidisciplinary Symposium on Artificial Intelligence in Medicine (AIMed). Presenter(s): Greer R, Goodwin A, Thommandram A, Eytan D, **Laussen PC.**
- Generation and management of annotation datasets for automated classification of time-series data using machine learning. First International Multidisciplinary Symposium on Artificial Intelligence in Medicine (AIMed). Presenter(s): Thommandram A, Goodwin A, Greer R, Eytan D, **Laussen PC.**
- Laguna Beach, California, USA.

2016 Nov 15 Genes associated with inotrope requirements in children undergoing tetralogy of Fallot repair (oral presentation). American Heart Association Scientific Sessions. Presenter(s): Lee S, Manickaraj AK, Lu D, Yao R, Chan Seng Yue M, Laussen PC, Schwartz S, Mital S. New Orleans, USA.

National

2016 Oct 31 **Session Moderator.** Restarting and Supporting the Heart. Critical Care Canada Forum 2016. Toronto, Ontario, Canada.

2016 Jun 29 **Invited Speaker.** Big Data, Big Potential. Critical Care Services Ontario (CCSO): Critical Care Response Team Conference. Toronto, Ontario, Canada.

2016 Jun 4-6 **Chair.** Big Data in Critical Care; Redesigning Systems and Structures for Optimal Delivery of Critical Care; Risky Business/Critical Care. 8th World Congress on Pediatric Intensive and Critical Care. Toronto, Ontario, Canada.

2016 Jan 20 **Invited Speaker.** Dept of Pediatrics Grand Rounds: "Two Decades of Treating Myocarditis". Children's Hospital of Eastern Ontario & University of Ottawa. Ottawa, Ontario, Canada.

Honours and Awards

2016 Jun Leader's Circle Ambassador Award (co-chairing successful 2016 World Congress on Pediatric Intensive & Critical Care), Leaders Circle. (Distinction)

DR. BRISEIDA MEMA, HOSPITAL FOR SICK CHILDREN

Peer-Reviewed Publication

Journal Articles

1. **Mema B**, Park YS, Kotsakis A. Validity and Feasibility Evidence of Objective Structured Clinical Examination to Assess Competencies of Pediatric Critical Care Trainees. *Critical Care Medicine*. 2016 May;44(5):948-53. **Principal Author.**

Peer-Reviewed Grants

2014 Feb-2017 Feb **Collaborator.** RESPECT: a tool to improve patient care quality and safety & facilitate team learning. Canadian Institutes of Health Research (CIHR). Catalyst Grant: eHealth Innovations. PI: Parshuran C. Collaborator(s): Dryden-Palmer V, Tijssen N. \$90,821 CAD. [Grants]

DR. MICHAEL-ALICE MOGA, HOSPITAL FOR SICK CHILDREN

Peer-Reviewed Publications

Abstracts

1. DiPietro, LM, DeSena Ho, Graham E, Sasaki J, **Moga MA**, Prodhan P, Goldstein S, Gaies M, Cooper DS. Central venous catheter utilization and complications in the Pediatric Cardiac Intensive Care Unit – A report from the Pediatric Cardiac Critical Care Consortium (PC4). Poster-The Pediatric Cardiac Intensive Care Society 12 the Annual International Meeting, Miami, USA. Dec 2016
2. **Moga MA**, Seligman E, Frey G, Kwon K, Wald E. Continuous quality review of ICU CPR events: Performance, outcomes and effect of systems level changes. Poster-American Heart Association (AHA) Scientific Sessions, New Orleans, USA. Nov 2016.
3. McBride ME, Aronson Schinasi DD, **Moga MA**, Calhoun AW. The Death of the pediatric patient: A robust theoretical framework for simulations. Poster-Midwest Society for Pediatric Research, Chicago, IL. 2016.
4. McBride ME, Aronson Schinasi DD, **Moga MA**, Calhoun AW. The Death of the pediatric patient: A robust theoretical framework for simulations. Poster-Pediatric Emergency Medicine Israel, Tel Aviv, Israel. 2016.

Invited Lectures and Presentations

International

2016

Invited Speaker. How we can help ourselves: Decision-making biases and fatigue. Pediatric Cardiac Intensive Care Society Annual Meeting. Miami, Florida, USA.

National

2016 Oct 30-Nov 2

Invited Speaker. Resuscitation-Improvement beyond the ABCs.

Moderator. Science of Quality Critical Care.

Canada Forum. Toronto, Ontario, Canada.

2016 **Invited Speaker.** Family of Risk-Sibling Rivalry. Risky Business Critical Care. Toronto, Ontario, Canada.

Local

2016 Dec 1 **Invited Speaker.** Help! My baby is blue, troubleshooting the cyanotic newborn. Cardiac Anaesthesia Seminar. The Hospital for Sick Children. Toronto, Ontario, Canada.

2016 Nov 30 **Invited Speaker.** Continuous Quality Improvement in Resuscitation. Cardiology Program Teaching. The Hospital for Sick Children. Toronto, Ontario, Canada.

2016 Oct 5 **Invited Speaker.** Critical Care Fellows Training Program – ECMO Simulation Day. The Hospital for Sick Children. Toronto, Ontario, Canada.

2016 Aug 9 **Invited Speaker.** Venovenus and Venoarterial Membrane Oxygenation. Critical Care Medicine Fellows Teaching. The Hospital for Sick Children. Toronto, Ontario, Canada.

2016 Jul 12 **Invited Speaker.** Basic Cardiology. Critical Care Medicine Fellows Teaching. The Hospital for Sick Children. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. **Parshuram CS.** Intensive Care Unit Physician Discretion in Pediatric Critical Care. Polarized, Evaluated, and Reframed. *Am J Respir Crit Care Med.* 2016 Dec 15;194(12):1443-1444. **Principal Author.**
2. Slater MB, Gruneir A, Rochon PA, Howard AW, Koren G, **Parshuram CS.** Identifying High-Risk Medications Associated with Acute Kidney Injury in Critically Ill Patients: A Pharmacoepidemiologic Evaluation. *Paediatr Drugs.* 2016 Dec 9. **Senior Responsible Author.**
3. Slater MB, Gruneir A, Rochon PA, Howard AW, Koren G, **Parshuram CS.** Risk Factors of Acute Kidney Injury in Critically Ill Children. *Pediatr Crit Care Med.* 2016 Sep 1;17(9):e391-8. **Senior Responsible Author.**
4. Sutton RM, French B, Meaney PA, Topjian AA, **Parshuram CS,** Edelson DP, Schexnayder S, Abella BS, Merchant RM, Bembea M, Berg RA, Nadkarni VM, American Heart Association's Get With The Guidelines–Resuscitation Investigators. Physiologic monitoring of CPR quality during adult cardiac arrest: A propensity-matched cohort study. *Resuscitation.* 2016 Jun 24;106:76-82. **Coauthor or Collaborator.**
5. Kotsakis A, Stevens D, Frndova H, Neal R, Williamson G, Mohseni-Bod H, **Parshuram CS.** Description of PICU Unplanned Readmission. *Pediatr Crit Care Med.* 2016 Jun 1;17(6):558-62. **Senior Responsible Author.**
6. Slater MB, Gruneir A, Rochon PA, Howard AW, Koren G, **Parshuram CS.** Risk factors of acute kidney injury in critically ill children. *Pediatric Critical Care Medicine.* 2016 Apr. In Press. **Senior Responsible Author.**
7. McBain KL, Payne ET, Sharma R, Frndova H, Abend NS, Sánchez SM, Gallentine WB, Cornett KM, Nash KB, Snead OC, **Parshuram CS,** Hutchison JS, Hahn CD. Strategies to Maximize Enrollment in a Prospective Study of Comatose Children in the PICU. *Pediatr Crit Care Med.* 2016 Mar 1;17(3):246-50. **Coauthor or Collaborator.**

8. Mouzaki M, Schwartz SM, Mtaweh H, La Rotta G, Mah K, Herridge J, Van Arsdell G, **Parshuram CS**, Floh AA. Can Vco2-Based Estimates of Resting Energy Expenditure Replace the Need for Indirect Calorimetry in Critically Ill Children? JPEN J Parenter Enteral Nutr. 2016 Feb 10. **Coauthor or Collaborator**.
9. Raymond TT, Bonafide CP, Praestgaard A, Nadkarni VM, Berg RA, **Parshuram CS**, Hunt EA. American Heart Association Get With the Guidelines-Resuscitation Investigators. Pediatric Medical Emergency Team Events and Outcomes: A Report of 3647 Events From the American Heart Association's Get With the Guidelines-Resuscitation Registry. Hosp Pediatr. 2016 Jan 1. **Coauthor or Collaborator**.

Editorials

1. **Parshuram, CS**. ICU-physician Discretion in Pediatric Critical Care: Polarized, Evaluated and Re-framed. American Journal of Respiratory And Critical Care Medicine. 2016 Jul 6. In Press. **Principal Author**.

Peer-Reviewed Grants

Funded

- | | |
|-------------------|--|
| 2016 Jul-2017 Jun | Principal Applicant . InCURS: Intensive Care Unit Residents Scheduling Study. Canadian Institutes of Health Research (CIHR). Collaborator(s): Piquette D, Stelfox T, Willam A, Amaral A, Walsh. C.100,000 CAD. [Grants] |
| 2014 Sep-2018 Aug | Collaborator . Quantifying brain injury on computed tomography in hospitalized children: a prospective trial. Canadian Institutes of Health Research (CIHR). Open operating grant. PI: Guerguerian AM. Collaborator(s): Kulkarni A, Hutchison J, Laughlin S, Raybaud C, Bigler E. 976,825 CAD. [Grants] |
| 2014 Feb-2017 Mar | Principal Applicant . RESPECT: a tool to improve patient care quality and safety & facilitate team learning. Canadian Institutes of Health Research (CIHR). Collaborator(s): Mema B, Nadkarni V, Tijssen J. 90,821 CAD. [Grants] |

Non-Peer Reviewed Grants

Funded

2012-2016 **Principal Applicant.** End of Life Research Funding. RDV Foundation. Unrestricted grant for RDV Foundation. 150,000 CAD. [Grants]

Invited Lectures and Presentations

International

2016 Feb 22 **Invited Speaker.** BedsidePEWS. Queen Fabiola Children's University Hospital. Brussels, Belgium.

National

2016 Dec 13 **Invited Speaker.** BedsidePEWS Presentation. Kingston General Hospital, Grand Rounds. Kingston, Ontario, Canada.

2016 Jun 29 **Invited Speaker.** TBC. Critical Care Response Team Conference. Toronto, Ontario, Canada.

2016 Jun 22 **Invited Speaker.** BedsidePEWS. McMaster Children's Hospital. Hamilton, Ontario, Canada.

2016 Jun 7 **Chair.** Parallel Session: The Deteriorating Child.

Invited Speaker. Where are we up to with rapid response systems?

8th World Congress on Pediatric Intensive and Critical Care. Toronto, Ontario, Canada.

2016 Apr 20 **Invited Speaker.** Bedside Paediatric Early Warning System (PEWS). Education Session. Co-Speaker(s): Middaugh K. Markham Stouffville Hospital. Markham, Ontario, Canada.

Abstracts

- 2016 Jun 8 **Supervisor.** Complex Health Care Implementation: Description and evaluation of implementation factors and knowledge translation outcomes. Canadian Critical Care Trial Group (CCCTG) Resident's Day. Presenter(s): Dryden-Palmer K. (Trainee Presentation). Toronto, Ontario, Canada.
- 2016 Jun 6 **Principal Supervisor.** Moral distress in paediatric and neonatal intensive care practitioners - a cross sectional evaluation. 8th World Congress on Pediatric Intensive and Critical Care. Presenter(s): Larson C, Dryden-Palmer K. Toronto, Ontario, Canada.

Posters

- 2016 Jun 6 **Principal Supervisor.** Risk factors of acute kidney injury in critically ill children.
- Principal Supervisor.** Nephrotoxic medication exposure in critically ill children: A nested case-control study.
- 8th World Congress on Pediatric Intensive and Critical Care. Toronto, Ontario, Canada.

DR. STEVEN SCHWARTZ, HOSPITAL FOR SICK CHILDREN

Peer-Reviewed Publications

Journal Articles

1. Hickey E, Pham-Hung E, Nosikova Y, Halvorsen F, Gritti M, **Schwartz S**, Caldarone CA, Van Arsdell G. NASA Model of "Threat and Error" in Pediatric Cardiac Surgery: Patterns of Error Chains. *Ann Thorac Surg*. 2016 Dec 9. **Coauthor or Collaborator**.
2. **Schwartz SM**. Are ketones a window on the risk attributable to hyperglycemia after pediatric heart surgery? *Pediatr Crit Care Med* 2016 Sept;17(9): 889-90. **Principal Author**.
3. Friedberg MK, **Schwartz SM**, Zhang H, Chiu-Man C, Manlhiot C, Ilina MV, Van Arsdell G, Kirsh JA, McCrindle BW, Stephenson A. Hemodynamic effects of Post-operative Cardiac Resynchronization Therapy in Infants Following Repair of Congenital Heart Disease: Results of a Randomized Clinical Trial. *Heart Rhythm*. 2016 Sept 26. **Coauthor or Collaborator**.
4. Soto-Rivera CL, **Schwartz SM**, Sawyer JE, Macrae DJ, Agus MS. Endocrinologic Diseases in Pediatric Cardiac Intensive Care. *Pediatr Crit Care Med*. 2016 Aug 1;17(8 Suppl 1):S296-301. **Coauthor or Collaborator**.
5. Floh AA, Slicker J, **Schwartz SM**. Nutrition and Mesenteric Issues in Pediatric Cardiac Critical Care. *Pediatr Crit Care Med*. 2016 Aug 1;17(8 Suppl 1):S243-9. **Senior Responsible Author**.
6. **Schwartz SM**. Can an automated early warning system derived from continuous physiologic monitoring prevent disaster? *J Thorac Cardiovasc Surg*. 2016 Jul;152(1):3-4. **Principal Author**.
7. Pasquali SK, Jacobs JP, Farber GK, Bertoch D, Blume ED, Burns KM, Campbell R, Chang AC, Chung WK, Riehle-Colarusso T, Curtis LH, Forrest CB, Gaynor WJ, Gaies MG, Go AS, Henchey P, Martin GR, Pearson G, Pemberton VL, **Schwartz SM**, Vincent R, Kaltman JR. Report of the National Heart, Lung, and Blood Institute Working Group: An Integrated Network for Congenital Heart Disease Research. *Circulation*. 2016 Apr 5;133(14):1410-8. **Coauthor or Collaborator**.
8. Mertens LL, **Schwartz SM**. Sedation Practices in Pediatric Cardiac ICUs After Cardiopulmonary Bypass. *Pediatr Crit Care Med*. 2016 Apr 1;17(4):369-70. **Senior Responsible Author**.

9. Wertaschnigg D, Manlhiot C, Jaeggi M, Seed M, Dragulescu A, **Schwartz SM**, van Arsdell G, Jaeggi ET. Contemporary Outcomes and Factors Associated With Mortality After a Fetal or Neonatal Diagnosis of Ebstein Anomaly and Tricuspid Valve Disease. *Can J Cardiol*. 2016 Mar 22. **Coauthor or Collaborator**.
10. Tume SC, **Schwartz SM**, Bronicki RA. Pediatric Cardiac Intensive Care Society 2014 Consensus Statement: Pharmacotherapies in Cardiac Critical Care Treatment of Acute Heart Failure. *Pediatr Crit Care Med*. 2016 Mar 1;17(3 Suppl 1):S16-9. **Coauthor or Collaborator**.
11. Jean-St-Michel E, Chetan D, **Schwartz SM**, Van Arsdell G, Floh A, Honjo O, Conway J. Outcomes in Patients with Persistent Ventricular Dysfunction After Stage 1 Palliation for Hypoplastic Left Heart Syndrome. *Pediatric Cardiology*. 2016 Feb 22;37(2):239-47. **Coauthor or Collaborator**.
12. Mouzaki M, **Schwartz SM**, Mtaweh H, La Rotta G, Mah K, Herridge J, Van Arsdell G, Parshuram CS, Floh AA. Can Vco₂-Based Estimates of Resting Energy Expenditure Replace the Need for Indirect Calorimetry in Critically Ill Children? *JPEN J Parenter Enteral Nutr*. 2016 Feb 10. **Coauthor or Collaborator**.
13. Manlhiot C, Brandão LR, **Schwartz SM**, Sivarajan VB, Williams S, Collins TH, McCrindle BW. Management and Outcomes of Patients with Occlusive Thrombosis after Pediatric Cardiac Surgery. *J Pediatr*. 2016 Feb 1;169:146-53. **Coauthor or Collaborator**.
14. **Schwartz SM**, Floh AA, Laussen PC. Pharmacological Manipulation of Peripheral Vascular Resistance in Single-Ventricle Patients (Stages I, II, and III of Palliation). *Curr Vasc Pharmacol*. 2016 Jan 1;14(1):58-62. **Principal Author**.

Book Chapters

1. Floh A, Slicker J, **Schwartz S**. Nutrition and Mesenteric Issues. In: *Pediatric Cardiac Critical Care*. 2016.

Peer-Reviewed Grants

Funded

- 2015 - 2021 **Co-Investigator**. Cardiovascular Physiology and Brain Development in Newborns with Congenital Heart Disease. Canadian Institutes of Health Research (CIHR). PI: Miller S, Seed M. Collaborator(s): Blaser SI, Brant RF, Chau V, Hickey EJ, Kingdom JC, Ly LG, MacGowan CK, Sled JG. 1,008,289 CAD. [Grants]

Invited Lectures and Presentations

International

2016 Oct **Invited Speaker** Pediatric Cardiac ECMO; Physiology of ECMO; Inotropes after congenital heart surgery: Science and Practice; Cardiopulmonary and Mechanical ventilation considerations in Cardiac ICU.

Invited Moderator Critical Case Scenarios. Pediatric Cardiac Society of India. Bangalore, India.

Pediatric Cardiac Society of India. Bangalore, India.

2016 Jul **Invited Speaker.** Care of the Neonate with Heart Disease. Tianjin Medical Union of Neonate Congenital Heart Disease; Initiation and Signing Ceremony. Tianjin, China.

National

2016 Sep **Invited Speaker.** Managing Cardio-renal Issues in Heart Failure. Toronto Pediatric Heart Failure Summit. Toronto, Ontario, Canada.

2016 Jun 6 **Invited Speaker.** Neonatal Heart Disease.

Chair. Neonatal Heart Disease.

World Congress Pediatric Intensive Critical Care. Toronto, Ontario, Canada.

DR. MICHAEL DETSKY, SINAI HEALTH SYSTEM

Peer-Reviewed Publications

Journal Articles

1. Maley JH, Brewster I, Mayoral I, Siruckova R, Adams S, McGraw KA, Piech AA, **Detsky M**, Mikkelsen ME. Resilience in Survivors of Critical Illness in the Context of the Survivors' Experience and Recovery. *Annals of American Thoracic Society*. 2016 Aug 13;13(8):1351-60. **Coauthor or Collaborator**.

Non-Peer Reviewed Publications

Case Reports

1. **Michael E Detsky**. Lost in signout and documentation. April, 2016. Agency for healthcare research and quality; 2016 Apr. Available from: <https://psnet.ahrq.gov/webmm/case/371/lost-in-sign-out-anddocumentation>. Accepted / In Press. **Principal Author**.

Peer-Reviewed Grants

Funded

2016 Jan-2019 Dec **Consultant**. Prognosticating Outcomes and Nudging Decisions with Electronic Records in the ICU. Donaghue Foundation. PI: Scott Halpern. Collaborators: Courtright K, Singh J. 600,000 USD. [Grants].

Non-Peer Reviewed Grants

Funded

2016 Jul-2021 Jun **Co-Investigator**. Bacteremia Antibiotic Length Actually Needed for Clinical Effectiveness (BALANCE): A Randomized Controlled Clinical Trial. CIHR, Project Grant . PI: Daneman N, Fowler R. 2,010,635 CAD [Grants].

Invited Lectures and Presentations

International

2016 Jan 19 **Invited Speaker.** Optimization of decision planning in the ICU; Predicting patient centered outcomes: The PCOP study. Douglas White, Pittsburgh, Pennsylvania, USA.

Local

2016 May 4 **Invited Lecturer.** Predicting Patient Centred Outcomes in the Critically Ill: The PCOP study. UHN/MSH Department of Medicine. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. Martin-Loeches I, Bos LD, **Goligher EC**. Will all ARDS patients be receiving mechanical ventilation in 2035? *Pro. Intensive Care Med* 2016; August 11. **Coauthor or Collaborator**.
2. Beitler JR, **Goligher EC**, Schmidt M, Spieth PM, Zanella A, Martin-Loeches I, Calfee CS, Cavalcanti AB; ARDSne(x)t Investigators. Personalized medicine for ARDS: the 2035 research agenda. *Intensive Care Med*. 2016 May;42(5):756-67. **Coauthor or Collaborator**.
3. Hodgson C, **Goligher EC**, Young ME, Keating JL, Holland AE, Romero L, Bradley SJ, Tuxen D. *Cochrane Database Syst Rev*. 2016;11:CD006667. **Coauthor or Collaborator**.
4. Sklar MC, Burns K, Rittayamai N, Lanys A, Rauseo M, Chen L, Dres M, Chen GQ, **Goligher EC**, Adhikari NKJ, Brochard LJ, Friedrich JO. Effort to Breathe with Various Spontaneous Breathing Trial Techniques: A Physiological Meta-Analysis. *Am J Respir Crit Care Med*. 2016. **Coauthor or Collaborator**.
5. Kobylanski J, Murray A, Brace D, **Goligher EC**, Fan E. Electrical Impedance Tomography in Adult Patients Undergoing Mechanical Ventilation: A Systematic Review. *J Crit Care*. 2016;35:33-50. **Coauthor or Collaborator**.
6. **Goligher EC**, Ely WE, Sulmasy DP, Bakker J, Raphael J, Volandes AE, Patel BM, Payne K, Hosie A, Churchill L, White DB, Downar J. Physician-Assisted Suicide and Euthanasia in the Intensive Care Unit: A Dialogue on the Core Ethical Issues. *Crit Care Med*. 2016. **Principal Author**.
7. Mauri T, Yoshida T, Bellani G, **Goligher EC**, Carteaux G, Rittayamai N, Mojoli F, Chiumello D, Piquilloud L, Grasso S, Jubran A, Laghi F, Magder S, Pesenti A, Loring S, Gattinoni L, Talmor D, Blanch L, Amato M, Chen L, Brochard L, Mancebo J; PLeUral pressure working Group (PLUG—Acute Respiratory Failure section of the European Society of Intensive Care Medicine). Esophageal and transpulmonary pressure in the clinical setting: meaning, usefulness and perspectives. *Intensive Care Med*. 2016; 42(9):1360-73. **Coauthor or Collaborator**.

8. Sferrazza Papa GF, Pellegrino GM, Di Marco F, Imeri G, Brochard L, **Goligher EC**, Centanni S. A Review of the Ultrasound Assessment of Diaphragmatic Function in Clinical Practice. *Respiration*. 2016;91(5):403-11. **Coauthor or Collaborator**.
9. **Goligher EC**, Ferguson ND, Brochard LJ. Clinical Challenges in Mechanical Ventilation. *Lancet*. 2016;387:1856-1866. **Principal Author**.
10. Bellani G, Laffey JG, Pham T, Fan E, Brochard L, Esteban A, Gattinoni L, van Haren F, Larsson A, McAuley DF, Ranieri M, Rubenfeld G, Thompson BT, Wrigge H, Slutsky AS, Pesenti A; LUNG SAFE Investigators; ESICM Trials Group. Epidemiology, Patterns of Care, and Mortality for Patients With Acute Respiratory Distress Syndrome in Intensive Care Units in 50 Countries. *JAMA*. 2016;315(8):788-800. **Coauthor or Collaborator**.

Letters to the Editor

1. **Goligher EC**, Del Sorbo L, Liao L, Easson A, Cheung AM, Alibhai SMH, Halpern J, Ely EW, Sulmasy DP, Hwang SW. Why Conscientious Objection Merits Respect. *CMAJ* 2016. **Coauthor or Collaborator**.
2. Chen L, Sklar M, Dres M, **Goligher EC**. Different Definitions of Lung Recruitment by Computed Tomography Scan. *Am J Respir Crit Care Med*. 2016;193(11):1314-5. **Senior Responsible Author**.

Monographs

1. Diaphragm Activity and Function During Mechanical Ventilation. Doctoral Thesis, University of Toronto. April 2016.

Peer-Reviewed Grants

Funded

- | | |
|------|---|
| 2016 | Principal Investigator. Rehabilitation Aimed at Muscle Performance. Canadian Foundation for Innovation. \$194,716 CAD. [Grants] |
| 2016 | Co-Investigator: Diaphragm Activity and Function During Mechanical Ventilation: the MYOTRAUMA Study. Ontario Thoracic Society/Canadian Lung Association. PI: Reid, Darlene. \$48,316 CAD. [Operating Grants] |

Invited Lectures and Presentations

International

- 2016 Oct 2 **Invited Speaker.** Why Personalize Ventilation? Insights from clinical studies. ESICM LIVES 2016, Milan, Italy.
- 2016 May 27 **Invited Speaker.** Patient-ventilator interaction: diaphragm thickness monitoring; Should we tailor PEEP to physiological targets?; PEEP: Challenging the Experts' Opinions; Point of Care Ultrasound: the Diaphragm. SMART Conference 2016. Milan, Italy.

Oral Presentations

- 2016 Oct 2 **Invited Speaker.** Are Changes in Diaphragm Thickness during Mechanical Ventilation Associated with Clinical Outcomes? A Prospective Multi-Centre Cohort Study. European Society of Intensive Care Medicine Annual Scientific Meeting. Intensive Care Med Exp. 2016;4(Suppl 1):30. Milan, Italy.

Provincial

- 2016 Feb 5 **Invited Speaker.** Ventilator-Induced Diaphragm Dysfunction: Physiological Mechanisms and Clinical Impact. Centre for Heart Lung Innovation, St. Paul's Hospital, Vancouver, British Columbia, Canada.

National

- 2016 Nov 2 **Invited Speaker.** Assessing and Managing the Difficult-to-Wean Ventilated Patient; I Like to Move It – Diaphragmatic Ultrasound: Take a (Deep) Breath. Critical Care Canada Forum. Toronto, Ontario, Canada.

Local

- 2016 Dec 9 **Invited Speaker.** Ventilator-Induced Diaphragm Dysfunction: Mechanisms and Impact. Anesthesia Rounds, University Health Network. Toronto, Ontario, Canada.
- 2016 Nov 30 **Invited Speaker.** To Breathe or Not to Breathe: Is there Really Any Question? Medical Grand Rounds, Sinai Health System & University Health Network. Toronto, Ontario, Canada.

Abstracts

- 2016 Nov Assessing the Physiological Response to PEEP in Acute Hypoxemic Respiratory Failure: Proposed Structured Clinical Intervention Using Electrical Impedance Tomography. Presenter(s): Lee M, Campbell V, Chiam HT, Ko M, Ferguson ND, Lapinsky S, **Goligher E**, Fan E.
- 2016 Nov Diaphragm Echogenicity in Mechanically Ventilated Patients: Measurement Precision and Preliminary Findings. Presenter(s): Riegler S, Lee M, Voronna S, Dres M, Vieira L, **Goligher E**, Reid D, Brochard LJ, Ferguson ND.
- 2016 Nov Changes in Diaphragm Thickness and Clinical Outcomes During Mechanical Ventilation. Presenter(s): Sklar MC, Dres M, Fan E, Herridge M, Vorona S, Rittayamai N, Lanys A, Brace D, Urrea C, Tomlinson G, Scales DC, Reid D, Rubenfeld GD, Kavanagh BP, **Goligher E**, Brochard LJ, Ferguson ND.
- Critical Care Canada Forum (CCCCF). Toronto, Ontario, Canada.
- 2016 May Diaphragm Inactivity and Eccentric Contractile Activity Are Common and Impair Diaphragm Function During Mechanical Ventilation. Am J Respir Crit Care Med 2016;193:A7642. Presenter(s): Urrea C, Brochard LJ, Dres M, Sinderby C, Bolz SS, Rubenfeld GD, Kavanagh BP, **Goligher E**, Ferguson ND.
- 2016 May Technique and Validity of Sniff Airway Pressure and Sniff Diaphragm Thickening to Assess Diaphragm Function. Am J Respir Crit Care Med 2016;193:A6366. Presenter(s): Vorona SL, Urrea C, Lanys A, Ferguson ND, Brochard LJ, **Goligher E**.
- American Thoracic Society Scientific Meeting. San Francisco, California, USA.

Peer-Reviewed Publications

Journal Articles

1. Endocarditis Presenting as Peripartum Thrombotic Thrombocytopenic Purpura. J Obstet Gynaecol Can. 2016;38(11):1028-1032. **Senior Responsible Author.**
2. Clark E, Kumar A, Langote A, **Lapinsky S**, Dodek P, Kramer A, Wood G, Bagshaw SM, Wood K, Gurka D, Sood MM; Cooperative Antimicrobial Therapy of Septic Shock Database Research Group. Septic shock in chronic dialysis patients: clinical characteristics, antimicrobial therapy and mortality. Intensive Care Med. 2016;42:222-32. **Coauthor or Collaborator.**

Non-Peer Reviewed Publications

Journal Articles

1. Banerjee D, **Lapinsky SE**. Thromboembolic risk in transgender women. Chest Physician 2016; 11(3):59. **Senior Responsible Author.**
2. **Lapinsky SE**. Cardiopulmonary complications in pregnancy. International Journal of Intensive Care. Principal Author.
3. Fan E, Golan E, **Lapinsky SE**. Recruitment maneuvers in acute lung injury and acute respiratory distress syndrome. International Respiratory Care Clinics and Technology. **Senior Responsible Author.**

Peer-Reviewed Grants

Funded

- 2015 Apr-2019 March **Co-Investigator.** Standard versus accelerated initiation of renal replacement therapy in acute kidney injury. CIHR Industry-partnered collaborative research. PI: Wald R. 1,104,971 CAD. [Grants].

Invited Lectures and Presentations

International

- 2016 July **Invited Speaker.** Critical illness in Pregnancy; Critical patients' long term outcomes. Israeli Society of Critical Care Medicine Annual Meeting. Herzliya, Israel.
- 2016 July **Invited Speaker.** Intubation in the ICU. Meir Hospital Rounds. Kfar Saba, Israel.

Provincial

- 2016 Oct **Invited Speaker.** Cystic fibrosis in pregnancy. SARS in Toronto; Critical illness in Pregnancy North American Society for Obstetric Medicine. Montreal, Quebec.

National

- 2016 Nov **Invited Speaker.** Care of the critically ill pregnant patient. Critical Care Canada Forum. Toronto, Ontario, Canada.

DR. CHRISTIE LEE, SINAI HEALTH SYSTEM

Peer-Reviewed Publications

Journal Articles

1. Herridge MS, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, Dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, **Lee CM**, Wilcox ME, Ayas N, Choong K, Fowler R, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hebert P, Slutsky AS, Marshall JC, Cook D, Cameron JI; RECOVER Program Investigators (Phase 1: towards RECOVER) and the Canadian Critical Care Trials Group. The RECOVER Program: Disability Risk Groups & One Year Outcome after ≥ 7 Days of Mechanical Ventilation. *American Journal of Respiratory and Critical Care Medicine*. 2016 Oct 1;194(7). **Coauthor or Collaborator**.
2. Downar J, McNaughton N, Abdelhalim T, Wong N, Lapointe-Shaw L, Seccareccia D, Miller K, Dev S, Ridley J, **Lee CM**, Richardson L, McDonald-Blumer H, Knickle K. Standardized patient simulation versus didactic teaching alone for improving residents' communication skills when discussing goals of care and resuscitation: A randomized controlled trial. *Palliative Medicine*. 2016 Jun 15(June 16). **Coauthor or Collaborator**.
3. Cameron J, Chu L, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich J, Mehta S, , Lamontagne F, Levasseur M, Ferguson N, Adhikari N, Rudkowski J, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, dos Santos C, Abbey S, Tan,A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, **Lee CM**, Wilcox E, Ayas N, Choong K, Fowler R, Scales D Sinuff T, Cuthbertson B, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S. One-Year Outcomes in Caregivers of Critically Ill Patients. *N Engl J Med*. 2016 May 12;374:1831. **Coauthor or Collaborator**.

Peer-Reviewed Grants

Funded

- 2016 Jul-2017 Jun **Co-Principal Investigator.** Management of Pain, agitation and delirium in neutrauma patients: a cohort study. Respirology Petit Block Grant. PI: Burry L. 10,000 CAD. [Grants]
- 2015 Feb-2016 Jan **Co-Investigator.** Situating education in patient care: exploring how residents navigate learning opportunities for central venous catheter insertion skills. Department of Medicine, Faculty of Medicine, University of Toronto. Department of Medicine Education Research & Scholarship Grant. PI: Brydges R. Collaborator(s): Mylopoulos M, Goffi A. 11,250 CAD. [Grants]

Invited Lectures and Presentations

National

- 2016 Oct 25 **Invited Speaker.** Social Media and Medical Education. Education Scholars Program, Center for Faculty Development. Toronto, Ontario, Canada.
- 2016 Jun 14 **Chair.** Education Session. Art Slutsky Day. Toronto, Ontario, Canada.
- 2016 Apr 22 **Invited Speaker.** Shock and Sepsis in the Wild. Faculty Development for RN and RRT.CCRT training day with Hawryluck C, Ma P. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. Del Sorbo L, Vendramin A, **Mehta S**. High flow oxygen therapy for acute hypoxemic respiratory failure in adult critically ill patients. *Minerva Anesthesiol*. 2016 Dec 1. **Senior Responsible Author**.
2. Rose L, Dale C, Smith OM, Burry L, Enright G, Fergusson D, Sinha S, Wiesenfeld L, Sinuff T, **Mehta S**. A mixed-methods systematic review protocol to examine the use of physical restraint with critically ill adults and strategies for minimizing their use. *Syst Rev*. 2016 Nov 21;5(1):194. **Senior Responsible Author**.
3. Williamson DR, Frenette AJ, Burry L, Perreault MM, Charbonney E, Lamontagne F, Potvin M, Giguère J, **Mehta S**, Bernard F. Pharmacological interventions for agitation in patients with traumatic brain injury: Protocol for a systematic review and meta-analysis. *Systematic Reviews*. 2016 Nov 21;5:193. **Coauthor or Collaborator**.
4. Ouellette DR, Patel S, Girard TD, Morris PE, Schmidt GA, Truwit JD, Al-Hazzani, Burns S, Epstein S, Esteban A, Fan E, Ferrer M, Fraser GL, Gong M, Hough C, **Mehta S**, Nanchal R, Pawlik A, Schweickert W, Sessler CN, Strøm T, Kress JP. Liberation from Mechanical Ventilation: An Official American Thoracic Society / American College of Chest Physicians Clinical Practice Guideline. Spontaneous Breathing Trials, Protocols Minimizing Sedation, and Non-invasive Ventilation immediately after Extubation. *Chest*. 2016 Nov 3; (16):62324-3. pii: S0012-3692. **Coauthor or Collaborator**.
5. Burns KE, Jacob SK, Aguirre V, Gomes J, **Mehta S**, Rizvi L. Stakeholder Engagement in Trial Design: Survey of Visitors to Critically Ill Patients Regarding Preferences for Outcomes and Treatment Options during Weaning from Mechanical Ventilation. *Ann Am Thorac Soc*. 2016 Nov;13(11):1962-1968. **Coauthor or Collaborator**.
6. Girard TD, Al-Hazzani W, Kress JP, Ouellette DR, Schmidt GA, Truwit JD, Burns SM, Epstein S, Esteban A, Fan E, Ferrer M, Fraser GL, Gong M, Hough C, **Mehta S**, Nanchal R, Patel S, Pawlik A, Sessler CN, Strøm T, Schweickert W, Wilson KC, Morris PE. An Official American Thoracic Society/American College of Chest Physicians Clinical Practice Guideline: Liberation from Mechanical Ventilation in Critically Ill Adults. Rehabilitation Protocols, Ventilator Liberation Protocols, and Cuff Leak Tests. *Am J Respir Crit Care Med*. 2016 Oct 20. **Coauthor or Collaborator**.

7. Schmidt GA, Girard TD, Kress JP, Morris PE, Ouellette DR, Al-Hazzani W, Burns SM, Epstein S, Esteban A, Fan E, Ferrer M, Fraser GL, Gong M, Hough C, **Mehta S**, Nanchal R, Patel S, Pawlik A, Sessler CN, Strøm T, Schweickert W, Wilson KC and Truwit JD. Liberation from Mechanical Ventilation: Executive Summary of an Official American Thoracic Society / American College of Chest Physicians Clinical Practice Guideline. *Am J Respir Crit Care Med*. 2016 Oct 20. **Coauthor or Collaborator**.
8. Herridge MS, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, **Mehta S**, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NKJ, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, Rubenfeld GD, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow C, Keshavjee S, Brochard L, Hebert P, Slutsky AS, Marshall JC, Cook D, Cameron JI for the RECOVER Program Investigators (Phase 1: towards RECOVER) and the Canadian Critical Care Trials Group. The RECOVER Program: One-Year Disability in Critically Ill Patients Mechanically Ventilated (MV) for 7 Days. *Am J Respir Crit Care Med*. 2016 Oct 1;194(7):831-844. **Coauthor or Collaborator**.
9. Ball IM, Dodek PM, Turgeon AF, Burns KEA, Bagshaw SM, Kutsogiannis DJ, Day AG, Muscedere JG, **Mehta S**, Cook DJ, Wells GA, Stelfox HT, Stiell IG. A clinical prediction tool for hospital mortality in critically ill elderly patients. *J Critical Care*. 2016 Oct;35:206-12. **Coauthor or Collaborator**.
10. Hutton B, Burry LD, Kanji S, **Mehta S**, Guenette M, Martin CM, Fergusson DA, Adhikari NK, Egerod I, Williamson D, Straus S, Moher D, Ely EW, Rose L. Comparison of sedation strategies for critically ill patients: a protocol for a systematic review incorporating network meta-analyses. *Syst Rev*. 2016 Sep 20;5(1):157. **Coauthor or Collaborator**.
11. Burry L, Hutton B, Guenette M, Williamson D, **Mehta S**, Egerod I, Kanji S, Adhikari N, Moher D, Martin C, Rose L. Comparison of pharmacological and non-pharmacological interventions to prevent delirium in critically ill patients: A protocol for a systematic review incorporating network meta-analyses. *Syst Rev*. 2016 Sep 8;5(1):153. **Coauthor or Collaborator**.
12. Arabi YM, Aldawood AS, Al-Dorzi HM, Tamim HM, Haddad SH, Jones G, McIntyre L, Solaiman O, Sakkijha MH, Sadat M, Afesh L, Kumar A, Bagshaw SM, **Mehta S**, for the PermiT trial group. Permissive underfeeding or standard enteral feeding in high and low nutritional risk critically ill adults. *Am J Respir Crit Care Med*. 2016 Sep 2. **Senior Responsible Author**.

13. Cook DJ, Johnstone J, Marshall JC, Lauzier F, Thabane L, **Mehta S**, Dodek PM, McIntyre L, Pagliarello G, Henderson W, Taylor R, Cartin-Ceba R, Golan E, Herridge M, Wood G, Ovakim D, Karachi T, Surette MG, Bowdish DME, Lamarche D, Verschoor C, Duan E, Heels-Ansdell D, Meade M, For the PROSPECT Investigators and the Canadian Critical Care Trials Group. Probiotics: Prevention of Severe Pneumonia and Endotracheal Colonization Trial - PROSPECT: A Pilot Trial. *Trials*. 2016 Aug 2;17:377. **Coauthor or Collaborator.**
14. **Mehta S**, Meade M, Burry L, Mallick R, Katsios C, Fergusson D, Dodek P, Burns K, Herridge M, Devlin JW, Tanios M, Fowler R, Jacka M, Skrobik Y, Olafson K, and Cook DJ, for the SLEAP Investigators and the Canadian Critical Care Trials Group. Variation in diurnal sedation in mechanically ventilated patients managed with a sedation protocol or a sedation protocol and daily interruption. *Critical Care*. 2016 Aug 1;20(233). **Principal Author.**
15. Li G, Cook DJ, Thabane L, Friedrich JO, Crozier TM, Muscedere J, Granton J, **Mehta S**, Reynolds SC, Lopes RD, Lauzier F, Freitag AP, Levine MAH, the PROTECT Investigators for the Canadian Critical Care Trials Group, and the Australian and New Zealand Intensive Care Society Clinical Trials. Risk factors for mortality in patients admitted to intensive care units with pneumonia. *Respir Res*. 2016 Jul 11;17(1):80. **Coauthor or Collaborator.**
16. Cameron JI, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, **Mehta S**, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NKJ, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, Rubinfeld GD, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow C, Keshavjee S, Brochard L, Hebert P, Slutsky AS, Marshall JC, Cook D, Herridge MS for the RECOVER Program Investigators (Phase 1: towards RECOVER) and the Canadian Critical Care Trials Group. The RECOVER Program: One-Year Outcomes in Caregivers of Critically Ill Patients Mechanically Ventilated for 7 Days. *N Engl J Med*. 2016 May 12;374(19):1831-1841. **Coauthor or Collaborator.**
17. Oddo M, Crippa I, **Mehta S**, Menon D, Payen J, Taccone FS, Citerio G. Optimising sedation inpatients with acute brain injury. *Crit Care*. 2016 May 5;20(1):128. **Coauthor or Collaborator.**
18. Bein T, Grasso S, Moerer O, Quintel M, Guerin C, Deja M, Brondani A, **Mehta S**. The standard of care of patients with ARDS: ventilatory settings and rescue therapies for refractory hypoxemia. *Intensive Care Med*. 2016 May;42(5):699-711. **Senior Responsible Author.**

19. Rittayamai N, Wilcox E, Drouot X, **Mehta S**, Goffi A, Brochard L. Positive and negative effects of mechanical ventilation on sleep in the ICU. A review with clinical recommendations. *Intensive Care Med.* 2016 Apr;42(4):531-41. **Coauthor or Collaborator.**
20. Delaney JW, Pinto R, Long J, Lamontagne F, Adhikari NK, Kumar A, Marshall JC, Cook DJ, Jouvet P, Ferguson ND, Griesdale D, Burry LD, Burns KEA, Hutchison J, **Mehta S**, Menon K, Fowler RA. The influence of corticosteroid treatment on the outcome of Influenza A (H1N1pdm09)-related critical illness. *Crit Care.* 2016 Mar 30;20(75). **Coauthor or Collaborator.**
21. Bellani G, Laffey JG, Pham T, Fan E, Brochard L, Esteban A, Gattinoni L, van Haren F, Larsson A, McAuley DF, Ranieri M, Rubenfeld G, Thompson BT, Wrigge H, Slutsky AS, Pesenti A; LUNG SAFE Investigators; ESICM Trials Group. Epidemiology, patterns of care, and mortality for patients with Acute Respiratory Distress Syndrome in Intensive Care Units in 50 Countries. *JAMA.* 2016 Feb;315(8):788-800. **Coauthor or Collaborator.**
22. Butty Z, Gopwani J, **Mehta S**, Margolin E. Horner's Syndrome in patients admitted to the Intensive Care Unit that have undergone central venous catheterization: a prospective study. *Eye (Lond).* 2016 Jan;30(1):31-3. doi: 10.1038/eye.2015.181 (Epub ahead of print). **Coauthor or Collaborator.**
23. Smith OM, Dale C, **Mehta S**, Pinto R, Rose L. Nurse attitudes to the conduct of critical care research: a questionnaire study. *Crit Care Med.* 2016 Jan;44(1):153-61. **Coauthor or Collaborator.**
24. Rose L, Burry L, Mallick R, Luk E, Cook DJ, Fergusson D, Dodek P, Burns K, Granton J, Ferguson N, Devlin JW, Steinberg M, Keenan S, Reynolds S, Tanios M, Fowler RA, Jacka M, Olafson K, Skrobik Y, **Mehta S**. Prevalence, risk factors and outcomes associated with physical restraint use in mechanically ventilated adults. *J Crit Care.* 2016 Jan;31:31-35. **Senior Responsible Author.**
25. Wheeler KE, Cook DJ, **Mehta S**, Calce A, Guenette M, Perreault MM, Thiboutot Z, Duffett M, Burry L. Use of Probiotics to Prevent Ventilator-Associated Pneumonia: A Survey of Pharmacists' Attitudes. *J Crit Care.* 2016 Jan;31:221-226. **Coauthor or Collaborator.**
26. Kraguljac AP, Croucher D, Christian M, Ibrahimova N, Kumar V, Jacobs G, Kiss A, Minden MD, **Mehta S**. Outcomes of patients with acute leukemia admitted to the intensive care unit. *Can Respir J.* 2016. Article ID 3027656. **Senior Responsible Author.**

27. Arabi Y, Alsolamy S, Al-Dawood A, Al-Omari A, Al-Hameed F, Burns KEA, Almaani M, Al Bshabshe A, **Mehta S**, Al-Aithan AM, Mandourah Y, Mekhlafi G, Finfer S, Abdukahil S, Afesh L, Dbsawy M, Sadat M. Study Protocol: Thromboprophylaxis Using Combined Intermittent Pneumatic Compression and Pharmacologic Prophylaxis Versus Pharmacologic Prophylaxis Alone in Critically Ill Patients: A Multicenter Randomized Controlled Trial. *Trials*. 2016;17:390-398. **Coauthor or Collaborator**.
28. Rose L, Burns KEA, Dodek P, Mallick R, Cook DJ, Burry LD, Meade M, Fergusson D, **Mehta S**, for the Canadian Critical Care Trials Group. Spontaneous breathing trials in patients managed with a sedation protocol or a sedation protocol with daily interruption. *Anaesth Critic Care Med J*. 2016;1(2):00110.
<https://medwinpublishers.com/ACCMJ/ACCMJ16000111.pdf>. **Senior Responsible Author**.
29. Ball IM, Bagshaw S, Burns K, Cook D, Day A, Dodek P, Kutsogiannis J, **Mehta S**, Muscedere J, Stelfox T, Turgeon A, Wells G, Stiell I. Hospital outcomes of very elderly critically ill medical and surgical patients: A Multi-Center Prospective Cohort Study. *Can J Anaesthesia*. 2016. **Coauthor or Collaborator**.

Abstracts

1. Shears M, Clarke F, Mehta S, Dodek P, Giacomini B, Alcuaz V, O'Brien J, Krause C, Taylor R, Meade L, Liedl L, Cartin-Ceba R, Foster D, Henderson B, Jakab M, Shah S, Smith O, Lee Y, Lee J, Marshall J, McDonald E, Karachi T, Zytaruk N, Cook D for the Inter-Prob Investigators, PROSPECT Investigators and the CCCTG. Inter-Prob:INTERviewing substitute decision makers about PROBiotics. *Crit Care Med*. 2016 Jan;43(12 (Suppl)):462. **Coauthor or Collaborator**.
2. DeBacker JW, Tamberg E, O'Neill L, Munshi L, Burry L, Fan E, **Mehta S**. Sedation and analgesia practice in extra-corporeal membrane oxygenation (ECMO) - treated patients with acute respiratory distress syndrome (ARDS): a retrospective study. *Critical Care*.2016;20(Suppl 2):P260. **Senior Responsible Author**.
3. Bell C, Liu J, Debacker J, Tamberg E, Campbell V, Lee C, **Mehta S**. Noninvasive ventilation in patients with haematologic malignancy: a retrospective review. *Critical Care*. 2016;20(Suppl 2):P234. **Senior Responsible Author**.
4. Merman E, Chu L, Robles P, Tomlinson G, Thomas C, Burns S, Matte A, RECOVER site PIs, Cameron J, Herridge MS in collaboration with the Canadian Critical Care Trials Group. Discordant determinants of functional disability compared to mortality outcomes in the RECOVER program cohort. *Am J Respir Crit Care Med*. 2016;193:A1166. **Coauthor or Collaborator**.

5. Parotto M, Tomlinson G, Tansey CM, Matte A, Robles P, **Mehta S**, Guest C, Mazer D, Slutsky A, Cook D, Cheung A, Herridge M and the Canadian Critical Care Trials Group. Risk stratification of the Toronto ARDS cohort using RECOVER Program disability groups. *Am J Respir Crit Care Med*. 2016;193:A1847. **Coauthor or Collaborator**.
6. Burns KEA, Jacob SK, Aguirre VA, Gomes J, **Mehta S**, Rizvi L. Citizens' views regarding important outcomes and treatment options during weaning from mechanical ventilation. *Am J Respir Crit Care Med*. 2016;193:A7601. **Coauthor or Collaborator**.

Non-Peer Reviewed Publications

Letters to Editor

1. Rose L, **Mehta S**. Reply to letter to editor titled "Physical restraint in mechanically ventilated adults: A complex early diagnosis by protocols? *J Crit Care*. 2016 May 27. **Senior Responsible Author**.
2. Arabi YM, Al-Dorzi HM, McIntyre L, **Mehta S**. Design of nutrition trials in critically ill patients: Food for thought. Response to letter to the editor. *Ann Transl Med*. 2016 May;4(9):186. **Senior Responsible Author**.

Clinical Care Guidelines

1. Murray MJ, DeBlock H, Erstad B, Gray A, Jacobi J, Jordan C, McGee W, McManus C, Meade M, Nix S, Patterson A, Sands MK, Pino R, Tescher A, Arbour R, Rochweg B, Murray CF, **Mehta S**. Clinical practice guidelines for sustained neuromuscular blockade in the adult critically ill patient. 2016. *Critical Care Medicine* 2016: 44(11): 2079-2103. **Co-Principal Author**.

Peer-Reviewed Grants

Funded

- | | |
|--------------|---|
| 2014-present | Co-Investigator . LibeRation from MEchanical VEntilAtion and ScrEening Frequency Trial: The RELEASE Trial. Ontario Thoracic Society, Grant-In-Aid. PI: Burns K. 50,000 CAD. [Grants] |
| 2014-present | Co-Investigator . Screening elderly patients for inclusion in a weaning trial: the SENIOR trial. Technology Evaluation in the Elderly, 2013 Catalyst Research. PI: Burns K. 99,894 CAD. [Grants] |
| 2014-present | Co-Investigator . Frequency of Screening And SBT Technique Trial: The FAST Trial. CIHR Operating Grant. PI: Burns K. 212,067.6 CAD. [Grants] |

- 2016 Jul-2019 Jul **Co-Investigator.** PROSPECT: Probiotics to Prevent Severe Pneumonia and Endotracheal Colonization Trial. Canadian Institutes of Health Research (CIHR). PI: Johnstone J. 1,272,893 CAD. [Grants]
- 2016 Jun-2017 May **Senior Investigator.** Management of pain, agitation, and delirium in critically ill patients with traumatic brain injury: a prospective cohort study. Godfrey S Pettit Division of Respiriology Block Term Grant. PI: Lee C. 10,000 CAD. [Grants]
- 2016 Apr-2019 Mar **Co-Investigator.** PROSPECT: Probiotics: Prevention of Severe Pneumonia and Endotracheal Colonization Trial. Physicians' Services Incorporated. PI: Cook D. 250,000 CAD. [Grants]
- 2016 Jan-2017 Dec **Co-Investigator.** Sedation and delirium in the ICU: network meta-analyses. CIHR Knowledge Synthesis Grant. PI: Burry L. 90,000 CAD. [Grants]
- 2016 Jan-2016 Jul **Supervisor.** Sedation and analgesia practice in extra-corporeal membrane oxygenation (ECMO) - treated patients with acute respiratory distress syndrome (ARDS): a retrospective study. Mount Sinai Hospital Department of Medicine Studentship Awards Program. 2,500 CAD. [Grants]
- 2015 Dec-2016 Nov **Principal Investigator.** Sedation & mobilization during venovenous extracorporeal membrane oxygenation (VV-ECMO) for acute respiratory failure: an international survey. Physicians' Services Incorporated Foundation Resident Research Grant competition. Collaborators: Marhong J. 19,500 CAD. [Grants]
- 2015 Oct-2016 Sep **Co-Investigator.** The RECOVER Program: A Patient- and Family-Centred international practice standard for follow-up care after critical illness and National ICU-outcomes educational program. University of Toronto Department of Medicine Integrating Challenge Grant. PI: Herridge, M. 200,000 CAD. [Grants]
- 2015 Aug-2016 Jul **Co-Investigator.** Efficacy and safety of melatonin for prevention of delirium in critically ill patients: A multi-centre, randomized, double blind, placebo-controlled feasibility study. Centre for Collaborative Drug Research Pilot Project Fund. PI: Burry L. 50,000 CAD. [Grants]

- 2015 Jun-2016 May **Principal Investigator.** Outcomes of patients with leukemia admitted to the Intensive Care Unit at Mount Sinai Hospital. Department of Medicine Clinical Research Voucher Support Program. 5,000 CAD. [Grants]
- 2014-2016 **Co-Principal Investigator.** Survey of pharmacists' attitudes toward the use of probiotics to prevent ventilator associated pneumonia. Technology Evaluation in the Elderly Network, Summer Student Award 2014. PI: Burry L. 6,000 CAD. [Grants]
- 2009-2016 **Co-Investigator.** OSCILLation for ARDS Treated Early (OSCILLATE) Trial. Canadian Institutes of Health Research (CIHR). PI: Meade M, Ferguson N. 3,792,489 CAD. [Grants].

Invited Lectures and Presentations

International

2016 Mar 12-16 **Chair.** A closer look at albumin.

Invited Speaker.

36th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.

2016 Mar 12 **Invited participant.** Sedation, analgesia and paralysis strategies. Round Table: Recovery after Critical Illness: Putting the Puzzle Together. Brussels, Belgium.

Abstracts

2016 May Discordant determinants of functional disability compared to mortality outcomes in the RECOVER program cohort; Risk stratification of the Toronto ARDS cohort using RECOVER Program disability groups; Citizens' views regarding important outcomes and treatment options during weaning from mechanical ventilation. American Thoracic Society. San Francisco, California, USA.

2016 Jan Inter-Prob:INTERviewing substitute decision makers about PROBiotics. Presenter(s): Shears M, Clarke F, **Mehta S**, Dodek P, Giacomini B, Alcuaz V, O'Brien J, Krause C, Taylor R, Meade L, Liedl L, Cartin-Ceba R, Foster D, Henderson B, Jakab M, Shah S, Smith O, Lee Y, Lee J, Marshall J, McDonald E, Karachi T, Zytaruk N, Cook D for the Inter-Prob Investigators, PROSPECT Investigators and the CCCTG. (Trainee Presentation). SCCM. USA.

National

2016 Oct 31-Nov 2 **Invited Speaker.** Delirium in the ICU - Helped by Restraints; ICU outcomes of patients with hematologic malignancy; Is your ICU elder/frail friendly?

Plenary session Co-Chair. Presentation of EUPHRATES Randomized Trial results.

Critical Care Canada Forum, Toronto, Ontario, Canada.

2016 Jun 28 **Invited Speaker.** Sedation for Mechanical Ventilation. Ventilation - from physiology to practice. Interdepartmental Division of Critical Care Medicine. University of Toronto. Toronto, Ontario, Canada.

National

Abstracts

2016 Oct Refining exclusion criteria based on pilot trials: Lessons from PROSPECT. Presenter(s): Duan E, Johnstone J, Meade M, Marshall J, Lauzier F, **Mehta S**, Dodek P, McIntyre L, Hall R, Ovakim D, Wood G, Pagliarello G, Henderson W, Golan E, Herridge M, Karachi T, Lamontagne F, Charbonneau E, Zarychanski R, Taylor R, Cartin-Ceba R, Cook D, for the PROSPECT Pilot Trial Investigators and the CCCTG.

Sedation and Analgesia practice in extra-corporeal membrane oxygenation (ECMO)-treated patients with acute respiratory distress syndrome (ARDS): a retrospective study. Presenter(s): DeBacker J, Tamberg E, O'Neill L, Munshi L, Burry L, **Mehta S**, Fan E.

Sedation and mobilization during veno-venous Extracorporeal Membrane Oxygenation (VV-ECMO) for Acute Respiratory Distress Syndrome: An International Survey. Presenter(s): Marhong J, DeBacker J, **Mehta S**, Fan E.

Sleep assessment in critically ill patients the night before a spontaneous breathing trial: a feasibility and descriptive study. Presenter(s): Dres M, Chau E, **Mehta S**, Kendzerska T, Grieco D, Rittayamai N, Wilcox E, Leung R, Brochard L.

Re-Evaluating the Inhibition of Stress Erosions: Withholding Gastrointestinal Bleeding Prophylaxis In the ICU (REVISE): A Pilot Randomized Trial. Presenter(s): Alhazzani W, Marshall JC, Lauzier F, Muscedere J, Hall R, Alshahrani M, English SW, Karachi T, Rochweg B, **Mehta S**, Thabane L, Arabi YM, Deane AM, Zytaruk N, Anderson-White S, Clarke F, Heel-Ansdell D, Guyatt G, Cook D on behalf of the Canadian Critical Care Trials Group.

Critical Care Canada Forum, Toronto, Ontario, Canada.

Peer Reviewed Publications

Journal Articles

1. **Munshi L**, Kobayashi T, DeBacker J, Doobay R, Telesnicki T, Lo V, Cote N, Cypel M, Keshavjee S, Ferguson ND, Fan E. Intensive care physiotherapy during extracorporeal membrane oxygenation for acute respiratory distress syndrome. *Annals of the American Thoracic Society*. 2016 Nov 29. **Principal Author.**
2. **Munshi L**, Gershengorn H, Fan E, Wunsch H, Ferguson N, Stukel T, Rubenfeld G. Adjuvants to mechanical ventilation for acute respiratory distress syndrome. *Annals of the American Thoracic Society*. 2016 Oct 13. **Principal Author.**
3. **Munshi L**, Fan E. Lung transplant and extracorporeal membrane oxygenation: more is better and better together? *American Journal of Respiratory and Critical Care Medicine*. 2016; 194 (3): 255-256. **Principal Author.**
4. **Munshi L**, Rubenfeld G, Wunsch H. Adjuvants to mechanical ventilation for acute respiratory -distress syndrome. *Intensive Care Medicine*. 2016; 42 (5): 775-778. **Principal Author.**

Book Chapters

1. **Munshi L**, Mensa J. Neurologic infectious complications in the immunocompromised patient: *International Society of Heart and Lung Transplant Infectious Disease Reference Guide*. 2016. **Principal Author.**

Peer Reviewed Grants

Funded

- 2015-ongoing **Principal Investigator.** Adjuvants to Mechanical Ventilation for Acute Respiratory Failure. CIHR. Supervisor: Rubenfeld G. 146,666 CAD. [Grants]

- 2013-2016 **Principal Investigator.** Adjuvants to Mechanical Ventilation for Acute Respiratory Failure. Eliot Phillipson Clinician Scientist Training Program. Department of Medicine, University of Toronto. Supervisor: Rubinfeld G. 225,000 CAD. [Grants]
- 2015-2016 **Co-Principal Investigator.** Measurement of Extravascular Lung Water to Detect and Predict Primary Graft Dysfunction Following Bilateral Lung Transplant. Ontario Thoracic Society Research Grant. PIs: Cypel M, Granton G. 48,038.00 CAD. [Grants]
- 2015-2017 **Co-Principal Investigator.** Predictors of Apnea and Their Relationship to Time to Death Following Withdrawal of Life Sustaining Therapies. Physician Services Incorporated Award.PI: Singh J. 37,025.00 CAD. [Grants]
- 2015 -2016 **Co-Principal Investigator.** The Association Between Oxygenation and Mortality in Extracorporeal Life Support Extracorporeal Life Support Organization Research Grant. PI: Fan E. 4,800.00 CAD. [Grants]

Invited Lectures and Presentations

International

- 2016 September **Invited Speaker.** The Relationship Between Oxygenation and Mortality in Extracorporeal Life Support. Annual Extracorporeal Life Support Organization International Conference. San Diego, California, USA.
- 2016 May **Invited Speaker.** Adoption and De-Adoption of Adjuvant Treatments for Acute Respiratory Failure. American Thoracic Society Annual Meeting. San Francisco, California, USA.

Peer-Reviewed Publication

Journal Articles

1. de Oliveira Manoel AL, Mansur A, Silva GS, Germans MR, Jaja BN, Kouzmina E, Marotta TR, **Abrahamson S**, Schweizer TA, Spears J, Macdonald RL. Functional Outcome After Poor-Grade Subarachnoid Hemorrhage: A Single-Center Study and Systematic Literature Review. Neurocrit Care. 2016 Dec;25(3):338-350. **Coauthor or Collaborator.**
2. de Oliveira Manoel AL, Goffi A, Marotta TR, Schweizer TA, **Abrahamson S**, Macdonald RL. The critical care management of poor-grade subarachnoid haemorrhage. Crit Care. 2016 Jan 23;20:21. **Coauthor or Collaborator.**

Reviews

1. de Oliveira Manoel AL, Goffi A, Zampieri FG, Turkel-Parrella D, Duggal A, Marotta TR, Macdonald RL, **Abrahamson S**. The critical care management of spontaneous intracranial hemorrhage: a contemporary review. Crit Care. 2016 Sep 18;20:272. **Senior Responsible Author.**

Peer-Reviewed Publications

Journal Articles

1. Hallet J, Wallace D, El-Sedfy A, **Ahmed N**, Smith AJ, Nathens AB, Conn LG, Coburn NG. Defining Communication Improvement Needs in General Surgery: An Analysis of Pages, Communications, Patterns, and Content? J Surg Educ. 2016 Nov - Dec;73(6):959-967. doi: 10.1016/j.jsurg.2016.05.004. **Coauthor or Collaborator.**
2. Fernando O, Coburn NG, Nathens AB, Hallet J, **Ahmed N**, Conn LG. Interprofessional communication between surgery trainees and nurses in the inpatient wards: Why time and space matter. J Interprof Care. 2016 Sep;30(5):567-73. **Coauthor or Collaborator.**
3. Hamadani F, Deckelbaum D, Shaheen M, Sauvé A, Dumitra S, **Ahmed N**, Latulippe JF, Balaa F, Walsh M, Fata P. Elimination of 24-hour continuous medical resident duty in Quebec Can J Surg. 2016 Feb;59(1):67-9. **Coauthor or Collaborator.**
4. Dedy NJ, Bonrath EM, **Ahmed N**, Grantcharov TP. Structured Training to Improve Nontechnical Performance of Junior Surgical Residents in the Operating Room: A Randomized Controlled Trial. Ann Surg. 2016 Jan;263(1):43-9. **Coauthor or Collaborator.**

Peer-Reviewed Grants

Funded

- | | |
|-------------|---|
| 2016 - 2017 | Co-Investigator. Investigating Organizational Drivers of Resident Fatigue. St. Michael's Hospital Innovation AFP Funds. Collaborator(s): Maggie J, Dang K, Covington S. 21,972 CAD. [Grants] |
| 2015 - 2016 | Co-Investigator. Trauma Resuscitation Using in-situ Simulation Team Training (TRUST) study: A novel approach to safety threat identification and high-performance team training. Royal College of Physicians and Surgeons of Canada 2015 Medical Education Research Grant, PI: Petrosoniak, Andrew. Collaborator(s): Hicks C, Campbell D, Rizoli S. 50,000 CAD. [Grants] |

Invited Lectures and Presentations

International

- 2016 Nov 10 **Invited Speaker.** Massive Transfusion and Massive Transfusion Protocols. Pan-American Congress of Trauma, Critical Care and Emergency Surgery. Maceio, Brazil.
- 2016 Nov 5-7 **Course Director.** When to leave the abdomen open and when to close it; Mesenteric Ischemia. Course Director(s): with Sugrue M, Fraga G. 2016 Emergency Abdominal Surgery Course. University of Campinas, Campinas, Brazil.

Abstracts

- 2016 Oct 16-20 Retirement and the General Surgeon: A practice survey of intentions and perceptions. Presenter(s): Poushay H, Kagedan D, Hallet J, Beyfuss K, Nadler A, **Ahmed N**, Wright F. (Trainee Presentation). Surgical Forum, American College of Surgeons Meeting, Washington DC, USA.

Provincial

Abstracts

- 2016 May Development and Implementation of Quality Indicators for Acute Care Surgery. Presenter(s): with Paskar D, Rice T, McFarlan A, Lawless B, Marshall J, **Ahmed N**, Rezende J, Rizoli S. Abstract published Can J of Surg, Vol 29, suppl 1. (Trainee Presentation).
- Proof of Principle in a Canadian Level 1 Trauma Centre: The use of Resuscitative Endovascular Balloon Occlusion of the Aorta (REBOA). Presenter(s): Rice T, **Ahmed N**, Rezende J, Wheatcroft M, Prabhudesai V, Rizoli S. Abstract published Can J of Surg, Vol 29, suppl 1. (Trainee Presentation).
- Isolated Physiologic Indicators are Associated with Failure to Achieve Primary Fascial Closure in the Open Abdomen: An analysis of Physiologic Subgroups. Presenter(s): Rice T, Paskar D, Rizoli S, **Ahmed N**, Rotstein, Nisenbaum R, Rezende J, Abstract published Can J of Surg, Vol 29, suppl 1. (Trainee presentation).
- Trauma Association of Canada. Annual Scientific Meeting, Halifax, Nova Scotia.

National

Abstracts

2016 Sept 9 Implementing operative dictation templates for General Surgery Residents training: is it useful? Presenter(s): **Ahmed N**, Ramkumar S. Canadian Journal of Surgery. (Trainee Presentation). Canadian Association of General Surgeons.

Honours and Awards

2016 Royal College AMS/Donald Richards Wilson Award, Royal College of Physicians and Surgeons of Canada - Given for excellence in leadership in Post Graduate Education.

2016 Jameel Ali Award for Excellence in Continuing Education. St. Michael's Hospital, Department of Surgery, University of Toronto.

2016 Canadian Association of Medical Education (CAME) – Ian Hart Award for Distinguished Contribution in Medical Education. (Nominated)

Peer-Reviewed Publications

Journal Articles

1. Bell JD, Rhind SG, Di Battista AP, Macdonald RL, **Baker AJ**. Biomarkers of glyocalyxinjury are associated with delayed cerebral ischemia following aneurysmal subarachnoid hemorrhage: A Case Series Supporting a New Hypothesis. *Neurocrit Care*. 2016 Dec 20. **Senior Responsible Author**.
2. McCredie VA, Ferguson ND, Pinto RL, Adhikari NK, Fowler RA, Chapman MG, Burrell A, **Baker AJ**, Cook DJ, Meade MO, Scales DC; Canadian Critical Care Trials Group. Airway Management Strategies for Brain-injured Patients Meeting Standard Criteria to Consider Extubation: A Prospective Cohort Study. *Ann Am Thorac Soc*. 2016 Nov 21. **Coauthor or Collaborator**.
3. McCredie VA, Piva S, Santos M, Xiong W, Manoel AL, Rigamonti A, Hare GMT, Chapman MG, **Baker AJ**. The impact of red blood cell transfusion on cerebral tissue oxygen saturation in severe traumatic brain injury. *Neurocrit Care*. 18 Oct 2016. **Senior Responsible Author**.
4. McCutcheon V, Park E, Liu E, Sobhe Bidari P, Tavakkoli J, Wen XY, **Baker AJ**. A novel model of traumatic brain injury in adult zebrafish demonstrates response to injury and treatment comparable with mammalian models. *J Neurotrauma*. 2016 Sep 20. **Senior Responsible Author**.
5. Brooks SC, Scales DC, Pinto R, Dainty KN, Racz EM, Gaudio M, Amaral AC, Gray SH, Friedrich JO, Chapman M, Dorian P, Fam N, Fowler RA, Hayes CW, **Baker AJ**, Crystal E, Madan M, Rubenfeld G, Smith OM, Morrison LJ. The postcardiac arrest consult team: Impact on hospital care processes for out-of-hospital cardiac arrest patients. *Crit Care Med*. 2016 Aug 10. **Coauthor or Collaborator**.
6. Hunt C, Zanetti K, Kirkham B, Michalak A, Masanic C, Vaidyanath C, Bhalerao S, Cusimano M, **Baker AJ**, Ouchterlony D. Identification of hidden health utilization services and costs in adults awaiting tertiary care following mild traumatic brain injury in Toronto, Ontario, Canada. 8 August 2016. *Concussion*. **Coauthor or Collaborator**.
7. Di Battista AP, Rhind SG, Richards D, Churchill N, **Baker AJ**, Hutchison MG. Altered blood biomarker profiles in athletes with a history of repetitive head impacts. *PLoS One*. 2016 Jul 26;11(7):e0159929. eCollection 2016. **Coauthor or Collaborator**.

8. Di Battista AP, Rizoli SB, Lejnieks B, Min A, Shiu MY, Peng HT, **Baker AJ**, Hutchison MG, Churchill N, Inaba K, Nascimento BB, Manoel AL, Beckett A, Rhind SG. Sympathoadrenal activation is associated with acute traumatic coagulopathy and endotheliopathy in isolated brain injury. *Shock*. 2016 May 19. **Coauthor or Collaborator.**
9. McCutcheon V, Park E, Liu E, Wen XY, **Baker AJ**. A model of excitotoxic brain injury in larval zebrafish: Potential application for high-throughput drug evaluation to treat traumatic brain injury. *Zebrafish*. 2016 Jun;13(3):161-9. **Senior Responsible Author.**
10. Di Battista AP, Rhind SG, Hutchison MG, Hassan S, Shiu SH, Inaba K, Topolevic-Vranic J, Neto AC, Rizoli S, **Baker AJ**. Inflammatory cytokine and chemokine profiles are associated with patient outcome and the hyperadrenergic state following acute brain injury. *J Neuroinflammation*. 2016 Feb 16;13(1):40. **Senior Responsible Author.**

Peer-Reviewed Grants

Funded

- | | |
|---------------------|--|
| 2015 - 2017 | Principal Investigator. Human umbilical cord perivascular cell (HUCPVC) therapy for traumatic brain injury: targeting the neurovascular unit. Physicians' Services Incorporated (PSI) Foundation. 160,500 CAD. [Grants] |
| 2015 - 2017 | Principal Investigator. The role of neuroinflammation following traumatic brain injury to the pathogenesis of neurodegenerative disorders. Merit Award. Department of Anesthesia, University of Toronto. 30,000 CAD. [Grants] |
| 2015 Sep - 2016 Sep | Principal Investigator. Ontario Concussion Care Strategy: Phases I and II. Ontario Neurotrauma Foundation. 70,000 CAD. [Grants] |
| 2010-2016 | Co-investigator. From bench to bedside to curbside. Heart and Stroke Foundation of Canada. PI: Morris L. 1,500,000 CAD. [Grants] |
| 2010-2016 | Principal investigator. From bench to bedside to curbside. National Institutes of Health. 648,000 USD. [Grants] |
| 2009-2016 | Co-investigator. From bench to bedside to curbside. Canadian Institutes of Health Research. 1,057,000 CAD. [Grants] |

2011-2016 **Co-investigator.** National Institutes of Health Resuscitation Outcomes Consortium - Core Training Grant. PI: Morris L. 335,000 CAD. [Grants]

Invited Lectures and Presentations

National

2016 Nov 2 **Invited Speaker.** Update on concussion and TBI for intensivists.

Moderator. Neurocritical Care - Prognosis and outcomes.

Critical Care Canada Forum. Toronto, Ontario, Canada.

2016 May 2 **Chair.** Discovery.

Invited Speaker. Gender disparities in end-of-life care decisions for cardiac arrest patients.

Resuscitation in Motion. Toronto, Ontario, Canada.

2016 Apr 18 **Invited Speaker.** Neuroscience Research in Anesthesia. Professor's Rounds for Fellows, Department of Anaesthesia, University of Toronto. Toronto, Ontario, Canada.

Honours and Awards

2016 Nov Jeffrey C. Lozon Physician Leadership Award, St. Michael's Hospital.

2016 Oct Keenan Legacy Award, Keenan Research Centre for Biomedical Science. Li KaShing Knowledge Institute.

2016 May Lifetime Achievement Award, Ontario Trillium Gift of Life Network.

Peer-Reviewed Publications

Journal Articles

1. Wang ZH, Chen H, Yang YL, Shi ZH, Guo QH, Li YW, Sun LP, Qiao W, Zhou GH, Yu RG, Yin K, He X, Xu M, **Brochard L**, Zhou JX. Bispectral Index Can Reliably Detect Deep Sedation in Mechanically Ventilated Patients: A Prospective Multicenter Validation Study. *Anesth Analg*. 2016 Dec 22. **Coauthor or Collaborator**.
2. Adler D, Pépin JL, Dupuis-Lozeron E, Espa-Cervena K, Merlet-Violet R, Muller H, Janssens JP, **Brochard L**. Comorbidities and Subgroups of Patients Surviving Severe Acute Hypercapnic Respiratory Failure in the ICU. *Am J Respir Crit Care Med*. 2016 Dec 14. **Senior Responsible Author**.
3. Laffey JG, Bellani G, Pham T, Fan E, Madotto F, Bajwa EK, **Brochard L**, Clarkson K, Esteban A, Gattinoni L, van Haren F, Heunks LM, Kurahashi K, Laake JH, Larsson A, McAuley DF, McNamee L, Nin N, Qiu H, Ranieri M, Rubenfeld GD, Thompson BT, Wrigge H, Slutsky AS, Pesenti A, LUNG SAFE Investigators and the ESICM Trials Group. Potentially modifiable factors contributing to outcome from acute respiratory distress syndrome: the LUNG SAFE study. *Intensive Care Med*. 2016 Dec 1;42(12):1865-1876. **Coauthor or Collaborator**.
4. Demoule A, Clavel M, Rolland-Debord C, Perbet S, Terzi N, Kouatchet A, Wallet F, Roze H, Vargas F, Guerin C, Dellamonica J, Jaber S, **Brochard L**, Similowski T. Neurally adjusted ventilatory assist as an alternative to pressure support ventilation in adults: a French multicentre randomized trial. *Intensive Care Med*. 2016 Nov 1;42(11):1723-1732. **Coauthor or Collaborator**.
5. Serpa Neto A, Schmidt M, Azevedo LC, Bein T, **Brochard L**, Beutel G, Combes A, Costa EL, Hodgson C, Lindskov C, Lubnow M, Lueck C, Michaels AJ, Paiva JA, Park M, Pesenti A, Pham T, Quintel M, Marco Ranieri V, Ried M, Roncon-Albuquerque R Jr, Slutsky AS, Takeda S, Terragni PP, Vejen M, Weber-Carstens S, Welte T, Gama de Abreu M, Pelosi P, Schultz MJ, ReVA Research Network and the PROVE Network Investigators. Associations between ventilator settings during extracorporeal membrane oxygenation for refractory hypoxemia and outcome in patients with acute respiratory distress syndrome: a pooled individual patient data analysis : Mechanical ventilation during ECMO. *Intensive Care Med*. 2016 Nov 1;42(11):1672-1684. **Coauthor or Collaborator**.

6. Mahul M, Jung B, Galia F, Molinari N, de Jong A, Coisel Y, Vaschetto R, Matecki S, Chanques G, **Brochard L**, Jaber S. Spontaneous breathing trial and post-extubation work of breathing in morbidly obese critically ill patients. *Crit Care*. 2016 Oct 27;20(1):346. **Coauthor or Collaborator**.
7. Sklar MC, Burns K, Rittayamai N, Lanys A, Rauseo M, Chen L, Dres M, Chen GQ, Goligher EC, Adhikari NK, **Brochard L**, Friedrich JO. Effort To Breathe With Various Spontaneous Breathing Trial Techniques. A Physiological Meta-analysis. *Am J Respir Crit Care Med*. 2016 Oct 21. **Coauthor or Collaborator**.
8. Bellani G, Laffey JG, Pham T, Madotto F, Fan E, **Brochard L**, Esteban A, Gattinoni L, Bumbasirevic V, Piquilloud L, van Haren F, Larsson A, McAuley DF, Bauer PR, Arabi YM, Ranieri M Md, Antonelli M, Rubenfeld GD, Thompson BT, Wrigge H, Slutsky AS, Pesenti A, LUNG SAFE Investigators and the ESICM Trials Group. Non-invasive Ventilation of Patients with ARDS: Insights from the LUNG SAFE Study. *Am J Respir Crit Care Med*. 2016 Oct 18. **Coauthor or Collaborator**.
9. Doorduyn J, Nollet JL, Roesthuis LH, van Hees HW, Brochard LJ, Sinderby CA, van der Hoeven JG, Heunks LM. Partial Neuromuscular Blockade During Partial Ventilatory Support in Sedated Patients with High Tidal Volumes. *Am J Respir Crit Care Med*. 2016 Oct 17. **Coauthor or Collaborator**.
10. Jolliet P, Ouanes-Besbes L, Abroug F, Ben Khelil J, Besbes M, Garnerio A, Arnal JM, Daviaud F, Chiche JD, Lortat-Jacob B, Diehl JL, Lerolle N, Mercat A, Razazi K, Brun-Buisson C, Durand-Zaleski I, Texereau J, **Brochard L**, E.C.H.O. trial investigators. A Multicenter Randomized Trial Assessing the Efficacy of Helium/Oxygen in Severe Exacerbations of Chronic Obstructive Pulmonary Disease. *Am J Respir Crit Care Med*. 2016 Oct 13. **Coauthor or Collaborator**.
11. **Brochard L**, Slutsky A, Pesenti A. Mechanical Ventilation to Minimize Progression of Lung Injury in Acute Respiratory Failure. *Am J Respir Crit Care Med*. 2016 Sep 14. **Principal Author**.
12. Béduneau G, Pham T, Schortgen F, Piquilloud L, Zogheib E, Jonas M, Grelon F, Runge I, Terzi N, Grangé S, Barberet G, Guitard PG, Frat JP, Constan A, Chretien JM, Mancebo J, Mercat A, Richard JM, **Brochard L**, Weaning according New Definition (WIND) study group on behalf of Réseau Européen de recherche en Ventilation Artificielle (REVA) network. . Epidemiology of Weaning Outcome According to a New Definition. The WIND Study. *Am J Respir Crit Care Med*. 2016 Sep 14. **Coauthor or Collaborator**.
13. Kasenda B, Sauerbrei W, Royston P, Mercat A, Slutsky AS, Cook D, Guyatt GH, **Brochard L**, Richard JC, Stewart TE, Meade M, Briel M. Multivariable fractional polynomial interaction to investigate continuous effect modifiers in a meta-analysis on higher versus lower PEEP for patients with ARDS. *BMJ Open*. 2016 Sep

8;6(9):e011148. **Coauthor or Collaborator.**

14. Chen L, Li HL, **Brochard L**. High-flow nasal cannula in postextubation management. *J Thorac Dis*. 2016 Sep 1;8(9):E1013-E1016. **Senior Responsible Author.**
15. Frat JP, Ragot S, Girault C, Perbet S, Prat G, Boulain T, Demoule A, Ricard JD, Coudroy R, Robert R, Mercat A, **Brochard L**, Thille AW, REVA network. Effect of non-invasive oxygenation strategies in immunocompromised patients with severe acute respiratory failure: a post-hoc analysis of a randomised trial. *Lancet Respir Med*. 2016 Aug 1;4(8):646-52. **Coauthor or Collaborator.**
16. Dres M, Dubé BP, Mayaux J, Delemazure J, Reuter D, **Brochard L**, Similowski T, Demoule A. Coexistence and Impact of Limb Muscle and Diaphragm Weakness at Time of Liberation From Mechanical Ventilation in Medical ICU Patients. *Am J Respir Crit Care Med*. 2016 Jun 16. **Coauthor or Collaborator.**
17. Sferrazza Papa GF, Pellegrino GM, Di Marco F, Imeri G, **Brochard L**, Goligher E, Centanni S. A Review of the Ultrasound Assessment of Diaphragmatic Function in Clinical Practice. *Respiration*. 2016 May 25;91(5):403-11. **Coauthor or Collaborator.**
18. Cameron JI, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Lefebvre M, Ferguson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, **Brochard L**, Hébert P, Slutsky AS, Marshall JC, Cook D, Herridge MS, RECOVER Program Investigators (Phase 1: towards RECOVER), Canadian Critical Care Trials Group. One-Year Outcomes in Caregivers of Critically Ill Patients. *N Engl J Med*. 2016 May 12;374(19):1831-41. **Coauthor or Collaborator.**
19. **Brochard L**, Hedenstierna G. Ten physiologic advances that improved treatment for ARDS. *Intensive Care Med*. 2016 May 1;42(5):814-6. **Principal Author.**
20. **Brochard L**, Pham T, Rubenfeld G. Does my patient really have ARDS? *Intensive Care Med*. 2016 May 1;42(5):656-8. **Principal Author.**
21. Bellani G, Grasselli G, Tegaglia-Droghi M, Mauri T, Coppadoro A, **Brochard L**, Pesenti A. Do spontaneous and mechanical breathing have similar effects on average transpulmonary and alveolar pressure? A clinical crossover study. *Crit Care*. 2016 Apr 28;20(1):142. **Coauthor or Collaborator.**
22. Beloncle F, Akoumianaki E, Rittayamai N, Lyazidi A, **Brochard L**. Accuracy of delivered airway pressure and work of breathing estimation during proportional assist ventilation: a bench study. *Ann Intensive Care*. 2016 Apr 14;6(1):30. **Senior Responsible Author.**

23. Mojoli F, Iotti GA, Torriglia F, Pozzi M, Volta CA, Bianzina S, Braschi A, **Brochard L**. In vivo calibration of esophageal pressure in the mechanically ventilated patient makes measurements reliable. *Crit Care*. 2016 Apr 11;20(1):98. **Senior Responsible Author**.
24. Dres M, Rittayamai N, **Brochard L**. Monitoring patient-ventilator asynchrony. *Curr Opin Crit Care*. 2016 Apr 11. **Senior Responsible Author**.
25. Jaber S, Lescot T, Futier E, Paugam-Burtz C, Seguin P, Ferrandiere M, Lasocki S, Mimoz O, Hengy B, Sannini A, Pottecher J, Abback PS, Riu B, Belafia F, Constantin JM, Masseret E, Beaussier M, Verzilli D, De Jong A, Chanques G, **Brochard L**, Molinari N, NIVAS Study Group. Effect of Noninvasive Ventilation on Tracheal Reintubation Among Patients With Hypoxemic Respiratory Failure Following Abdominal Surgery: A Randomized Clinical Trial. *JAMA*. 2016 Apr 5;315(13):1345-53. **Coauthor or Collaborator**.
26. Herridge MS, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, Dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, **Brochard L**, Hebert P, Slutsky AS, Marshall JC, Cook D, Cameron JI, RECOVER Program Investigators (Phase 1: towards RECOVER) and the Canadian Critical Care Trials Group. The RECOVER Program: Disability Risk Groups & One Year Outcome after ≥ 7 Days of Mechanical Ventilation. *Am J Respir Crit Care Med*. 2016 Mar 14. **Coauthor or Collaborator**.
27. Thille AW, Boissier F, Ben-Ghezala H, Razazi K, Mekontso-Dessap A, Brun-Buisson C, **Brochard L**. Easily identified at-risk patients for extubation failure may benefit from noninvasive ventilation: a prospective before-after study. *Crit Care*. 2016 Feb 26;20(1):48. **Senior Responsible Author**.
28. Bellani G, Laffey JG, Pham T, Fan E, **Brochard L**, Esteban A, Gattinoni L, van Haren F, Larsson A, McAuley DF, Ranieri M, Rubenfeld G, Thompson BT, Wrigge H, Slutsky AS, Pesenti A, LUNG SAFE Investigators, ESICM Trials Group. Epidemiology, Patterns of Care, and Mortality for Patients With Acute Respiratory Distress Syndrome in Intensive Care Units in 50 Countries. *JAMA*. 2016 Feb 23;315(8):788-800. **Coauthor or Collaborator**.
29. Gattinoni L, Marini JJ, Pesenti A, Quintel M, Mancebo J, **Brochard L**. The “baby lung” became an adult. *Intensive Care Med*. 2016 Jan 18. **Coauthor or Collaborator**.

30. Rittayamai N, Wilcox E, Drouot X, Mehta S, Goffi A, **Brochard L**. Positive and negative effects of mechanical ventilation on sleep in the ICU: a review with clinical recommendations. *Intensive Care Med*. 2016 Jan 13. **Senior Responsible Author**.

Reviews

1. Mauri T, Yoshida T, Bellani G, Goligher EC, Carteaux G, Rittayamai N, Mojoli F, Chiumello D, Piquilloud L, Grasso S, Jubran A, Laghi F, Magder S, Pesenti A, Loring S, Gattinoni L, Talmor D, Blanch L, Amato M, Chen L, **Brochard L**, Mancebo J, PLeUral pressure working Group (PLUG—Acute Respiratory Failure section of the European Society of Intensive Care Medicine). Esophageal and transpulmonary pressure in the clinical setting: meaning, usefulness and perspectives. *Intensive Care Med*. 2016 Sep 1;42(9):1360-73. **Coauthor or Collaborator**.
2. Fan E, Gattinoni L, Combes A, Schmidt M, Peek G, Brodie D, Muller T, Morelli A, Ranieri VM, Pesenti A, **Brochard L**, Hodgson C, Van Kiersbilck C, Roch A, Quintel M, Papazian L. Venovenous extracorporeal membrane oxygenation for acute respiratory failure : A clinical review from an international group of experts. *Intensive Care Med*. 2016 May 1;42(5):712-24. **Coauthor or Collaborator**.
3. Goligher EC, Ferguson ND, Brochard LJ. Clinical challenges in mechanical ventilation. *Lancet*. 2016 Apr 30;387(10030):1856-66. **Senior Responsible Author**.

Peer-Reviewed Grants

Funded

- | | |
|------------------|--|
| 2016 Jun-present | Collaborator . A New, Minimally-Invasive Device to Improve Arterial CO ₂ in Mechanically-Ventilated Patients (Through-Flow). SMH Foundation's Translational Innovation Fund. PI: Sinderby C. 75,000 CAD. [Grants] |
| 2015 Jan-present | Co-Principal Investigator . Gas eXchange eXtracorporeaL (XXL) Techniques Study. UHN/MSH AFP Innovation Fund. Collaborator(s): Fan E. 130,950 CAD. [Grants] |
| 2015-present | Principal Investigator . Low-flow extracorporeal carbon dioxide (CO ₂) removal in patients with moderate acute respiratory distress syndrome (ARDS) to enhance lung protective ventilation (SUPERNOVA). European Society of Intensive Care Medicine (ESICM). Collaborator(s): Friedrich J, Hall D, Sklar M, Dres M, Pham T, Sandhu G, Salway K, Smith O. 15,000 CAD. [Grants] |

- 2015-2020 **Co-Investigator.** The NEUROlogically-impaired extubation Timing Trial (NEURO-ETT). Canadian Institutes of Health Research. Adhikari N, Singh JM, Wilcox ME, Baker A, Mainprize T, Turgeon A, McCredie V, Zygun D, Seely AJ, Griesdale D, Bosma K, Charbonney E, Meade M, Nathens A, Rubinfeld GD, Fowler RA, Alali A, Chapman M, Cuthbertson BH. 880,405 CAD. [Grants]
- 2015 Apr-2017 Mar **Principal Investigator.** Randomized cross-over physiologic study of High Flow nasal oxygEN cannula versus non-invasive ventilation in cystic fibrosis: The HIFEN study. Canadian Cystic Fibrosis Foundation. Cystic Fibrosis Canada Grant ID: #3050. 97,925 CAD. [Grants]
- 2014 Jun-2016 Jun **Collaborator.** The Frequency of Screening and SBT Technique Trial: The FAST Trial. Canadian Institutes of Health Research (CIHR). PI: Burns, Karen. Collaborator(s): Friedrich J, Mehta G, Fan E, et al. 156,772 CAD. [Grants]
- 2013 Oct-2016 Sep **Co-Investigator.** The Importance of Spontaneous Breathing Efforts in Mechanically Ventilated Patients with Acute Respiratory Distress Syndrome. Physicians Services Incorporated Foundation Operating Grant (PSI). PI: Fan E. 50,000 CAD. [Grants]

Non-Peer Reviewed Grants

Funded

- 2014 Jan-2018 Dec **Principal Investigator.** Start-Up Operating Funds (Annually). St. Michael's Hospital. 200,000 CAD. [Contracts]
- 2014-2016 **Principal Investigator.** Randomized cross-over physiologic study of High Flow nasal oxygEN cannula versus non-invasive ventilation in cystic fibrosis: The HIFEN study. Fisher and Paykel. 20,000 CAD. [Industrial Grants]

Presentations and Special Lectures

International

- 2016 Nov 29 **Invited Speaker.** PaO₂/FiO₂ in clinical practice; Lung mechanics: the equation of motion at the bedside; Lung protective strategies: A practical approach; Respirator management; Pressure vs. Volume targeted mechanical ventilation. 22nd Postgraduate Refresher Course, Cardiovascular and Respiratory Physiology, Applied to Intensive Care Medicine. Brussels, Belgium.
- 2016 Nov 26 **Invited Speaker.** Le cercle infernal de l'insuffisance respiratoire aigüe ; Ventilation du SDRA et recrutement; Avec le soutien de GE Healthcare.
- Moderator:** Mécanique ventilatoire with S Jaber.
- Journée d'Actualités en Ventilation Artificielle (JAVA). Creteil, France.
- 2016 Nov 17 **Invited Speaker.** Charla magistral: CPAP, BIPAP, Canula de alto flujo, VNI: Cúal elegir?; Manejo individualizado y práctico del SDRA. 34th Chilean Congress of Intensive Medicine. Coquimbo, Chile.
- 2016 Oct 2-5 **Invited Speaker.** Weaning from Mechanical Ventilation & Clinical Case History: Difficult Weaning; How could it be applied at bedside supported by new clinical data: What can we monitor with Edi signal; Esophageal pressure: Different approaches.
- Chair:** Perioperative Intensive Care and Sedation; PLUG; Clinical Trials in Intensive Care.
- ESICM 29th Annual Congress. Milano, Italy.
- 2016 Sep 29 **Invited Speaker.** Grand Rounds Presentation: Several Physiological Advances Useful for ARDS Management. Department of Anesthesia, Critical Care and Pain Medicine at Mass General Hospital. Boston, Massachusetts, USA.
- 2016 Sep 14 **Invited Speaker.** Grand Rounds Presentation: Several physiological advances that improved (or can improve) treatment for ARDS. Cleveland Clinic, Respiratory Institute. Ohio, USA.
- 2016 Jul 16 **Invited Speaker.** Key Mechanics in ARDS: Pressures, Respiratory Muscle Activity, and Proportional Modes; PLUG asynchronies; Patient Ventilator Interactions: Problems and Solutions. 38th Annual Meeting of the Japan Society of Respiratory Care Medicine. Osaka, Japan.

- 2016 Jun 30 **Invited Speaker.** ARDS Session - Transpulmonary pressure: application to the decision to initiate VVECMO. ECMO 2016. Paris, France.
- 2016 Jun 9-12 **Invited Speaker.** Sepsis: Should we control the temperature; How to manage severe ARDS; Ventilatory support in the ICU: High flow nasal oxygen therapy: Is NIV dead?. 6th Int'l Symposium of Intensive Care. São Paulo, Brazil.
- 2016 May 25-27 **Invited Speaker.** Advanced Respiratory Monitoring - Transpulmonary Pressure; Non invasive Ventilation - HFNC: a panacea?; Open Issues in ARDS -Spontaneous breathing in ARDS should be promoted; High Flow Oxygen Therapy: The Evolution of a concept - High flow oxygen therapy: clinical evidence.
- Chair:** Improving Patient-Ventilator Interaction; Peep in Patients with ARDS; Driving Pressure.
- 27 SMART Congress. Milano, Italy.
- 2016 May 14-18 **Invited Speaker.** Physiology of Mechanical Ventilation in ARDS - Driving Pressure; Leading Journal in Respiratory, Critical Care, and Sleep Medicine - Key Papers, Publication Ethics, New Initiatives - Highlights in Critical in AJRCCM.
- Chair:** Leading Journal in Respiratory, Critical Care, and Sleep Medicine - Key Papers, Publication Ethics, New Initiatives.
- American Thoracic Society (ATS). San Francisco, California, USA.
- 2016 Apr 23-24 **Invited Speaker.** Individualized settings in ARDS: which tools are available?. Beijing Society Critical Care Medicine CM Annual Conference. Beijing, China.
- 2016 Apr 8-10 **Invited Speaker.** Respiratory in Mechanics in ARDS: Is it clinically useful; What's the real prognosis of weaning?. 17th Int'l Conference on Mechanical Ventilation. Madrid, Spain.
- 2016 Mar 15-17 **Invited Speaker.** The Max Harry Weil Memorial Lecture: Individualized Management of ARDS; Learning physiology through mechanical ventilation - Respiratory basics; Ventilation with helium - Decompensated COPD: New insights; What is it all about? - Nasal high-flow oxygen therapy;Respiratory muscle underuse - Respiratory muscle activity during mechanical ventilation; CPAP, BIPAP, High flow nasal oxygen, NIV.: How to choose?.

Moderator: Mechanical ventilation in ARDS - Standard presentation;
Lung recruitment in ARDS - Standard presentation.

36th International Symposium on Intensive Care & Emergency
Medicine. Brussels, Belgium.

2016 Mar 12

Invited Speaker. Mechanical Ventilation and Diaphragmatic
Dysfunction. Round Table 2016 - Recovery after Critical Illness:
Putting the Puzzle Together. Brussels, Belgium.

2016 Mar 10-11

Invited Speaker. Cas clinique : Un patient difficile à sevrer;
Ventilation assistée : Quels objectifs?; Modes automatisés : ASV et
SmartCare. DU de Ventilation Artificielle Module 2. Université
d'Angers. Angers, France.

2016 Jan 13

Invited Speaker. SDRA: l'épidémiologie a-t-elle changé?; Comment
améliorer le sommeil des patients en réanimation?; Utilisation des
nouveaux outils en pratique : Quiz autour de la PAV+; Automated
weaning: from assistance level to oxygen titration; A Pro.

Meet the Expert: How do I manage severe ARDS.

Moderator: Optiflow: des effets physiologiques aux bénéfices
cliniques (Fisher & Paykel).

Chair: My ten "must-read" articles.

Société de Réanimation de Langue Française (SRLF). Paris, France.

2016 Jan 11-12

Invited Speaker. Bases physiologiques de la ventilation en pression
positive; Réglages des modes assistés (VAC, AI); Volume contrôlé -
Pression contrôlée: exercice sur simulateur; SDRA: Définition et
épidémiologie. DU de Ventilation Artificielle Module 1. Université
d'Angers. Angers, France.

2016 Jan 6

Invited Speaker. Weaning from Mechanical Ventilation. Cook County
Medical Grand Rounds, Department of Medicine, Videoconference.
Chicago, Illinois, USA.

Provincial

2016 Sep 19-22 **Invited Speaker.** Généralités, concepts de base en ventilation et physiologie; From physiology to clinical application with Thiel cadavers, Live simulation via videoconference from UQTR; Mécanique respiratoire et recrutabilité; SDRA: Quelle définition et données épidémiologiques? VCV vs. PCV: simulation interactive; Sevrage de la ventilation artificielle : Définition et données épidémiologiques; Ventilation non invasive : Indications et résultats. Diplome International en Ventilation Artificielle (DIVA). À l'auditorium de L'Hôpital St-François d'Assise, 10, rue de l'Espinay, Montreal, Quebec, Canada.

National

2016 Oct 31 **Invited Speaker.** Pes to Set PEEP - The (French) Canadian Perspective; Proportional modes. What for?; Do we have solutions to combine spontaneous and mechanical breaths?

Moderator. ARDS -Basics with N. Adhikari; Weaning Part II with L. Chen.

Critical Care Canada Forum. Toronto, Ontario, Canada.

2016 Sep 27 **Invited Speaker.** Canada. Several Physiological Advances Useful for ARDS Management. SickKids PCCM Fellow Teaching. Toronto, Ontario,

2016 Jul 12 **Invited Speaker.** Key Concepts of Mechanical Ventilation. U of T IDCCM Tuesday Rounds. Toronto, Ontario, Canada.

2016 Jun 27-29 **Invited Speaker.** Physiological Principles: Equation of motion: pressures, volumes and flow; Ventilator waveforms and patient-ventilator synchrony; Interactive session on simulator: Respiratory mechanics during volume and pressure ventilation; Modes of Ventilation: Determinants of inspiratory effort under mechanical ventilation; Proportional assist ventilation; Testing the ability to be separated from mechanical ventilator; Non-invasive ventilation technique and indications (including high flow); Humidification, aerosols; Hands-on Workshops - Monitoring - Patient ventilator synchrony; Diseases, Syndromes and Clinical Recommendations: ARSD: from stiff lungs to baby lung, stress and strain; Workshops: Challenging cases - Interactive case presentation: COPD. Mechanical Ventilation Course with Critical Care Canada Forum (CCCF). Toronto, Ontario, Canada.

2016 Jun 1-3 **Invited Speaker.** Patient Ventilator Asynchrony; Weaning from mechanical ventilation. Canadian Critical Care Review (CCCR). Toronto, Ontario, Canada.

Local

2016 Nov 8 **Invited Speaker.** ARDS and Complications from Mechanical Ventilation. SMH Critical Care Rounds. Toronto, Ontario, Canada.

2016 Oct 28 **Invited Speaker.** Are we using oxygen wisely. Presenter(s): with Laffey J. SMH Critical Care Rounds. Toronto, Ontario, Canada.

2016 Aug 31 **Invited Speaker.** ARDS and Complications from Mechanical Ventilation. SMH Critical Care Rounds. Toronto, Ontario, Canada.

2016 Jun 22 **Invited Speaker.** Weaning and Extubation. SMH Critical Care Rounds. Toronto, Ontario, Canada.

2016 Apr 28 **Invited Speaker.** Hypothesis - Using Invasive Ventilation to Reduce Lung Injury. Toronto Ventilation Study Group-Mechanisms Of Associated Injury (MOAI). St. Michael's Hospital. Toronto, Ontario, Canada.

2016 Apr 27 **Invited Speaker.** COPD/NIPPV. SMH Critical Care Rounds. Toronto, Ontario, Canada.

2016 Jan 27 **Invited Speaker.** COPD/NIPPV. SMH Critical Care Rounds. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. **Burns KE**, Jacob SK, Aguirre V, Gomes J, Mehta S, Rizvi L. Stakeholder Engagement in Trial Design: Survey of Visitors to Critically Ill Patients Regarding Preferences for Outcomes and Treatment Options during Weaning from Mechanical Ventilation. *Ann Am Thorac Soc*. 2016 Nov;13(11):1962-8. **Principal Author**.
2. Pellegrini JA, Moraes RB, Maccari JG, de Oliveira RP, Savi A, Ribeiro RA, **Burns KE**, Teixeira C. Spontaneous Breathing Trials With T-Piece or Pressure Support Ventilation. *Respir Care*. 2016 Dec;61(12):1693-1703. **Coauthor or Collaborator**.
3. Ball IM, Bagshaw SM, **Burns KE**, Cook DJ, Day AG, Dodek PM, Kutsogiannis DJ, Mehta S, Muscedere JG, Stelfox HT, Turgeon AF, Wells GA, Stiell IG. A clinical prediction tool for hospital mortality in critically ill elderly patients. *J Crit Care*. 2016 Oct;35:206-12. **Coauthor or Collaborator**.
4. **Burns KE**, Rizvi L, Dodek P, Lamontagne F, Seely AJE, Rochweg B, Tanios M, Piraino T, Honig E, Cirone R, Cook DJ. Frequency of screening and 'Spontaneous Breathing Trial' Technique Study (The FAST Trial): Design of a Multicentre, Pilot, Factorial Randomized Controlled Trial. 2016 . *Clin Trials* 6: 284. **Principal Author**.
5. Sklar MC, **Burns KE**, Rittayamai N, Lanys A, Rauseo M, Chen L, Dres M, Chen GQ, Goligher EC, Adhikari NK, Brochard L, Friedrich JO. Effort To Breathe With Various Spontaneous Breathing Trial Techniques. A Physiological Meta-analysis. *Am J Respir Crit Care Med*. 2016 Oct 21. **Coauthor or Collaborator**.
6. Koo KK, Choong K, Cook DJ, Herridge M, Newman A, Lo V, Guyatt G, Priestap F, Campbell E, **Burns KE**, Lamontagne F, Meade MO; Canadian Critical Care Trials Group. Early mobilization of critically ill adults: a survey of knowledge, perceptions and practices of Canadian physicians and physiotherapists. *CMAJ Open*. 2016 Aug 18;4(3):E448-E454. **Coauthor or Collaborator**.
7. Rose L, Scales DC, Atzema C, **Burns KE**, Gray S, Doing C, Kiss A, Rubenfeld G, Lee J. Emergency Department Length of Stay for Critical Care Admissions: A Population-based study. *Annals of the American Thoracic Society*, Vol. 13, No. 8, August 1, 2016: 1324-1332. **Coauthor or Collaborator**.

8. Mehta S, Meade M, Burry L, Mallick R, Katsios C, Fergusson D, Dodek P, **Burns KE**, Herridge M, Devlin JW, Tanios M, Fowler R, Jacka M, Skrobik Y, Olafson K, Cook D; SLEAP Investigators and the Canadian Critical Care Trials Group. Variation in diurnal sedation in mechanically ventilated patients who are managed with a sedation protocol alone or a sedation protocol and daily interruption. *Crit Care*. 2016 Aug 1;20(1):233. doi: 10.1186/s13054-016-1405-3. **Coauthor or Collaborator**.
9. Arabi Y, Alsolamy S, Al-Dawood A, Al-Omari A, Al-Hameed F, **Burns KE**, Almaani M, Al Bshabshe A, Mehta S, Al-Aithan A, Mekhlafi G, Finfer S, Abdukahil SAI, Afesh LY, Dbsawy M, Sadat M. Study Protocol: Thromboprophylaxis Using Combined Intermittent Pneumatic Compression and Pharmacologic Prophylaxis Versus Pharmacologic Prophylaxis Alone in Critically Ill Patients: A Multicenter Randomized Controlled Trial. *Trials*. 2016;17: 390. **Coauthor or Collaborator**.
10. Shrum B, Church B, McArthurs E, **Burns KE**, Znajda T, McAlisters V. Hypertonic Salt Solution for Perioperative Fluid Management: An Updated Cochrane Review. 2016. *Cochrane Database of Syst Reviews*. 2016. 6:CD005576. **Coauthor or Collaborator**.
11. Godard S, Herry C, Westergaard P, Scales N, Brown SM, **Burns KE**, Mehta S, Jacono FJ, Kubelik D, Maziak DE, Marshall J, Martin C, Seely AJ. Practice Variation in Spontaneous Breathing Trial Performance and Reporting. *Can Respir J*. 2016;2016:9848942. doi: 10.1155/2016/9848942. **Coauthor or Collaborator**.
12. Delaney J, Pinto R, Long J, Lamontagne F, Adhikari NK, Kumar A, Marshall J, Cook DJ, Jouvett P, Fergusson ND, Griesdale D, Burry L, **Burns KE**, Hutchison J, Fowler R. The Influence of Corticosteroid Treatment on the Outcome of Influenza A (H1N1 pdm09)-related Critical Illness. *Crit Care*. 2016 Mar 30;20(1):75. **Coauthor or Collaborator**.

Peer-Reviewed Grants

Funded

2015-2019 **Co-Investigator**. CIHR: Standard vs Accelerated Initiation of Renal Replacement Therapy in Acute Kidney Injury. Co-I's: Wald R, Adhikari N, Bellomo R, Cailhier J, Chawla L, Dodek P, Friedrich J, Garg A, Hiremath S, Joannidis M, Lamontagne S, Lapinsky S, Magder S, Manns B, Mazer D, McIntyre L, Muscedere J, Ostermann M, Palevsky P, Petilla V, Smith O, Soth M, Stelfox T, Thorpe K, WaxR, Weir M, Wilcox M, Wood G, Bagshaw S. 220,996 CAD. [Grants]

- 2015 Jul-2018 Jun **Co-Investigator.** CIHR: Tricycle. PI: Kho M. Co-I's: Ball I, Burns KEA, Cook DJ, Fox-Robichaud A, Herridge M, Karachi T, Koo K, Lo V, athur S, Mourtzakis M, Pellizzari J, Piraino T, Rudkowski J, Tarride JE. Knowledge User: Reid J. Collaborator(s): McCaughan M. 332,994 CAD. [Grants]
- 2014-2016 **Principal Investigator.** OTS/OLA. Collaborator(s): Friedrich J, Brochard L, Mehta S, Fan E, Seely A, Hand L, Kho M, Lee J, Lamontagne F, Cook D, Dodek P, Meade M. 50,000 CAD. [Grants]
- 2016 **Co-Investigator.** Pan-Canadian Public Consultation Regarding Alternative Consent Models in Adult Emergency Care Research. PI: Dainty K. Co-I's: Christenson J, Parker M, Freitag S, Brooks S, Morrison L, Scales D, Henry B, Weijer C. 100,000 CAD. [Grants]
- 2016 **Co-Investigator.** Transfusion in traumatic brain injury (TSiTBI Trial). PI: Turgeon A. Co-I's: Zarychanski R, English S, Griesdale D, Green R, Kramer A, Zygun D, Burns K, Scales D, Lauzier F, Fergusson D. 1,139,105 CAD. [Grants]
- 2016 **Co-Investigator.** CIHR: Computed tomography perfusion for neurological death determination: A prospective Canadian multicenter diagnostic test study. PI: Chassé M, Shankar J. 951,803 CAD. [Grants]

Presentations and Special Lectures

International

Abstracts

- 2016 Effects of Alternative Spontaneous Breathing Trial Techniques on Clinical Outcomes: A Systematic Review and Meta-Analysis. AJRCCM C51: A5291. Poster P769. Presenter(s): Soliman I, Adhikari N, Zwein A, Wong J, Pelligrini J, Gomez builes C, **Burns KE**, Brochard L, Rittayamai N, Sklar M, Lanys A, Chen G, Rauseo M, Friedrich JO.
- Citizen's Views Regarding Important Outcomes and Treatment Options During Weaning From Mechanical Ventilation. AJRCCM D103:A7601. Poster 710. Presenter(s): Karottaiyamvelil JS, **Burns KE**, Aguirre VA, Gomes J, Mehta S, Rizvi L.
- American Thoracic Society (ATS). San Francisco, California, USA.

Provincial

Abstracts

2016 Apr 16 Weaning Elderly Critically Ill Adults from Invasive Mechanical Ventilation: A Tale of Two Pilot Randomized Controlled Trials. Presenter(s): **Burns KE**. Canadian Geriatric Society Meeting. Vancouver, British Columbia, Canada.

27 Jan 2016 The WE Succeed Trial; The International Observational Study of Mechanical Ventilation Discontinuation Practices and the RELEASE and SENIOR Trials. Presenter(s): **Burns KE**. CCCTG Meeting. Lake Louise, Alberta, Canada.

National

2 Nov 2016 **Invited Speaker**. Is There A Preferred SBT Technique? A Systematic Review and Meta-Analysis. Critical Care Canada Forum. Toronto, Ontario, Canada.

Abstracts

3 Nov 2016 Standard and Deferred Consent in the Age of Transfused Blood (ABLE) Trial in Critically Ill Adults. AJRCCM: A52:A1811. Poster P913. The Frequency of Screening and SBT Technique Trial. Presenter(s): Hebert P, Fergusson D, Lacroix J, **Burns KE**. Canadian Critical Care Trials Group (CCCTG) Meeting. Toronto, Ontario, Canada.

2016 D'Aragon F, Yaworski A, Oczkowski S, Rochweg B, Belley Cote E, Frenette AJ, Areseneau E, Dhanani S, **Burns KE**, Lauzier F, Lamontagne F, Meade MO for the Canada-DONATE Investigators, the Canadian Critical Care Trials Group and the Canadian National Transplant Research Program. Canadian Society of Transplantation. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. Amatullah H, Shan Y, Beauchamp B, Gali P, Gupta S, Maron-Gutierrez T, Speck E, Fox-Robichaud A, Tsang J, Mei S, Mak T, Rocco P, Semple J, Hu P, Marshall J, Stewart D, Harper ME, Liaw P, Liles WC, **dos Santos CC**. DJ-1/PARK7 impairs bacterial clearance in sepsis. *American Journal of Respiratory and Critical Care Medicine*. 2016 Oct 13. **Senior Responsible Author**.
2. Hsin-Ju SM, **dos Santos CC**, Stewart S. Advances in Stem Cell and Cell-Based Gene Therapy Approaches for Experimental Acute Lung Injury: A Review of Preclinical Studies. *Human Gene Therapy*. 2016 Aug 28. **Coauthor or Collaborator**.
3. Walsh CJ, Batt J, Herridge MS, Mathur S, Bader GD, Hu P, **dos Santos CC**. Transcriptomic analysis reveals abnormal muscle repair and remodeling in survivors of critical illness with sustained weakness. *Sci Rep*. 2016 Jul 14;6:29334. **Senior Responsible Author**.
4. **dos Santos CC**, Herridge M, Batt J. Early goal directed mobility in the ICU: 'something in the way you move'. *Journal of Thoracic Disease*. 2016 Jul 7;3(2). **Principal Author**.
5. Siddiqi FS, Majumder S, Thai K, Abdalla M, Hu P, Advani SL, White KE, Bowskill BB, Guarna G, **Dos Santos CC**, Connelly KA, Advani A. The Histone Methyltransferase Enzyme Enhancer of Zeste Homolog 2 Protects against Podocyte Oxidative Stress and Renal Injury in Diabetes. *J Am Soc Nephrol*. 2016 Jul 1;27(7):2021-34. **Coauthor or Collaborator**.
6. Cameron JI, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, **dos Santos CC**, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hébert P, Slutsky AS, Marshall JC, Cook D, Herridge MS, RECOVER Program Investigators (Phase 1: towards RECOVER), Canadian Critical Care Trials Group. One-Year Outcomes in Caregivers of Critically Ill Patients. *N Engl J Med*. 2016 May 12;374(19):1831-41. **Coauthor or Collaborator**.

7. **dos Santos CC**, Hussain SN, Mathur S, Picard M, Herridge M, Correa J, Bain A, Guo Y, Advani A, Advani SL, Tomlinson G, Katzberg H, Streutker CJ, Cameron JI, Schols A, Gosker H, Batt J, MEND ICU group, the RECOVER Program investigators and the Canadian Critical Care Translational Biology Group. Mechanisms of Chronic Muscle Wasting and Dysfunction After an Intensive Care Unit Stay: A Pilot Study. *Am J Respir Crit Care Med*. 2016 Apr 8. **Principal Author**.
8. Herridge MS, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, **dos Santos C**, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hebert P, Slutsky AS, Marshall JC, Cook D, Cameron JI, RECOVER Program Investigators (Phase 1: towards RECOVER) and the Canadian Critical Care Trials Group. The RECOVER Program: Disability Risk Groups; One Year Outcome after ≥ 7 Days of Mechanical Ventilation. *Am J Respir Crit Care Med*. 2016 Mar 14. **Coauthor or Collaborator**.
9. Breitling S, Hui Z , Zabini D, Hu Y, Hoffmann J, Goldenberg N, Buelow R, **dos Santos CC**, Kuebler W. The mast cell - B-cell axis in lung vascular remodeling and pulmonary hypertension. *American Journal of Physiology, Lung and Molecular Cell Physiology*. 2016. **Coauthor or Collaborator**.
10. Walsh C, Hu P, Batt J, **dos Santos CC**. Discovering Micro RNA Regulatory Modules in Multi-Dimensional Cancer Genomic Data: A Survey of Computational Methods. *Cancer Informatics*. 2016;15(S2):25-42. **Senior Responsible Author**.
11. Walsh C , Batt J , Herridge M, Mathur S, Bader G , Pingzhao h, **dos Santos CC**, submitted on behalf of the MEND-ICU Group and Canadian Critical Care Translational Biology Group. Transcriptomic analysis reveals abnormal repair and remodeling in survivors of critical illness with sustained muscle weakness. *Nature Scientific Reports*. 2016. 6: 29334. **Coauthor or Collaborator**.
12. Abdalla M, Abdalla M, Siddiqi F, Geldenhuys L, Batchu S, Tolosa M, Yuen D, **dos Santos CC**, Advani A. A common transcriptomic signature distinguishes diabetic nephropathy from other kidney diseases in humans and mice. *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*. 2016. **Coauthor or Collaborator**.
13. Gali P, Amatullah S, Shan Y, Mei S, Szaszi K, Fernández-Segoviano P, Lorente JA, Esteban A, Liles WC, Marsden P, Pingzhao H, Stewart D, **dos Santos CC**. MicroRNA 193b-5p Plays A Critical Role In The Regulation Of Sepsis-Induced Vascular Leak And Acute Lung Injury. *e-Life*. 2016. **Senior Responsible Author**.

14. Smith O, Chant C, Burns KE, Kaur M, Ashraf S, **dos Santos CC**, Hwang s, Friedrich JO. Characteristics and Outcomes of Homeless and Non-Homeless Patients Admitted to ICU: A Matched Cohort Study. Journal of Critical Care. 2016. **Coauthor or Collaborator.**
15. Philip A, Wang Y, Mauro A, El-Rass S, Marshall J, Lee W, Slutsky A, **dos Santos CC**, Wen XY. Development of a zebrafish sepsis model for high-throughput drug discovery. Molecular Medicine. 2016. **Coauthor or Collaborator.**
16. Batt J, Mathur S, Katzburg H, Herridge MS, **dos Santos CC**. Sarcopenia, Dynapenia and Muscle Dysfunction after Critical Illness. Intensive Care Medicine. 2016. **Senior Responsible Author.**

Peer-Reviewed Grants

Funded

- | | |
|-------------------|--|
| 2016 Mar-2017 Mar | Co-Investigator. Cell Immunotherapy for Septic Shock (Phase II). Ontario Institute of Regenerative Medicine. Disease Grant Competition. 500,000 CAD. [Clinical Trials] |
| 2015 Jul-2019 Mar | Co-Investigator. Solutions for Cardio-pulmonary Organ Repair and Regeneration (SCORR). Ontario Research Fund. PI: Stewart D. 5,000,000 CAD. [Grants] |
| 2015 Jul-2016 Jul | Principal Applicant. Epigenetics Profiling in Severe Sepsis (EPSIS). McLaughlin Foundation. Accelerator Grant Competition. MC-2015-03. 50,000 CAD. [Grants] |
| 2015 Mar-2017 Mar | Co-Principal Investigator. Optimizing Mesenchymal Stem Cells for the Treatment of Cystic Fibrosis. Cystic Fibrosis Foundation, Therapeutics Inc. Disease Grant Competition. 198,000 CAD. [Grants] |
| 2014 Jul-2019 Jun | Principal Investigator. Molecular Mechanism(s) of Protection from Acute Lung Injury. Canadian Institutes of Health Research (CIHR). 900,000 CAD. [Grants] |
| 2014 Jul-2019 Jun | Co-Investigator. Z-BRAIN: A Zebrafish Drug Screening Platform Targeting Brain Disorders. Brain-Canada Grant. 1,310,000 CAD. [Grants] |

- 2014 Jul-2019 Jun **Co-Investigator.** Mechanisms of Impaired Skeletal Muscle Growth in Intensive Care Unit Acquired Weakness (ICUAW). Canadian Institutes of Health Research (CIHR). 715,000 CAD. [Grants]
- 2013 Jan-2018 Jun **Principal Investigator.** Mechanisms of protection and informed target discovery for gene and stem cell therapy in sepsis. Canadian Institutes of Health Research (CIHR). 130331. 750,000 CAD. [Grants]
- 2012 Mar-2017 Apr **Principal Investigator.** New Investigator Award: Informed discovery of novel targets for therapy. Canadian Institutes of Health Research (CIHR). 562,000 CAD. [Grants]

Presentations and Special Lectures

International

- 2016 May 18 **Invited Speaker.** Is all Organ Failure Created Equal? American Thoracic Society Meeting. San Francisco, California, USA.
- 2016 Mar 14-15 **Invited Speaker.** Integrative Genomics: Robust Biomarkers and Biotargets; Integrative Genomics can help Develop Robust Biomarkers: Considerations in Future Stem Cell Trials. 36th International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium.
- 2016 Mar 13 **Invited Speaker.** Molecular Mechanisms of Persistent ICU Acquired Weakness. Round Table Conference: Recovery after Critical Illness: Putting the Puzzle Together. Brussels, Belgium.

Abstracts

- 2016 May Burden Of Comorbid Illness Is Associated With 1-Year Survival But Not Early Disability After Critical Illness: Results From The RECOVER Program. Presenter(s): Chu L, Robles P, Tomlinson G, Thomas C, Burns KE, Matte A, Friedrich J, Lamontagne F, Mehta G, Adhikari N, Ferguson N, Rudkowski J, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, **dos Santos C**, Cook D, Cameron J, Herridge M.
- Identification Of MiR-124 As A Major Regulator Of Enhanced Endothelial Cell Glycolysis In Pulmonary Arterial Hypertension. Presenter(s): Dunmore B, Schlosser K, Schoors S, **dos Santos C**, Perez-Iratxeta C, Lavoie J, Long L, Hurst L, Caruso MLP, Ormiston A, Carmeliet P, Stewart D, Morrell N.

Heat Shock Protein 90 (HSP90) Stabilizes A Molecular Complex Of Caspase-8 And Toll-Like Receptor-4 (TLR-4) To Prolong Polymorphonuclear Neutrophil (PMN) Survival And Regulate Respiratory Burst Activity. Presenter(s): Amatullah H, D’Cruz R, Jia S, Tsang J, **dos Santos C**, Marshall J, Gupta S.

Mechanisms of chronic muscle wasting and dysfunction after an intensive care unit stay: a pilot study. Presenter(s): **dos Santos C**.

American Thoracic Society. San Francisco, California, USA.

National

- 2016 Apr 7 **Invited Speaker.** Mechanisms of Protection and Informed Target Discovery for Gene and Stem Cell Therapy in Sepsis. SCORR Meeting. Toronto, Ontario, Canada.
- 2016 Apr 6 **Invited Lecturer.** Mesenchymal Stem Cells for Treatment of Sepsis. Resuscitation in Motion Program MSC400H1. Toronto, Ontario, Canada.
- 2016 Feb 12 **Invited Speaker.** Treating Sepsis with Mesenchymal Stem Cells. Popular Science Series. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. Yanagawa B, Verma S, Jüni P, Tam DY, Mazine A, Puskas JD, **Friedrich JO**. A systematic review and meta-analysis of in situ versus composite bilateral internal thoracic artery grafting. *J Thorac Cardiovasc Surg*. 2016 Nov 21. **Senior Responsible Author**.
2. Sklar MC, Burns K, Rittayamai N, Lanys A, Rauseo M, Chen L, Dres M, Chen GQ, Goligher EC, Adhikari NK, Brochard L, **Friedrich JO**. Effort to breathe with various spontaneous breathing trial techniques. A physiological meta-analysis. *Am J Respir Crit Care Med*. 2016 Oct 21. **Senior Responsible Author**.
3. Brooks SC, Scales DC, Pinto R, Dainty KN, Racz EM, Gaudio M, Amaral AC, Gray SH, **Friedrich JO**, Chapman M, Dorian P, Fam N, Fowler RA, Hayes CW, Baker A, Crystal E, Madan M, Rubinfeld G, Smith OM, Morrison LJ. The postcardiac arrest consult team: impact on hospital care processes for out-of-hospital cardiac arrest patients. *Crit Care Med*. 2016 Nov 1;44(11): 2037-2044. **Coauthor or Collaborator**.
4. Herridge MS, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, **Friedrich JO**, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, Dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hebert P, Slutsky AS, Marshall JC, Cook D, Cameron JI; RECOVER Program Investigators (Phase 1: towards RECOVER) and the Canadian Critical Care Trials Group. The RECOVER program: disability risk groups & one year outcome after ≥ 7 days of mechanical ventilation. *Am J Respir Crit Care Med*. 2016 Oct 1;194(7): 831-844. **Coauthor or Collaborator**.
5. Li G, Cook DJ, Thabane L, **Friedrich JO**, Crozier TM, Muscedere J, Granton J, Mehta S, Reynolds SC, Lopes RD, Francois L, Freitag AP, Levine MA; PROTECT Investigators for the Canadian Critical Care Trials Group, and the Australian and New Zealand Intensive Care Society Clinical Trials Group. Risk factors for mortality in patients admitted to intensive care units with pneumonia. *Respir Res*. 2016 Jul 11;17(1): 80. Erratum in *Respir Res* 2016 Jul 11;17(1): 128. **Coauthor or Collaborator**.

6. Cameron JI, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, **Friedrich JO**, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hébert P, Slutsky AS, Marshall JC, Cook D, Herridge MS, RECOVER Program Investigators (Phase 1: towards RECOVER), Canadian Critical Care Trials Group. One-year outcomes in caregivers of critically ill patients. *N Engl J Med*. 2016 May 12; 374(19): 1831-41. **Coauthor or Collaborator**.
7. Sud S, Sud M, **Friedrich JO**, Wunsch H, Meade MO, Ferguson ND, Adhikari NK. High-frequency oscillatory ventilation versus conventional ventilation for acute respiratory distress syndrome. *Cochrane Database of Syst Rev*. 2016 Apr 4; Issue 4: CD004085. **Coauthor or Collaborator**.
8. Greenberg JA, Hsu J, Bawazeer M, Marshall J, **Friedrich JO**, Nathens A, Coburn N, May GR, Pearsall E, McLeod RS. Clinical practice guideline: management of acute pancreatitis. *Can J Surg*. 2016 Apr 1;59(2): 128-140. **Coauthor or Collaborator**.
9. Greenberg JA, Hsu J, Bawazeer M, Marshall J, **Friedrich JO**, Nathens A, Rotstein O, May G, Coburn N, Huang H, McLeod RS. Compliance with evidence-based guidelines in acute pancreatitis: an audit of practices in University of Toronto hospitals. *J Gastrointest Surg*. 2016 Feb; 20(2): 392-400. **Coauthor or Collaborator**.
10. Johnston BC, Alonso-Coello P, **Friedrich JO**, Mustafa RE, Tikkinen KAO, Neumann I, Vandvik PO, Akl EA, da Costa BR, Adhikari NK, Dalmau GM, Kosunen E, Mustonen J, Crawford MW, Thabane L, Guyatt GH. Do clinicians understand the size of treatment effects? A randomized survey across 8 countries. *CMAJ*. 2016 Jan 5;188(1): 25-32. **Coauthor or Collaborator**.

Non-Peer Reviewed

Journal Articles

1. Yanagawa B, Puskas JD, Verma S, **Friedrich JO**. Coronary artery bypass graft should be considered in octogenarians with multivessel coronary disease. *Can J Cardiol*. 2016 Sep; 32(9):1045.e1-3. **Senior Responsible Author**.
2. Yanagawa B, **Friedrich JO**, Verma S. Moving beyond beta-blockers and amiodarone. The use of anti-inflammatories to treat post-cardiac surgery atrial fibrillation. *JACC-Clinical Electrophysiology*. 2016 Feb 1;2(1): 86-88. **Coauthor or Collaborator**.

Abstracts

1. Merman E, Chu L, Robles P, Tomlinson G, Thomas C, Burns SB, Matte A, **Friedrich JO**, Lamontagne F, Mehta GM, Adhikari N, Ferguson N, Rudkowski J, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, Dos Santos C, Cook D, Cameron J, Herridge MS. Burden of comorbid illness is associated with 1-year survival but not early disability after critical illness: results from the RECOVER program. *Am J Resp Crit Care Med*. 2016 May;193. A1166. **Coauthor or Collaborator**.
2. Rauseo M, Soliman I, Chen L, Rittayamai N, Chen G-Q, Sklar M, Campbell C, Goligher EC, **Friedrich JO**, Sinderby CA, Heunks L, Brochard LJ. Electrical activity to determine the start of diaphragm activity in mechanically ventilated patients: an observational study. *Am J Resp Crit Care Med*. 2016 May;193. A7643. **Coauthor or Collaborator**.
3. Chen L, Xu M, Chen GQ, Soliman I, Rittayamai N, Sklar M, Shklar O, Martins C, Greco P, Every H, **Friedrich JO**, Pronovost A, Baker A, Zhou J-X, Brochard LJ. Respiratory mechanics in acute respiratory distress syndrome: variables and indexes associated with clinical outcome. *Am J Resp Crit Care Med*. 2016 May;193. A1839. **Coauthor or Collaborator**.
4. Parotto M, Tomlinson G, Tansey CM, Matte A, Robles P, Mehta S, Guest C, Mazer D, **Friedrich JO**, Slutsky A, Cook D, Cheung AM, Herridge MS. Risk stratification of the Toronto ARDS cohort using RECOVER program disability groups. *Am J Resp Crit Care Med*. 2016 May;193. A1847. **Coauthor or Collaborator**.
5. Burns KEA, Soliman I, Adhikari N, Zwein A, Wong J, Gomez-Builes C, Brochard LJ, Chen L, Rittayamai N, Sklar M, Lanys A, Chen G, Rauseo M, **Friedrich JO**. Effects of alternative spontaneous breathing trial techniques on clinical outcomes: a systematic review and meta-analysis. *Am J Resp Crit Care Med*. 2016 May;193. A5291. **Senior Responsible Author**.

Peer-Reviewed Grants

Funded

- | | |
|-------------------|--|
| Mar 2014-Feb 2017 | Principal Investigator . Novel Applications of Systematic Review and Meta-Analytic Techniques to Challenge Prevailing Thinking Regarding Effectiveness of Treatments for Reducing Mortality in Critically-Ill Patients. Canadian Institutes of Health Research (CIHR). Clinician Scientist Phase 2 (Renewal). 180,000 CAD. [Grants] |
| Sep 2014-Aug 2016 | Co-Investigator . The Frequency of Screening and SBT Technique Trial: The FAST Trial. Canadian Institutes of Health Research (CIHR). PI: Burns K. 156,772 CAD. [Operating Grants] |

Sep 2014-Aug 2016

Co-Investigator. Liberation from Mechanical Ventilation and Screening: The RELEASE Trial. Ontario Thoracic Society/Ontario Lung Association. PI: Burns K. 50,000 CAD. [Grants]

Presentations and Special Lectures

Provincial

2016 Feb 29

Invited Speaker. Mortality Outcomes in Critical Care Trials”, International Federation of Acute Care Trialists (InFACT)/ISARIC Colloquium on Building Global Clinical Research Collaboration-Outcome Measures. Whistler, British Columbia, Canada.

National

2016 Nov 1

Invited Speaker. Continuous vs intermittent dosing of antibiotics in critically-ill patients.

Moderator. Critical Care Nephrology.

Critical Care Canada Forum, Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. Brooks SC, Sales DC, Pinto R, Dainty KN, Racz EM, Gaudio M, Amaral AC, **Gray SH**, Friedrich JO, Chapman M, Dorian P, Fam N, Fowler RA, Hayes CW, Baker A, Crystal E, Madan M, Rubinfeld G, Smith OM, Morrison LJ. The Postcardiac Arrest Consult Team: Impact on Hospital Care Processes for Out-of-Hospital Cardiac Arrest Patients. *Crit Care Med.* 2016 Nov;44(11):2037-2044. **Coauthor or Collaborator.**
2. Ly DL, Khalili K, **Gray SH**, Atri M, Hanbidge A, Thippavong S. When the Appendix Is Not Seen on Ultrasound for Right Lower Quadrant Pain: Does the Interpretation of Emergency Department Physicians Correlate With Diagnostic Performance? *Ultrasound Quarterly.* 32(3):290-295, September 2016. **Coauthor or Collaborator.**
3. Rose L, Scales D, Atzema C, Burns, **Gray SH**, Doing C, Kiss A, Rubinfeld G, Lee J. Emergency Department Length of Stay for Critical Care Admissions: a Population-based Study. *Annals of the American Thoracic Society*, August 1, 2016, Vol. 13, No. 8: pp. 1324-1332. **Coauthor or Collaborator.**
4. Fortinsky KJ, Martel M, Razik R, Spiegle G, Grover S, Pavenski K, Weizman A, Gallinger Z, Kwapisz L, Mehta S, **Gray SH**, Barkun AN. Red Blood Cell Transfusions and Iron Therapy for Patients Presenting with Acute Upper Gastrointestinal Bleeding: A Survey of Canadian Gastroenterologists and Hepatologists," *Canadian Journal of Gastroenterology and Hepatology*, vol. 2016, Article ID 5610838, 2016. **Coauthor or Collaborator.**
5. Howes D, **Gray SH**, Brooks SC, Boyd JG, Djogovic D, Golan E, Green RS, Jacka MJ, Sinuff T, Chaplin T, Smith OM, Owen J, Szulewski A, Murphy L, Irvine S, Jichici D, Muscedere J. Canadian Guidelines for the use of targeted temperature management (therapeutic hypothermia) after cardiac arrest: A joint statement from The Canadian Critical Care Society (CCCS), Canadian Neurocritical Care Society (CNCCS), and the Canadian Critical Care Trials Group (CCCTG). *Resuscitation.* 2016 Jan;98:48-63. **Coauthor or Collaborator.**

Presentations and Special Lectures

International

2016 Jun 14-15 **Invited Speaker.** Critical care triage for scarce resources in a disaster; Resuscitative hysterotomy; DNR should be the default – Debate. Presenter(s): with Psirides A. SMACC. Dublin, Ireland.

2016 May 25 **Invited Speaker.** Critical Care Disasters. University of Maryland Department of Emergency Medicine's 5th Annual Critical Care Symposium. Baltimore, Maryland, USA.

Abstracts

2016 Feb 20 Can early warning scores predict mortality of ED septic patients? A comparison of ViEWS-L and NEWS-L. Presenter(s): **Gray SH**, Quan G, Lebovic G, McGowan M. Society Critical Care Congress (SCCM). Orlando, Florida, USA.

Oral Presentations

2016 Oct 13 Socking it to sepsis. UK Sepsis Trust. Presenter(s): McGowan M, Guiyab M, Barratt L, Smith O, **Gray SH**. (*won top oral presentation prize*)

Posters

2016 Dec 8 Empirical Mode Decomposition Analysis of Alcohol Withdrawal Tremor Signals. Presenter(s): Norouzi N, Aarabi P, Dear T, Carver S, Bromberg S, Kahan M, **Gray SH**, Borgundvaag B. Globa ISIP 2016 Paper #1035: Chicago, Illinois, USA.

2016 Dec Can early warning scores predict mortality of ED septic patients? A comparison of ViEWS-L and NEWS-L. Crit Care Med 43; (12 Suppl 1): 256. Presenter(s): Quan G, Lebovic G, McGowan M, **Gray SH**. Society of Critical Care Congress (SCCM). USA.

2016 Apr 20 Ten patients, one ventilator: How to best allocate critical care resources during mass disaster. Presenter(s): Acton C, McGowan M, Ziegler C, **Gray SH**. ICEM. Cape Town, South Africa.

Provincial

2016 Feb 21-23 **Invited Speaker.** Critical Care cases; Plenary on ACLS update. U of T EM Conference. Whistler, British Columbia, Canada.

Oral Presentations

2016 Jun 4 Lightning LO096 - Comfortable with your thoracotomy skills? An innovative simulation-based curriculum to teach rare procedures in emergency medicine. Presenter(s): **Gray SH**, Owen J, Petrosoniak A, M McGowan. Canadian Association of Emergency Physicians (CAEP). Quebec City, Quebec, Canada.

Posters

2016 Jun 4 Ten patients, one ventilator: How to best allocate critical care resources during mass disaster. Presenter(s): Acton C, McGowan M, Ziegler C, **Gray SH**. Canadian Association of Emergency Physicians (CAEP). Quebec City, Quebec, Canada.

National

2016 Oct **Invited Speaker.** Alcohol Withdrawal and Delirium Tremens – EM cases. Podcast . Presenter(s): with Borgundvaag B, Kahan M. Toronto, Ontario, Canada.

2016 Sep 20 **Invited Speaker.** University of Toronto EM City Wide Group B Rounds on Ventilators. Toronto, Ontario, Canada.

2016 Jul 19 **Invited Speaker.** Curriculum development and delivery. U of T EM Critical Care Skills Day. Presenter(s): with Petrosoniak A. Toronto, Ontario, Canada.

2016 Jul **Invited Speaker.** ACEP Frontline Podcasts on Resuscitative Hysterotomy and Disaster Planning. Toronto, Ontario, Canada.

2016 May 3-5 **Invited Speaker.** Critical Care cases workshop; Sepsis plenary. EMU. North York General Hospital. Toronto, Ontario, Canada.

2016 Feb 19 **Invited Speaker.** PMCD; Ventilators; Disaster triage. UWO Emergency Medicine, Visiting Professor. London, Ontario, Canada.

2016 Feb **Invited Speaker.** Emcrit.org podcast on Optimizing Critical Care in your ED. Toronto, Ontario, Canada.

2016 Jan 5 **Invited Speaker.** Critical Care cases. U of T EM City-wide Grand Rounds. Toronto, Ontario, Canada.

Local

2016 Sep 16 **Invited Speaker.** SMH ICU Grand Rounds on Sepsis. St. Michael's Hospital. Toronto, Ontario, Canada.

2016 Jan 11 **Invited Speaker.** Optimizing Sepsis Resuscitation. CPRS Rounds, Science & Sushi. St. Michael's Hospital. Toronto, Ontario, Canada.

Honours and Awards

2016 May 19 Nominated for Outstanding Clinical Teacher of the Year award in Emergency Medicine. St Michael's Hospital.

Peer-Reviewed Publications

Book Chapters

1. Balter M, Binnie M, Hall D. Respiriology. Chin-Yee B, Williams C, Chapter Editors. Frankfurter C, Associate Editor. Vanner R, EBM Editor. Toronto Notes. University of Toronto. 2016. **Co-Editor**.
2. Balter M, Hall D. The Respiratory Exam, Essential of Clinical Examination Handbook. 8th Edition University of Toronto. 2016. **Co-Editor**.

Non-Peer Reviewed Grants

Funded

2016 Mar-present **Co-Investigator (site)**. SUPERNOVA: Low-flow extracorporeal CO2 removal in patients with moderate ARDS to enhance lung protective ventilation: A pilot feasibility and safety study. PI: Brochard L. Collaborator(s): Friedrich J, Sklar M, Dres M, Pham T, Sandhu G, Salway K, Smith O. 15,000 CAD. [Clinical Trials]

Presentations and Special Lectures

International

Abstracts

2016 May 15 Clinical Features and Associated Likelihood of Primary Ciliary Dyskinesia in Adults. Presenter(s): **Hall D**, Sullivan K, Daniels M, Atkinson J, Ferkol T, Lee HS, Metjian H, Olivier K, Rosenfeld M, Milla C, Zariwala M, Sagel S, Carson J, Krischer J, Hazucha M, Knowles M, Leigh M, Genetics Disorders Of Mucociliary Clearance Consortium (GDMCC). (Trainee Presentation). American Thoracic Society. San Francisco, California, USA.

National

2016 Feb 27 **Co-Chair and Speaker.** COPD:Moving From Definitions to Phenotype-Driven Management. Lung 2016. Toronto, Ontario, Canada.

Honours and Awards

2016 Jun Outstanding Teacher for Critical Care Medicine. Dept of Critical Care Medicine, Faculty of Medicine, St. Michael's Hospital.

DR. CHRISTOPHER HAYES, ST. MICHAEL'S HOSPITAL

Peer-Reviewed Grants

Funded

2012 Oct–present **Principal Investigator.** SEARCHED: Sepsis Early Antibiotics and Resuscitation to Control Infected Patients in the Emergency Department. AHSC Alternate Funding Plan Innovation Fund – MOHLTC. \$82,455.00 CAD. [Grants]

Honours and Awards

2016 Recipient of the William Goldie Prize and Travel Award in Quality and Innovation

Peer-Reviewed Publications

Journal Articles

1. Douglas M. Campbell, Laya Poost-Foroosh, Katerina Pavenski, Maya Contreras, Fahad Alam, Jason Lee, **Houston P**. Simulation as a toolkit – understanding the perils of blood transfusion in a complex health care environment. *Advances in Simulation* (2016) 1:32. **Senior Responsible Author.**

Presentations and Special Lectures

Provincial

Oral Presentation

2016 Apr Use of Simulation to Detect Errors in Perioperative Blood Transfusion Administration. Presenter(s): **Houston P**, Campbell D, Poost L, Contreras M, Khodadoust N, Pavenski K. Canadian Conference on Medical Education. Montreal, Quebec, Canada.

Posters

2016 Apr Breaking Barriers: A Governance Model for Successful Collaboration in an Academic Health Sciences Centre. Presenter(s): Beavers L, **Houston P**, Miles S, Zirkle M, Baker L. Canadian Conference on Medical Education. Montreal, Quebec, Canada.

Honours and Awards

2016 Jun Student Experience Award. St. Michael's Hospital (Distinction)

Peer-Reviewed Publications

Journal Articles

1. Charbonney E, Tsang JY, Li Y, **Klein D**, Duque P, Romaschin A, Marshall JC. Endotoxemia Following Multiple Trauma: Risk Factors and Prognostic Implications. Crit Care Med. 2016 Feb 1;44(2):335-41. **Coauthor or Collaborator.**

Peer-Reviewed Publications

Journal Articles

1. Nagendran M, McAuley DF, Kruger PS, Papazian L, Truwit JD, Laffey JG, Thompson BT, Clarke M, Gordon AC. Statin therapy for acute respiratory distress syndrome: an individual patient data meta-analysis of randomised clinical trials. *Intensive Care Med.* 2016 Dec 21. **Coauthor or Collaborator.**
2. Curley GF, Jerkic M, Dixon S, Hogan G, Masterson C, O'Toole D, Devaney J, **Laffey JG.** Cryopreserved, xeno-free human umbilical cord mesenchymal stromal cells reduce lung injury severity and bacterial burden in rodent escherichia coli-induced acute respiratory distress syndrome. *Crit Care Med.* 2016 Nov 16. **Senior Responsible Author.**
3. McDonnell MJ, Aliberti S, Goeminne PC, Restrepo MI, Finch S, Pesci A, Dupont LJ, Fardon TC, Wilson R, Loebinger MR, Skrbic D, Obradovic D, De Soyza A, Ward C, Laffey JG, Rutherford RM, Chalmers JD. Comorbidities and the risk of mortality in patients with bronchiectasis: an international multicentre cohort study. *Lancet Respir Med.* 2016 Dec;4(12):969-979. **Coauthor or Collaborator.**
4. **Laffey JG,** Bellani G, Pham T, Fan E, Madotto F, Bajwa EK, Brochard L, Clarkson K, Esteban A, Gattinoni L, van Haren F, Heunks LM, Kurahashi K, Laake JH, Larsson A, McAuley DF, McNamee L, Nin N, Qiu H, Ranieri M, Rubenfeld GD, Thompson BT, Wrigge H, Slutsky AS, Pesenti A; LUNG SAFE Investigators and the ESICM Trials Group. Potentially modifiable factors contributing to outcome from acute respiratory distress syndrome: the LUNG SAFE study. *Intensive Care Med.* 2016 Dec;42(12):1865-76. **Principal Author.**
5. McDonnell MJ, Aliberti S, Goeminne PC, Dimakou K, Zucchetti SC, Davidson J, Ward C, **Laffey JG,** Finch S, Pesci A, Dupont LJ, Fardon TC, Skrbic D, Obradovic D, Cowman S, Loebinger MR, Rutherford RM, De Soyza A, Chalmers JD. Multidimensional severity assessment in bronchiectasis: an analysis of seven European cohorts. *Thorax.* 2016 Dec; 71(12): 1110–1118. **Coauthor or Collaborator.**
6. Horie S, Ansari B, Masterson C, Devaney J, Scully M, O'Toole D, **Laffey JG.** Hypercapnic acidosis attenuates pulmonary epithelial stretch-induced injury via inhibition of the canonical NF- κ B pathway. *Intensive Care Med Exp.* 2016 Dec;4(1):8. **Senior Responsible Author.**

7. Curley GF, **Laffey JG**, Zhang H, Slutsky AS. Biotrauma and ventilator-induced lung injury: Clinical implications. *Chest*. 2016 Nov;150(5):1109-17. **Coauthor or Collaborator**. Bellani G, **Laffey JG**, Pham T, Fan E; LUNG SAFE Investigators and the ESICM Trials Group. The LUNG SAFE study: a presentation of the prevalence of ARDS according to the Berlin Definition! *Crit Care*. 2016 Sep 9;20(1):268. **Coauthor or Collaborator**.
8. Horie S, **Laffey JG**. Recent insights: mesenchymal stromal/stem cell therapy for acute respiratory distress syndrome. *F1000Res*. 2016 Jun 28;5. pii: F1000 Faculty Rev-1532. **Senior Responsible Author**.
9. Horie S, Curley GF, **Laffey JG**. What's new in cell therapies in ARDS? *Intensive Care Med*. 2016 May;42(5):779-82. **Senior Responsible Author**.
10. Bihari S, Laffey JG, Bersten AD. The ten studies that should be done in ARDS. *Intensive Care Med*. 2016 May;42(5):783-6. **Coauthor or Collaborator**.
11. Masterson C, O'Toole D, Leo AM, McHale P, Horie S, Devaney J, **Laffey JG**. Effects and mechanisms by which hypercapnic acidosis inhibits sepsis-induced canonical nuclear factor- κ B signaling in the lung. *Crit Care Med*. 2016 Apr;44(4):e207-17. **Senior Responsible Author**.
12. Bellani G, **Laffey JG**, Pham T, Fan E, Brochard L, Esteban A, Gattinoni L, van Haren F, Larsson A, McAuley DF, Ranieri M, Rubenfeld G, Thompson BT, Wrigge H, Slutsky AS, Pesenti A; LUNG SAFE Investigators; ESICM Trials Group. Epidemiology, patterns of care, and mortality for patients with acute respiratory distress syndrome in intensive care units in 50 countries. *JAMA*. 2016 Feb 23;315(8):788-800. **Coauthor or Collaborator**.
13. Horie S, Masterson C, Devaney J, **Laffey JG**. Stem cell therapy for acute respiratory distress syndrome: a promising future? *Curr Opin Crit Care*. 2016 Feb;22(1):14-20. **Senior Responsible Author**.

Book Chapters

1. **Laffey JG**, Kavanagh BP. Hypercapnia in the critically ill. In: Webb A, Angus D, Finfer S, Gattinoni L, Singer M, editor(s). *Oxford Textbook of Critical Care*. Oxford University Press; Section 4, Part 4.5: Acute respiratory failure, Chapter 86, 394-8, 2016. **Principal Author**.
2. Neligan P, **Laffey JG**. Obstetric physiology and special considerations in ICU. In: Webb A, Angus D, Finfer S, Gattinoni L, Singer M, editor(s). *Oxford Textbook of Critical Care*. Oxford University Press; Section 19, Part 19.3: Obstetric intensive care, Chapter 365, 1745-8, 2016. **Senior Responsible Author**.

Peer-Reviewed Grants

Funded

- 2014 Oct-2017 Sep **Co-Investigator.** Health Research Board. Enhancing the antimicrobial efficacy of mesenchymal stem cells (MSCs) for eliminating sepsis induced acute lung injury (ALI) using a novel combination of immune-stimulants. PI: Rowan N. 288,000 €. [Grants]
- 2014 Oct-2017 Sep **Co-Investigator.** Health Research Board. STandaRd Issue TrANsfusion versuS Fresher red blood cell Use in intenSive carE (TRANSFUSE) – a randomised controlled trial. PI: Nichol A. 750,000 €. [Grants]

Presentations and Special Lectures

International

- 2016 Oct 4-5 **Invited Speaker.** Effect of postoperative high-flow nasal cannula vs. conventional oxygen therapy on hypoxemia in patients after major abdominal surgery: A randomized clinical trial; What can I learn from lung injury models; LUNG SAFE: Regional variations and factors contributing to patient outcome from ARDS; Acute hypoxaemic respiratory failure: different from ARDS; Oxygenation targets in ARDS patients. European Society of Intensive Care Medicine. Annual Conference, Milan, Italy.
- 2016 Sept 8-9 **Invited Speaker.** Acute hypoxemic respiratory failure – Epidemiology update; Challenging clinical cases. International Conference in Anesthesia and Critical Care, Cong, County Mayo, Ireland.
- 2016 Sept 6 **Invited Speaker.** Therapeutic efficacy of human mesenchymal cells (MSCs) in the repair of ARDS and VILI; Mesenchymal cells (MSCs) for ARDS – translational challenges. European Respiratory Society. Annual Conference, London, England, UK.
- 2016 Jun 30 **Invited Speaker.** ECMO in the 21st Century – Insights from the LUNG SAFE study. ICS. ECMO Annual Meeting, Paris, France.

- 2016 May 26 **Invited Speaker.** ARDS and acute hypoxic respiratory failure – is there a difference; ARDS and acute hypoxic respiratory failure in the real world – what have we learned. SMART Annual Meeting, Milan, Italy.
- 2016 May 18 **Invited Speaker.** Cell therapies for pulmonary diseases. International Anesthesia Research Society. Annual Scientific Meeting, San Francisco, CA, USA.
- 2016 Apr 29 **Invited Speaker.** Severe chest trauma. European Society. Annual Regional Conference, Porto, Portugal.
- 2016 Feb 23 **Invited Speaker.** Epidemiology, Epidemiology, patterns of care, and mortality for patients with acute respiratory distress syndrome in intensive care units in 50 countries. Society of Critical Care Medicine. Annual Conference, Orlando, Florida, USA.

National

- 2016 Oct 30-31 **Invited Speaker.** Stem cells for ARDS; Lessons from LUNG SAFE. Canadian Critical Care Forum. Toronto, Ontario, Canada.
- 2016 Jun 29 **Invited Speaker.** ARDS: Recommendations for mechanical ventilation. University of Toronto. Mechanical Ventilation Master Class, Toronto, Ontario, Canada.
- 2016 Apr 26 **Invited Speaker.** Current clinical applications of stem cells for critical illnesses. Ontario Institute of Regenerative Medicine. Public Symposium, Peter Gilgan Centre for Research and Learning. The Hospital for Sick Children. Toronto, Ontario, Canada.

Local

- 2016 Apr 8 **Invited Speaker.** Epidemiology, Epidemiology, patterns of care, and mortality for patients. St. Michael's Hospital. Critical Care Grand Rounds. Toronto, Ontario, Canada.
- 2016 Apr 1 **Invited Speaker.** Epidemiology, Epidemiology, patterns of care, and mortality for patients. St. Michael's Hospital. Critical Care Grand Rounds. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. Sinuff T, Garland A, Muscedere J, **Lawless B**, Cook D, Dodek P, et al. Knowledge Translation Interventions for Critical Ill Patients: A Systematic Review. *Critical Care Medicine*. 2013 Mar 16. **Coauthor or Collaborator**.

Manuals

1. Snead C, **Lawless B**, Kostrzewa L, Vogt A, et al. Provincial Guidelines for Regional Epilepsy Centres. In: Lawless, B; Kostrzewa, L; Vogt, A, editor(s). Toronto, Ontario, Canada: Critical Care Services Ontario; 2016. **Coauthor or Collaborator**.
2. **Lawless B**, Kostrzewa L, Xisto N, et al. Regional Trauma Network Development: A guide for Ontario hospitals. In: Lawless, B; Kostrzewa, L., editor(s). Toronto, Ontario, Canada: Critical Care Services Ontario; 2016. 42 p. **Principal Author**.
3. Snead C, **Lawless B**, Vogt A, Kostrzewa L, et al. Provincial Guidelines for the Management of Medically Refractory Epilepsy in Adults and Children Who are Not Candidates for Epilepsy Surgery. In: Lawless, B; Kostrzewa, L; Vogt, A, editor(s). Toronto, Ontario, Canada: Critical Care Services Ontario; 2016. 56 p. **Coauthor or Collaborator**.
4. Snead C, **Lawless B**, Kostrzewa L, Vogt A, et al. Provincial Guidelines for Epilepsy Surgery Referrals in Ontario. In: Lawless, B; Kostrzewa, L; Vogt, A, editor(s). Toronto, Ontario, Canada: Critical Care Services Ontario; 2016. 20 p. **Coauthor or Collaborator**.

Presentations and Special Lectures

Provincial

Abstract

- 2016 May Development and Implementation of Quality Indicators for Acute Care Surgery. Presenter(s): Ahmed N, Paskar D, Rice T, McFarlan A, **Lawless B**, Marshall JC, Rezende J, Rizoli S. Abstract published *Can J of Surg*, Vol 29, (suppl 1) June 2016 (Trainee Presentation). Trauma Association of Canada. Annual Scientific Meeting, Halifax, Nova Scotia.

National

2016 Jun 29

Chair. Critical Care Response Team Education Day. Critical Care Services Ontario. Toronto, Ontario, Canada.

2016 Jun 2

Chair. The Introduction and Launch of Regional Trauma Networks in Ontario. Critical Care Services Ontario. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. Han B, Li Y, Parkinson S, Del Sorbo L, **Lee WL**, Zhong N, Slutsky AS, Zhang H. Tsr Chemoreceptor interacts with IL-8 provoking E. coli transmigration across human lung epithelial cells - my lab performed the endothelial permeability assays. Scientific Reports. **Coauthor or Collaborator.**
2. Kraehling J, Chidlow J, Rajagopal C, Sugiyama M, Lee M, Park E, Chen K, Larriveé B, Folta-Stogniew E, Zhou W, Nagle M, Herz J, Williams K, Fernández-Hernando C, Sugiyama M, **Lee WL**, Eichmann A, Sessa W. Functional genome-wide RNAi screen reveals new pathways of LDL uptake into endothelial cells: ALK1 is a novel LDL binding protein - (my lab used the TIRF assay to demonstrate that ALK1 is required for LDL transcytosis - a critical point in the paper). Nature Communications. **Coauthor or Collaborator.**
3. Schmidt EP, Kuebler WM, **Lee WL**, Downey GP. Adhesion Molecules: Master Controllers of the Circulatory System. Comprehensive Physiology. 6(2): 945-73. **Coauthor or Collaborator.**
4. Philip A, Wang Y, Mauro A, El-Rass S, Marshall J, **Lee WL**, Slutsky A, DosSantos CC, Wen XY. Development of a zebrafish sepsis model for high-throughput drug discovery. Experimental and Molecular Medicine. **Coauthor or Collaborator.**
5. Goldenberg N, Steinberg B, Rutka J, Chen R, Cabral V, Rosenblum N, Kapus A, **Lee WL**. Research projects in the Surgeon-Scientist and Clinician-Investigator programs at the University of Toronto (1987-2016): a cohort study. CMAJ Open. 4(3): E444-447. **Senior Responsible Author.**
6. **Lee WL**, Klip A. Endothelial transcytosis of insulin: does it contribute to insulin resistance? Physiology. 31(6): 336-45. Canadian Institutes of Health Research (CIHR) - MOP130493 **Principal Author.**
7. Batchu S, Majumder S, Bowskill B, White K, Advani S, Brijmohan A, Liu Y, Thai K, Azizi P, **Lee WL**, Advani A. IP receptor agonism preserves beta-cell function and attenuates albuminuria through nephrin-independent mechanisms (collaborator - measured podocyte transcytosis in nephrin-depleted cells using the novel TIRF assay). Diabetes. 65(5): 1398-1409. **Coauthor or Collaborator.**

8. Steinberg B, Goldenberg N, Fairn G, Kuebler W, **Slutsky A**. Where has basic science gone? The decline of biomedical research in the medical literature. *The FASEB Journal*. 30(2): 515-518. **Senior Responsible Author**.
9. Sugiyama M, Gamage A, Zyla R, Armstrong SM, Advani S, Advani A, Wang C, **Lee WL**. Influenza infection induces platelet-endothelial adhesion which contributes to lung injury. *Journal of Virology*. 90(4): 1812-23. **Senior Responsible Author**.
10. Kuebler WM, Wittenberg C, **Lee WL**, Reppien E, Goldenberg NM, Lindner K, Gao Y, Winoto-Morbach S, Drab M, Mühlfeld C, Dombrowsky H, Ochs M, Schütze S, Uhlig S. Thrombin stimulates albumin transcytosis in lung microvascular endothelial cells via activation of acid sphingomyelinase (2nd author - measured albumin transcytosis using our novel TIRF assay). *American Journal of Physiology - Lung Cellular and Molecular Physiology*. 310(8): L720-L732. **Coauthor or Collaborator**.

Peer-Reviewed Grants

Funded

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|-------------------|--|
| 2016 Jul-2019 Jun | Principal Investigator . Molecular mechanisms of LDL transcytosis. Heart and Stroke Foundation of Canada (HSFC). 264,869 CAD. [Grants] |
| 2015 Nov-2017 Jul | Principal Investigator . Canada Foundation for Innovation - John R. Evans Leadership Fund (JELF) & Ontario Research Fund - Small Infrastructure Grant (JELF-ORF). Purchased a TIRF microscope that is dedicated to the work in this proposal. Co-applicant(s) : Kapus A, Szaszik. Canada Foundation for Innovation (CFI). 1,000,000 CAD. [Grants] |
| 2015 Apr-2020 Mar | Principal Investigator . NSERC Discovery Grant - Molecular characterization of albumin transcytosis by different tissue beds. Natural Sciences and Engineering Research Council of Canada (NSERC). 150,000 CAD. [Discovery Grant] |
| 2013 Jul-2018 Jun | Principal Investigator . Influenza and acute lung injury: priming, platelets and permeability. Canadian Institutes of Health Research (CIHR). 487,130 CAD. [Operating Grant] |
| 2016 Jul-2017 Jun | Principal Investigator . Discovery of novel antiinfluenza drugs – a high-throughput approach using zebrafish and mice. Ontario Lung Association. 47,131 CAD. [Grant-in-Aid] |

2011 Jan-2016 Jan **Principal Investigator.** Leaky blood vessels - new insights into how influenza causes death. Ministry of Research and Innovation (MRI) (Ontario). Early Researcher Award. 150,000 CAD. [Grants]

Presentations and Special Lectures

International

2016 **Invited Speaker.** Integrity of the lung endothelium determines mortality in mouse models of severe influenza. FASEB Scientific Research Conference. Saxtons River, USA.

Posters

2016 Flow promotes insulin uptake and transcytosis in microvascular endothelial cells independently of nitric oxide – potential role of the actin cytoskeleton. (Student, Guan L). Experimental Biology, San Diego, USA.

Provincial

2016 **Invited Speaker.** LDL transcytosis by SR-BI is regulated distinctly from reverse cholesterol transport. Canadian Lipoprotein Conference. St. John's, Newfoundland and Labrador, Canada.

National

2016 **Invited Speaker.** LDL transcytosis - the neglected first step of atherosclerosis. McMaster University Thrombosis and Atherosclerosis Cardiovascular Research Seminar Series. Hamilton, Ontario, Canada.

2016 **Invited Speaker.** The Tie2-agonist Vasculotide rescues mice from lethal influenza infection. Latner Thoracic Surgery Research Lab Seminar. Toronto, Ontario, Canada.

2016 **Invited Speaker.** Plugging a hole as a novel therapeutic strategy – the contribution of leaky blood vessels to death. CALAS Symposium. Toronto, Ontario, Canada.

Honours and Awards

2016 Oct Canada Research Chair (Tier II), Mechanisms of Endothelial Permeability Government of Canada.

Peer-Reviewed Publications

Journal Articles

1. Sakr Y, Rubatto Birri PN, Koffis K, Nanchal R, Shah B, Kluge S, Schroeder ME, **Marshall JC**, Vincent JL, Intensive Care Over Nations Investigators. Higher Fluid Balance Increases the Risk of Death From Sepsis: Results From a Large International Audit. *Crit Care Med*. 2016 Dec 5. **Coauthor or Collaborator**.
2. Li G, Thabane L, Cook DJ, Lopes RD, **Marshall JC**, Guyatt G, Holbrook A, Akhtar-Danesh N, Fowler RA, Adhikari NK, Taylor R, Arabi YM, Chittock D, Dodek P, Freitag AP, Walter SD, Heels-Ansdell D, Levine MA. Risk factors for and prediction of mortality in critically ill medical-surgical patients receiving heparin thromboprophylaxis. *Ann Intensive Care*. 2016 Dec 1;6(1):18. **Coauthor or Collaborator**.
3. Lalu MM, Sullivan KJ, Mei SH, Moher D, Straus A, Fergusson DA, Stewart DJ, Jazi M, MacLeod M, Winston B, **Marshall JC**, Hutton B, Walley KR, McIntyre L. Evaluating mesenchymal stem cell therapy for sepsis with preclinical meta-analyses prior to initiating a first-in-human trial. *Elife*. 2016 Nov 17;5. **Coauthor or Collaborator**.
4. Avey MT, Moher D, Sullivan KJ, Fergusson D, Griffin G, Grimshaw JM, Hutton B, Lalu MM, Macleod M, **Marshall JC**, Mei SH, Rudnicki M, Stewart DJ, Turgeon AF, McIntyre L, Canadian Critical Care Translational Biology Group. The Devil Is in the Details: Incomplete Reporting in Preclinical Animal Research. *PLoS One*. 2016 Nov 17;11(11):e0166733. **Coauthor or Collaborator**.
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6. Amatullah H, Shan Y, Beauchamp BL, Gali PL, Gupta S, Maron-Gutierrez T, Speck ER, Fox-Robichaud AE, Tsang JL, Mei SH, Mak TW, Rocco PR, Semple JW, Zhang H, Hu P, **Marshall JC**, Stewart DJ, Harper ME, Liaw PC, Liles WC, Dos Santos CC, Canadian Critical Care Translational Biology Group (CCCTBG) . DJ-1/PARK7 Impairs Bacterial Clearance in Sepsis. *Am J Respir Crit Care Med*. 2016 Oct 13. **Coauthor or Collaborator**.

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9. Cook DJ, Johnstone J, **Marshall JC**, Lauzier F, Thabane L, Mehta S, Dodek PM, McIntyre L, Pagliarello J, Henderson W, Taylor RW, Cartin-Ceba R, Golan E, Herridge M, Wood G, Ovakim D, Karachi T, Surette MG, Bowdish DM, Lamarche D, Verschoor CP, Duan EH, Heels-Ansdell D, Arabi Y, Meade M, PROSPECT Investigators and the Canadian Critical Care Trials Group. Probiotics: Prevention of Severe Pneumonia and Endotracheal Colonization Trial-PROSPECT: a pilot trial. Trials. 2016 Aug 2;17:377. **Coauthor or Collaborator**.
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19. Tsang JL, Jia SH, Parodo J, Plant P, Lodyga M, Charbonney E, Szaszi K, Kapus A, **Marshall JC**. Tyrosine Phosphorylation of Caspase-8 Abrogates Its Apoptotic Activity and Promotes Activation of c-Src. *PLoS One.* 2016 Apr 21;11(4):e0153946. **Senior Responsible Author.**
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21. **Marshall JC**, Kwong W, Kommaraju K, Burns KEA. Determinants of Citation Impact in Large Clinical Trials in Critical Care: The Role of Investigator-Led Clinical Trials Groups. *Crit Care Med.* 2016 Apr;44(4):663-670. **Principal Author.**
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24. Maslove DM, **Marshall JC**. Diagnostic Utility of Different Blood Components in Gene Expression Analysis of Sepsis. *Shock*. 2016 Mar 1;45(3):292-8. **Senior Responsible Author.**
25. Rimmelé T, Payen D, Cantaluppi V, **Marshall JC**, Gomez H, Gomez A, Murray P, Kellum JA, ADQI XIV Workgroup. IMMUNE CELL PHENOTYPE AND FUNCTION IN SEPSIS. *Shock*. 2016 Mar 1;45(3):282-91. **Coauthor or Collaborator.**
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27. Charbonney E, Tsang JY, Li Y, Klein D, Duque P, Romaschin A, **Marshall JC**. Endotoxemia Following Multiple Trauma: Risk Factors and Prognostic Implications. *Crit Care Med*. 2016 Feb 1;44(2):335-41. **Senior Responsible Author.**
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29. Greenberg JA, Hsu J, Bawazeer M, **Marshall JC**, Friedrich JO, Nathens A, Coburn N, Huang H, McLeod RS. Compliance with Evidence-Based Guidelines in Acute Pancreatitis: an Audit of Practices in University of Toronto Hospitals. *J Gastrointest Surg*. 2016 Feb 1;20(2):392-400. **Coauthor or Collaborator.**
30. Godard S, Herry C, Westergaard P, Scales N, Brown SM, Burns K, Mehta S, Jacono FJ, Kubelik D, Maziak DE, **Marshall J**, Martin C, Seely AJ. Practice Variation in Spontaneous Breathing Trial Performance and Reporting. *Can Respir J*. 2016 Jan 1;2016:9848942. **Coauthor or Collaborator.**

31. McIntyre LA, Moher D, Fergusson DA, Sullivan KJ, Mei SH, Lalu M, **Marshall JC**, McLeod M, Griffin G, Grimshaw J, Turgeon A, Avey MT, Rudnicki MA, Jazi M, Fishman J, Stewart DJ, Canadian Critical Care Translational Biology Group. Efficacy of Mesenchymal Stromal Cell Therapy for Acute Lung Injury in Preclinical Animal Models: A Systematic Review. PLoS One. 2016 Jan 1;11(1):e0147170. **Coauthor or Collaborator**.

Book Chapters

1. **Marshall JC**. Endotoxin in the pathogenesis of sepsis, Section VII, Chapter 2. In: Bockeria LA, Yaroustovsky MB, editor(s). Textbook of Blood Purification in Intensive Care. 3rd Edition. 2016. p. 458-468. **Principal Author**.

Consensus Development Conference, Journal Articles, Meta-Analysis, Review

1. Shankar-Hari M, Phillips GS, Levy ML, Seymour CW, Liu VX, Deutschman CS, Angus DC, Rubenfeld GD, Singer M, Sepsis Definitions Task Force: Angus D, Annane D, Bauer M, Bellomo R, Bernard G, Chiche JD, Coopersmith C, Deutschman C, Hotchkiss R, Levy M, **Marshall JC**, Martin G, Opal S, Rubenfeld G, Seymour C, Singer M, van der Poll T, Vincent JL. Developing a New Definition and Assessing New Clinical Criteria for Septic Shock: For the Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3). JAMA. 2016 Feb 23;315(8):775-87. **Coauthor or Collaborator**.

Reviews

1. Silversides JA, Major E, Ferguson AJ, Mann EE, McAuley DF, **Marshall JC**, Blackwood B, Fan E. Conservative fluid management or deresuscitation for patients with sepsis or acute respiratory distress syndrome following the resuscitation phase of critical illness: a systematic review and meta-analysis. Intensive Care Med. 2016 Oct 12. **Coauthor or Collaborator**.
2. Greenberg JA, Hsu J, Bawazeer M, **Marshall JC**, Friedrich JO, Nathens A, Coburn N, May GR, Pearsall E, McLeod RS. Clinical practice guideline: management of acute pancreatitis. Can J Surg. 2016 Apr 1;59(2):128-40. **Coauthor or Collaborator**.
3. Mebazaa A, Laterre PF, Russell JA, Bergmann A, Gattinoni L, Gayat E, Harhay MO, Hartmann O, Hein F, Kjolbye AL, Legrand M, Lewis RJ, **Marshall JC**, Marx G, Radermacher P, Schroedter M, Scigalla P, Stough WG, Struck J, Van den Berghe G, Yilmaz MB, Angus DC. Designing phase 3 sepsis trials: application of learned experiences from critical care trials in acute heart failure. J Intensive Care. 2016 Jan 1;4:24. **Coauthor or Collaborator**.

Peer-Reviewed Grants

Funded

- 2016 Oct - 2017 Oct **Principal Applicant.** The Antimicrobial Resistance in Intensive Care (AMRIC) Network: A global surveillance network to monitor the role of the ICU environment in the emergence of AMR; Phase I. Agence Nationale de la Recherche. Joint Programme Initiative JPIAMR. Collaborator(s): Fowler R, Daneman N, Murthy S, Gordon A, Bauer M, Sánchez García M. 75,000 CAD. [Grants]
- 2016 Sep - 2021 Jun **Principal Applicant.** Regulation of Neutrophil Inflammatory Function by Casase-8 Phosphorylation. Canadian Institutes of Health Research. Collaborator(s): Juss J. 676,584 CAD. [Grants]
- 2016 Sep - 2019 Jun **Co-Investigator.** PROSPECT: Probiotics to Prevent Severe Pneumonia and Endotracheal Colonization Trial. Canadian Institutes of Health Research (CIHR). Project Grant. PI: Johnstone J. 1,272,893 CAD. [Clinical Trials]
- 2016 Sep - 2018 Jun **Co-Investigator.** Bacteremia Antibiotic Length Actually Needed for Clinical Effectiveness (BALANCE): A Randomized Controlled Clinical Trial. PI: Daneman N. Collaborator(s): Carignan A, Taggart L, Elsayed S, Toye B, Evans G. 2,010,635 CAD. [Clinical Trials]
- 2016 Jul - 2018 Jun **Co-Investigator.** Temperature, Heart and Respiratory Rate Investigation with Variability Evaluation and Serum Biomarkers THRRIVES) to provide early and specific warning of infection. The Ottawa Hospital Academic Medical Organization. Innovation Fund. PI: Seely A. [Clinical Trials]
- 2016 Apr - 2019 Mar **Co-Investigator.** PROSPECT: Probiotics: Prevention of Severe Pneumonia and Endotracheal Colonization Trial. The Physicians' Services Incorporated Foundation. PI: Cook D, Johnstone J. Collaborator(s): Meade M, Lauzier F, Thebane L, Mehta S, Ball I, Golan E, Herridge M, Karachi T, Morris A, Garber G, Chau L, McIntyre L, Reeves B, Cirrone R, Carten-Ceba R, Arabi Y. 250,000 CAD. [Clinical Trials]

- 2015 Jul - 2016 Jun **Co-Investigator.** Bacteremia Antibiotic Length Actually Needed for Clinical Effectiveness (BALANCE): A Randomized Controlled Clinical Trial. Canadian Institutes of Health Research. Operating Grant. PI: Daneman N, Fowler R. Collaborator(s): Bagshaw S, Coburn B, Cook D, Dodek P, Hall R, Kumar A, Lamontagne F, Lauzier F, Marshall J, Martin C, McIntyre L, Muscedere J, Reynolds S, Stelfox H. 100,000 CAD. [Clinical Trials]
- 2015 Jul - 2016 Jun **Co-Investigator.** Crystalloid FLUID Choices for Resuscitation of Hospitalized Patients: A Pragmatic Cluster Cross Over Pilot Trial. Canadian Institutes of Health Research (CIHR). Operating Grant. PI: McIntyre L, Taljaard M. Collaborator(s): Christian M, Fergusson D, Forster A, Fox-Robichaud A, Graham I, Hawken S, Marshall J, Martin C, Maybee A, McCartney C, Muscedere J, Saginur R, Seely A, Stiell I, Thavor K. 135,935 CAD. [Clinical Trials]
- 2015 Jun - 2016 Jun **Co-Investigator.** Establishing Feasibility & Safety of Providing Critical Care for Patients with Ebola through design of a simulated Ebola Treatment Centre. Canadian Institutes of Health Care Research. Operating Grant - Innovative Ebola Research Grants. PI: Fowler R, Adhikari NK. Collaborator(s): Bah EI, Chan A, Christian MD, Hajek J, Hall TN, Lamah MC, Lamontagne F, Marshall JC, Mishra S, Murthy S, Piquette D, Simor E, Vanderschuren A. 249,973 CAD. [Grants]
- 2015 Apr - 2016 Mar **Principal Investigator.** International Forum for Acute Care Trialists. Canadian Institutes of Health Research (CIHR). Institute of Circulatory and Respiratory Health. 40,000 CAD. [Grants]
- 2015 Feb - 2017 Feb **Principal Investigator.** Cellular and molecular mechanisms of neutrophil survival in sepsis and trauma: the role of PBEF/Nampt/Visfatin. The Physicians' Services Incorporated Foundation. 169,500 CAD. [Grants]
- 2014 Sep - 2019 Aug **Co-Principal Investigator.** The Canadian Critical Care Trials Group. Canadian Institutes of Health Research (CIHR). Circulatory and Respiratory Health Community Development. CD1 138094. PI: Hebert P, Marshall J, Cook D, Burns K, et al. 1,500,000 CAD. [Grants]

2014 Jul - 2016 Jun **Co-Investigator.** Temperature, Heart and Respiratory Rate Investigation with Variability Evaluation and Serum Biomarkers (THRRIVES) to provide early and specific warning of infection. The Ottawa Hospital Academic Medical Organization. Innovation Fund. PI: Seely A. [Clinical Trials]

Presentations and Special Lectures

International

- 2016 Oct 1-5 **Invited Speaker.** Update on sepsis; Acute pancreatitis; Clinical trials in sepsis: Is big beautiful? Annual Congress, European Society of Intensive Care Medicine. Milan, Lombardia, Italy.
- 2016 Sep 8 **Invited Speaker.** Pandemic Readiness: The role of global collaboration. First World Sepsis Congress; Online Conference.
- 2016 Sep 23-24 **Invited Speaker.** Why have sepsis clinical trials failed? ; The gut in multiple organ failure: Where do we stand in 2016; Deresuscitation; Endotoxin in critically ill patients. Chinese Critical Care Congress 2016. Dalian, Liaoning, China.
- 2016 Aug 25-28 **Invited Speaker.** Influenza: The role of the ICU. International Society for Influenza and Respiratory Viruses Options IX. Chicago, Illinois, USA.
- 2016 Jun 11-14 **Invited Speaker.** The Multiple Organ Dysfunction Score: The role of the doctor. Shock Society Annual Meeting. Austin, Texas, USA.
- 2016 May 12-14 **Invited Speaker.** Sepsis 2016: Are we making progress?; The Multiple Organ Dysfunction Syndrome (MODS) at 40; Acinetobacter infection in the ICU; Why do good trials yield divergent results? 14th Symposium of Medical Emergency and Critical Care 2016. Santiago, Chile.
- 2016 May 14 **Invited Speaker.** The International Forum for Acute Care Trialists (InFACT) Outcome Measures Working Group. American Thoracic Society Workshop on Determining the Outcome Measures for Recovery after Critical Illness. San Francisco, California, USA.
- 2016 Apr 7-8 **Invited Speaker.** Failure: The inevitable pathway of sepsis protocols; Deresuscitation: The final stage in sepsis management; CCCTG: What is next in sepsis clinical trials? 13th International Sepsis Forum, Latin American Sepsis Institute. Sao Paulo, Brazil.

- 2016 Mar 15-18 **Invited Speaker.** What is an ICU?; Deresuscitation; Why do good trials yield divergent results?; Priorities in the management of trauma. 36th International Symposium of Intensive Care and Emergency Medicine. Brussels, Belgium.
- 2016 Mar 10-11 **Invited Speaker.** The role of the ICU in the response to pandemics. Leopoldina Symposium: Sepsis: The challenges of science, politics and society. Jena, Germany.
- 2016 Feb 18-19 **Invited Speaker.** Molecular therapies for sepsis: Why have they failed? Scientific Computing for Improved Diagnosis and Therapy of Sepsis (SCIDATOS) Inaugural Meeting. Heidelberg, Germany.
- 2016 Feb 5-6 **Invited Speaker.** Pandemics: How to prepare; Outcome measures for ICU trials; Peritonitis; Investigator-led research: The Canadian Critical Care Trials Group; Basic immunology for the intensivist. Sepsis 2016 - 22nd Annual Conference of the Indian Society of Critical Care Medicine. Agra, India.
- 2016 Jan 29-30 **Invited Speaker.** Hope, hype, and Hippocrates: The ongoing challenges of sepsis research. 20th Annual Meeting, Japanese Society of Critical Care for Endotoxemia. Tokyo, Japan.

National

- 2016 Oct 31-Nov 2 **Invited Speaker.** Definitions: Do they help us?; Endotoxemia: Harmful or beneficial?; International collaboration for RCTs in the 21st Century. Critical Care Canada Forum 2016. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. Verma S, Garg A, Yan AT, Gupta AK, Al-Omran M, Sabongui A, Teoh H, **Mazer CD**, ConnellyKA. Effect of Empagliflozin on Left Ventricular Mass and Diastolic Function in Individuals With Diabetes: An Important Clue to the EMPA-REG OUTCOME Trial? *Diabetes Care*. 2016 Dec;39(12):e212-e213. **Coauthor or Collaborator**.
2. Karangelis D, Mazine A, Roubelakis A, Alexiou C, Fragoulis S, **Mazer CD**, Yanagawa B, Latter D, Bonneau D. What is the role of sutureless aortic valves in today's armamentarium? *Expert Rev Cardiovasc Ther*. 2016 Dec 26:1-9. **Coauthor or Collaborator**.
3. Hall R, Beattie S, Grocott HP, **Mazer CD**, Turgeon AF, Denault A, Yang H, Lalu MM, George RB, Sampson S, McDonald H, members of the Canadian Perioperative Anesthesiology Clinical Trials Group (PACT) Steering Committee. Can we create a Canadian Perioperative Anesthesia Clinical Trials Group? We review the first five years and glimpse into the future. *Can J Anesth*. 2016 Nov; 63:1215-1222. **Coauthor or Collaborator**.
4. Steinhart BD, Levy P, Vandenberghe H, Moe G, Yan AT, Cohen A, Thorpe KE, McGowan M, **Mazer CD**. A randomized control trial using a validated prediction model for diagnosing acute heart failure in undifferentiated dyspneic emergency department patients -Results of the Gaspar Study. *J Card Fail*. 2016 Aug 23. pii: S1071-9164(16)31112-5. **Senior Responsible Author**.
5. Deb S, Tu JV, Austin PC, Ko DT, Rocha R, **Mazer CD**, Kiss A, Femes SE. Impact of South Asian ethnicity on long-term outcomes after coronary artery bypass grafting surgery: A large population-based propensity matched study. *J Am Heart Assoc*. 2016 July;5(7):pii: e003491. **Coauthor or Collaborator**.
6. Rahe-Meyer N, Levy JH, **Mazer CD**, Schramko A, Klein AA, Brat R, Okita Y, Ueda Y, Schmidt DS, Ranganath R, Gill R. Randomized evaluation of fibrinogen vs placebo in complex cardiovascular surgery (REPLACE): a double-blind phase III study of haemostatic therapy. *Br J Anaesth*. 2016 Jul;117(1):41-51. **Coauthor or Collaborator**.

7. Cahill LS, Gazdzinski LM, Tsui AK, Zhou YQ, Portnoy S, Liu E, **Mazer CD**, Hare GM, Kassner A, Sled JG. Functional and anatomical evidence of cerebral tissue hypoxia in young sickle cell anemia mice. *J Cereb Blood Flow Metab.* 2016 May 10. **Coauthor or Collaborator.**
8. Deschamps A, Hall R, Grocott H, **Mazer CD**, Choi PT, Turgeon AF, de Medicis E, Bussi eres JS et al. Canadian Perioperative Anesthesia Clinical Trials Group. Cerebral Oximetry Monitoring to Maintain Normal Cerebral Oxygen Saturation during High-risk Cardiac Surgery: A Randomized Controlled Feasibility Trial. *Anesthes.* 2016 Apr;124(4):826-36. **Coauthor or Collaborator.**
9. Wijeyesundera DN, Pearse RM, Shulman MA, Abbott TE, Torres E, Croal BL, Granton JT, Thorpe KE, Grocott MP, Farrington C, Myles PS, Cuthbertson BH; METS Study Investigators. Measurement of Exercise Tolerance before Surgery (METS) study: a protocol for an international multicentre prospective cohort study of cardiopulmonary exercise testing prior to major non-cardiac surgery. *BMJ Open.* 2016 Mar;6(3):e010359. **Coauthor or Collaborator.**
10. Ha ACT, **Mazer CD**, Verma S, Yanagawa B, Verma A. Management of postoperative atrial fibrillation after cardiac surgery. *Curr Opin Cardiol.* 2016 Mar;31(2):183-90. **Coauthor or Collaborator.**
11. Lecker I, Whissell PD, Wang D-S, Avramescu S, **Mazer CD**, Orser BA. Tranexamic acid-associated seizures: causes and treatment. *Ann Neurol.* 2016 Jan;79(1):18-26. **Coauthor or Collaborator.**
12. Deb S, Austin PC, Tu JV, Ko DT, **Mazer CD**, Kiss A, Fries SE. A review of propensity score methods and their use in cardiovascular research. *Can J of Cardiology.* 2016 Feb;32(2):259-65. **Coauthor or Collaborator.**

Peer-Reviewed Grants

Funded

- 2016-2019 **Co-Principal Investigator.** Transfusion Triggers in Cardiac Surgery New Zealand Trial (TRICS III). Health Research Council of New Zealand. [Grants]
- 2016 Oct **Co-Investigator.** Accelerating the safe and effective translation of research to STOP-MI (Stem cell Therapy fOr Perioperative Myocardial Infarction). [Grants]

- 2016 Sep **Co-Investigator.** Kidney Outcomes in the Transfusion Requirements in Cardiac Surgery – III (TRICS – III) Trial. (Kidney Foundation of Canada - Biomedical Research Grant. [Grants]
- 2016 Sep **Co-Investigator.** Randomized trial of a chiropody-led intervention to reduce diabetic foot complications (ENABLE-CHIROPODY). Heart and Stroke Foundation of Canada. [Grants]
- 2016 Sep **Co-Principal Investigator.** Anticoagulation strategies for bioprosthetic heart valves - a randomized controlled trial (ACHIEVE). Heart and Stroke Foundation of Canada. [Grants]
- 2015-2019 **Co-Investigator.** STandard versus Accelerated initiation of Renal Replacement Therapy in Acute Kidney Injury (STARRT-AKI). CIHR Operating Grant. [Grants]
- 2015-2019 **Co-Investigator.** STandard versus Accelerated initiation of Renal Replacement Therapy in Acute Kidney Injury (STARRT-AKI). CIHR and Industry Partnered Collaborative Research. [Grants]
- 2015-2018 **Co-Investigator.** A randomized trial of mitral valve repair with leaflet resection versus leaflet preservation on functional mitral stenosis: The Canadian Mitral Research Alliance (CAMRA-1) Trial. Heart and Stroke Foundation of Canada. [Grants]
- 2015-2018 **Co-Principal investigator.** Transfusion Triggers in Cardiac Surgery Australia Trial (TRICS III). National Health and Medical Research Council of Australia. [Grants]
- 2015-2017 **Principal Investigator.** Clinical trials to improve outcomes in patients undergoing cardiovascular surgery. University of Toronto, Department of Anesthesia 2015 Merit Award Research Competition. [Grants]
- 2014-2019 **Site Principal Investigator.** Left Atrial Appendage Occlusion Study III (LAAOS III). [Grants]
- 2013-2018 **Principal Investigator.** Transfusion Requirement in Cardiac Surgery III (TRICS III). CIHR. [Grants]
- 2013-2016 **Co-investigator.** The METS (Measurement of Exercise Tolerance before Surgery) Study: An international multicentre prospective cohort study of cardiopulmonary exercise testing for improving preoperative risk stratification for major non-cardiac surgery. CIHR; Heart and Stroke Foundation of Canada. [Grants]

2013-2015 **Principal Investigator.** Reducing adverse outcomes in cardiac surgery related to tissue hypoxia. University of Toronto, Department of Anesthesia 2013 Merit Award Research Competition. [Grants]

Non-Peer Reviewed Grants

Funded

2016-2020 **Co-Investigator.** Post-surgical enhanced monitoring for cardiac arrhythmias and atrial fibrillation (SEARCH-AF): A randomized controlled trial. Bristol Myers-Squibb, Boehringer-Ingelheim. [Grants]

2016-2018 **Co-Investigator.** A Randomized, Double-Blind, Placebo Controlled, Phase 2 Study to Evaluate the Efficacy and Safety of QPI-1002 for the Prevention of Acute Kidney Injury in Subjects at High Risk for AKI following Cardiac Surgery (QRK209) Quark Pharmaceuticals Inc. [Grants]

2016-2017 **Co-Investigator.** Effects of Empagliflozin on cardiac structure, function, and circulating biomarkers in patients with Type 2 diabetes: EMPA-HEART Trial. Boehringer Ingelheim. [Grants]

2015-2017 **Co-Investigator.** A randomized controlled trial of axillary vs. innominate artery cannulation for antegrade cerebral protection in aortic surgery: The ACE randomized trial. [Grants]

2015-2016 **Co-Investigator.** LEVO-CTS (A Double-Blind, Randomized, Placebo-Controlled Study of Levosimendan in Patients with Left Ventricular Systolic Dysfunction Undergoing Cardiac Surgery Requiring Cardiopulmonary Bypass) Tenax Therapeutics. [Grants]

2013-2016 **Principal Investigator.** Efficacy and safety of perioperative infusion of 6 % hydroxyethyl starch 130/0.4 in an isotonic electrolyte solution (Volulyte™) vs. 5% HSA as volume replacement therapy during cardiac surgery for adult patients. Fresenius Kabi. [Grants]

2013-2016 **Co-Principal Investigator.** A randomized, multicenter, double-blind, placebo-controlled study of AC607 for the treatment of acute kidney injury in cardiac surgery subjects. AlloCure Inc. [Grants]

2013-2015 **Co-Investigator.** A Phase II Multi-Center, Parallel-Group, Randomized, Double Blind, Proof-of-Concept, Adaptive Study Investigating the Safety and Efficacy of THR-184 Administered via Intravenous Infusion in Patients at Increased Risk of Developing Cardiac Surgery Associated-Acute Kidney Injury (CSA-AKI) THRASOS Innovation Inc. [Grants]

Presentations and Special Lectures

International

- 2016 Nov 13 **Invited Speaker.** Pharmacologic Management of Hemorrhage – Benefit vs. Risk. American Heart Association Scientific Sessions. New Orleans, Louisiana, USA.
- 2016 Oct 24 **Invited Speaker.** What's New in RBC Transfusion Therapy: Any New TRICS?" Refresher Course Lecture. American Society of Anesthesiologists annual meeting. Chicago, Illinois, USA.
- 2016 Aug 28-31 **Invited Speaker.** New oral anticoagulants (NOACs) monitoring; Anesthetic implications of the new antithrombotic agents. 16th World Congress of Anaesthesiologists. Hong Kong, China.
- 2016 Aug 26 **Invited Speaker.** Brain protection in cardiac surgery and anesthesia. 24th Annual Meeting of Chinese Society of Anesthesiology. Guangzhou, China.
- 2016 Apr 2 **Invited Speaker.** Coagulation and Transfusion: cell salvage" (workshop). Society of Cardiovascular Anesthesiologists annual meeting. San Diego, California, USA.
- 2016 Apr 5 **Invited Speaker.** Liberal and conservative transfusion triggers – What do they mean?" Society of Cardiovascular Anesthesiologists annual meeting, San Diego California, USA.

Peer-Reviewed Grants

Funded

2016 Sep-2017 Aug

Co-investigator. Thromboprophylaxis After Significant Traumatic Brain Injury: A Randomized Controlled Trial. PI: Pirouzmand F, Scales D. Collaborator(s): English S, Fourney D, Geerts W, Griesdale D, Jabejdar M, Kramer A, Kutsogiannis D, Macdonald R, Machnowska M, Mansouri A, Midha R, O'Kelly C, Patel C, Fowler R. CIHR. 100,000 CAD. [Grants]

Peer-Reviewed Publications

Journal Articles

1. McCredie VA, Piva S, Santos M, Xiong W, Manoel AL, **Rigamonti A**, Hare GMT, Chapman MG, Baker AJ. The impact of red blood cell transfusion on cerebral tissue oxygen saturation in severe traumatic brain injury. Neurocrit Care. 18 Oct 2016.
Coauthor or Collaborator.

Peer-Reviewed Publications

Journal Articles

1. Chia TL, Chesney TR, Isa D, Mnatzakanian G, Colak E, Belmont C, Hirpara D, Veigas PV, Acuna SA, **Rizoli S**, Rezende-Neto J. Thrombocytosis in splenic trauma: in-hospital course and association with venous thromboembolism. *Injury*. 2016 Jul;S0020-1383(16):30294-7. **Coauthor or Collaborator**.
2. Rezende-Neto JB, Rice T, Abreu ES, Rotstein O, **Rizoli S**. Anatomical, physiological, and logistical indications for the open abdomen: A proposal for a new classification system. *World Journal of Emergency Surgery*. 2016 Jun;11(28):eCollection. **Senior Responsible Author**.
3. Di Battista AP, Rhind SG, Hutchison MG, Hassan S, Shiu MY, Inaba K, Topolovec-Vranic J, Neto AC, **Rizoli S**, Baker AJ. Inflammatory cytokine and chemokine profiles are associated with patient outcomes and the hyperadrenergic state following acute brain injury. *Journal of Neuroinflammation*. 2016 Feb 16;13(1):40. **Coauthor or Collaborator**.
4. Bryne JP, Mann NC, Hoeft CJ, Buick J, Karanicolas P, **Rizoli S**, Hunt JP, Nathens AB. The Impact of Short Prehospital Times on Trauma Center Performance Benchmarking: An Ecologic Study. *Journal of Trauma & Acute Care Surgery*. 2016 Jan 21;Epub ahead of print. **Coauthor or Collaborator**.
5. **Rizoli S**, Min A, Sanchez AP, Shek P, Grodecki R, Veigas P, Peng H. In trauma, conventional ROTEM® and TEG® results are not interchangeable but are similar in clinical applicability. *Journal of Military Medicine*. 2016;181(5):117-126. **Principal Author**.
6. Coccolini F, Catena F, Moore EE, Ivatury R, Biffi W, Peitzman A, Coimbra R, **Rizoli S**, Kluger Y, Abu-Zidan FM, Ceresoli M, Montori G, Sartelli M, Weber D, Fraga GP, Naidoo N, Zanini N, Moore FA, Ansaloni L. WSES Classification and Guidelines for Liver trauma. *World Journal Emergency Surgery*. 2016. **Coauthor or Collaborator**.
7. Rezende-Neto J, **Rizoli S**. A new device for temporary hemorrhage control in penetrating injuries to the ventricles. *Journal of Trauma and Acute Care Surgery*. 2016. **Senior Responsible Author**.

8. Kelly JM, Veigas P, Hollands S, Min A, **Rizoli S**. Hypocalcaemia in trauma is common and associated with mortality and transfusion - without point-of-care testing, laboratory diagnosis is often delayed or missed: retrospective cohort study. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine*. 2016. **Senior Responsible Author**.

Non-Peer Reviewed Articles

Journal Articles

1. Veigas PV, Callum J, **Rizoli S**, Nascimento B, de Luz LT. A systematic review on the rotational thrombelastometry (Rotem®) values for the diagnosis of coagulopathy, prediction and guidance of blood transfusion and prediction of mortality in trauma patients. *Scand J Trauma Resusc Emerg Med*. 2016 Oct 3;24(1):114. **Coauthor or Collaborator**.
2. **Rizoli S**, Petersen A, Bulger E, Coimbra R, Kerby JD, Minei J, Morrison L, Nathens A, Schreiber M, de Oliveira Manoel AL; ROC Investigators. Early prediction of outcome after severe traumatic brain injury: a simple and practical model. *BMC Emerg Med*. 2016 Aug;16(1):32. **Principal Author**.
3. Di Saverio S, Birindelli A, Kelly MD, Catena F, Weber DG, Sartelli M, Sugrue M, De Moya M, Gomes CA, Bhangu A, Agresta F, Moore EE, Soreide K, Griffiths E, De Castro S, Kashuk J, Kluger Y, Leppaniemi A, Ansaloni L, Andersson M, Coccolini F, Coimbra R, Gurusamy KS, Campanile FC, Biffl W, Chiara O, Moore FA, Peitzman A, Fraga G, Navarro DC, Maier RV, **Rizoli S**, Balogh ZJ, Bendinelli C, Cirocchi R, Tonini V, Piccinini A, Tugnoli G, Jovine E, Persiani R, Biondi A, Scalea T, Stahel P, Ivatury R, Velmahos G, Andersson R. WSES Jerusalem Guidelines for Diagnosis and Treatment of Acute Appendicitis. *World Journal of Emergency Surgery*. 2016 Jul;11(34):eCollection. **Coauthor or Collaborator**.
4. Sartelli M, Weber DG, Ruppe E, **Rizoli S**, Viale P. Antimicrobials: a global alliance for optimizing their rational use in intra-abdominal infections (AGORA). *World Journal of Emergency Surgery*. 2016 Jul;11(33). **Coauthor or Collaborator**.
5. Newgard CD, Sanchez BJ, Bulger EM, Brasel KJ, Byers A, Buick JE, Sheehan KL, Guyette FX, King RV, Mena-Munoz J, Minei J, Schmicker RH, ROC Investigators. A geospatial analysis of severe firearm injuries compared to other injury mechanisms: Event characteristics, Location, Timing and Outcomes. *Acad Emerg Med*. 2016 May;23(5):554-65. **Coauthor or Collaborator**.

6. Undurraga Perl VJ, Leroux B, Cook MR, Watson J, Fair K, Martin DT, Kerby JD, Williams C, Inaba K, Wade CE, Cotton BA, Del Junco DJ, Fox EE, Scalea TM, Tilley BC, Holcomb JB, Schreiber MA, PROPPR Study Group. Damage-control resuscitation and emergency laparotomy: Findings from the PROPPR Study. *Journal of Trauma and Acute Care Surgery*. 2016 Apr;80(4):568-74. **Coauthor or Collaborator**.
7. Peng HT, Grodecki R, **Rizoli S**, Shek PN. A comparative study of tissue factor and kaolin on blood coagulation assays using rotational thromboelastometry and thromboelastography. *Blood Coagul Fibrinolysis*. 2016 Jan;27(1):31-41. **Coauthor or Collaborator**.
8. Gomez Builes J, **Rizoli S**, McFarlan A, Sholzberg M, Petropolis A, Zwein A, Manoel AL. Fibrin Clot Formation Kinetics in Trauma Patients. *Chest* 2016. 2016;150(4S):285A-285A. **Coauthor or Collaborator**.
9. Carreiro P, Rezende Neto JB, Lisboa TA, Ribeiro DD, Camargo ERS, Andrade M, **Rizoli S**, Melo JR. Coagulation Factor XIII and Desmopressin Improve Hemostasis in Uncontrolled Bleeding. *Acta Cirurgica Brasileira* 2015. 2015 Mar;30(3):170-177. **Coauthor or Collaborator**.

Book Chapters

1. Nascimento B, Callum J, Tien H, Peng H, **Rizoli S**, Karanicolas P, Alam A, Xiong W, Selby R, Garzon AM, Colavecchia C, Howald R, Nathens A, Beckett A. Fibrinogen in the initial resuscitation of severe trauma (FiiRST): a randomized feasibility trial. In: *Br J Anaesth*. 117. 6. 2016. p. 775-782. **Coauthor or Collaborator**.
2. Hoffman LP, **Rizoli S**, Rezende-Neto J. Lesao Vascular Abdominal. (Translation). In: Boffard KD, ed, editor(s). *Manual de Cuidados Cirurgicos Definitivos em Trauma*. 3rd edition Sao Paulo. 2016. **Coauthor or Collaborator**.
3. Ali J, **Rizoli S**, Pavenski K. The Coagulopathic Trauma Patient and Massive Transfusion Protocol. In: J. Ali ed. World Scientific, editor(s). *The Surgical Critical Care Handbook: A Guide to Care of the Critically Ill Surgical Patient*. 2016. **Coauthor or Collaborator**.
4. **Rizoli S**. About the editor. In: J. Ali ed. World Scientific, editor(s). *The Surgical Critical Care Handbook: A Guide to Care of the Critically Ill Surgical Patient*. 2016. p. xi-xii. **Principal Author**.
5. **Rizoli S**. Preface. In: Ribeiro Jr.Me., Eds, editor(s). *Livro Trauma Pronto*. Atheneu; 2016. **Principal Author**.
6. Andrade MV, Vilela DN, **Rizoli S**, Rezende-Neto JB. Fisiopatogenia do Choque. In: Souza HP, Breigeron R and Vilhordo DW, eds, editor(s). *Doenca Trauma*. Atheneu; 2016. p. 89-96. **Coauthor or Collaborator**.

7. **Rizoli S**, Rezende-Neto JB, Espada PC. Reposicao volemica e de hemoderivados no traumatizado. In: Souza HP, Breigeron R and Vilhordo DW, eds, editor(s). Doenca Trauma. Atheneu; 2016. p. 145-154. **Principal Author**.
8. Belmont CCG, Espada PC, **Rizoli S**, Rezende-Neto JB. Trauma toracoabdominal penetrante. In: Souza HP, Breigeron R and Vilhordo DW, eds, editor(s). Doenca Trauma. Atheneu; 2016. p. 363-369. **Coauthor or Collaborator**.

Journal Issues

1. Di Battista AP, **Rizoli S**, Lejnieks B, Min A, Shiu MY, Peng HT, Baker AJ, Hutchison MG, Churchill, N, Inaba K, Nascimento BB, Manoel AL, Beckett A, Rhind SG. Sympathoadrenal activation is associated with acute traumatic coagulopathy and endotheliopathy in isolated brain injury. Shock. 2016 May. **Coauthor or Collaborator**.

Peer-Reviewed Grants

Funded

- | | |
|-------------|--|
| 2012 - 2016 | Principal Site Investigator . Prospective randomized optimal platelet and plasma ratio trial. CIHR and Defense Research and Development Canada. CRR120612. PI: Holcomb J. [Clinical Trials] |
| 2012 - 2016 | Principal Investigator . Coagulopathy in Trauma: A Comparative Study. Defense Research and Development Canada. W7719-125093/001/TOR. [Contracts] |

Non-Peer Reviewed Grants

Funded

- | | |
|-------------------|--|
| 2015 Jul-2016 Jul | Co-Investigator . Effect of Remote Ischemic Conditioning in Trauma Patients with Hemorrhagic Shock: A novel intervention aimed at reducing immune activation and improving patient outcome. St. Michael's Hospital Foundation Translational Innovation Fund. PI: Rotstein OD. Collaborator(s): Wen XY, Rhind S. 50,000 CAD. [Clinical Trials] |
| 2015-2017 | Co-Investigator . Effect of Remote Ischemic Conditioning on Neutrophil Function and the Immune-Inflammatory and Coagulation Profiles in Trauma Patients with Hemorrhagic Shock. Physicians' Service Foundation. PI: Rotstein OD. Collaborator(s): Leung CH, Topolovec-Vranic J, Rhind S, Thorpe K. 167,933 CAD. [Clinical Trials] |

2015 - 2016 **Principal Investigator.** Using rotational thromboelastometry and simplified guidelines to reduce inappropriate transfusion of blood and blood products to trauma patients at St. Michael's Hospital. St. Michael's Hospital. AFP Innovation Funds. 29,200 CAD. [Clinical Trials]

Presentations and Special Lectures

International

- 2016 Dec 2 **Invited Speaker.** Trauma Coagulopathy: University of Toronto protocol and how to perform damage control resuscitation; Address question #3 on the role of laboratorial tests (including viscoelastic tests) in diagnosing and guiding hemostatic resuscitation. Trauma Coagulopathy Consensus Conference. São Paulo, Brazil.
- 2016 Jul 14 **Lecturer.** Anything new in blood utilization since 1:1 was proposed; Adrenaline and head injury: any role for beta blockers or alpha-agonists?. Trauma Conference International. Coronado, California, USA.
- 2016 Apr 28 **Lecturer.** Coagulopathy in trauma, management from pre-hospital to ICU. XVIII Trauma Course and Pre-Congress of the Brazilian Trauma Leagues. State University of Campinas (UNICAMP). Campinas, Brazil.
- 2016 Apr 26 **Lecturer.** Trauma, bleeding and coagulopathy. 1st International Trauma Symposium, XVI Introductory Course of the Trauma League and Emergency Surgery. Faculty of Medicine of Santo Amaro (UNISA). Santo Amaro, São Paulo, Brazil.
- 2016 Jan 31 **Examiner.** Practice oral exam for senior general surgery residents. Kuwait University, Faculty of Medicine. Kuwait City, Kuwait, Saudi Arabia.
- 2016 Jan **Lecturer.** Assessment and management of massive bleeding; Blunt hepatic trauma; Management of stab wounds to the anterior abdominal wall; Evidence based telemedicine; Further understanding traumatic brain injury. 14th Annual Kuwait Postgraduate Assembly in Surgery and 3rd Annual Kuwait Surgical Society Meeting. Kuwait City, Kuwait, Saudi Arabia

Abstracts

2016 Apr **Presenter.** Coagulation Profile in Patients with Traumatic Brain Injury. 9th International Update on Neuroanesthesia and Neurointensive Care EURONEURO2016. Barcelona, Spain.

Provincial

Abstracts

2016 Apr 23 **Presenter.** State of the art trauma management; Viscoelastic hemostatic monitoring for decision support. 9th Annual Blood & Beyond Conference. Halifax, Nova Scotia, Canada.

National

2016 Jun 2 **Chair.** Tile Lecture, Visiting Professor in Trauma, Research Symposium. University of Toronto. Toronto, Ontario, Canada.

2016 May 3 **Session Chair and Facilitator.** Speed dating session - meeting with senior investigators - Trauma and Coagulopathy. Research in Motion (RIM) 2016. Toronto, Ontario, Canada.

2016 May 2 **Commentator.** Research in Motion (RIM) 2016. Toronto, Ontario, Canada. Presenter(s): Ho C, Reperfusion ischemia conditioning; Kurz M, Coagulopathies post cardiac arrest.

Local

2016 Jan 27 **Lecturer.** Update on fibrinogen use. St. Michael's Hospital Trauma Rounds. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. Brander L, Moerer O, Hedenstierna G, Beck J, Takala J, Slutsky AS, **Sinderby CA**. Neural control of ventilation prevents both over-distension and de-recruitment of experimentally injured lungs. *Respir Physiol Neurobiol*. 2016 Dec 22;237:57-67. **Senior Responsible Author**.
2. Doorduyn J, Nolle J, Roesthuis LH, van Hees HW, Brochard L, **Sinderby CA**, van der Hoeven JG, Heunks LM. Partial Neuromuscular Blockade During Partial Ventilatory Support in Sedated Patients with High Tidal Volumes. *Am J Respir Crit Care Med*. 2016 Oct 17. **Coauthor or Collaborator**.

Presentations and Special Lectures

International

- 2016 Oct 14 **Invited Speaker**. The brainstem and respiratory drive during critical illness. Sixth Hedenstierna Laboratory Master Class Symposium. Uppsala, Sweden.

Honours and Awards

- 2016 Translational Innovation Fund, St-Michael's Hospital Foundation Award. "Endo-Tracheal Through Flow: Cleaning the Blood with Minimal Risk"
- 2016 Angel's Den, 2nd place, "Endo-Tracheal Through Flow: Cleaning the Blood with Minimal Risk. St. Michael's Hospital

Peer-Reviewed Publications

Journal Articles

1. Bellani G, Laffey JG, Pham T, Fan E, Brochard L, Esteban A, Gattinoni L, van Haren F, Larsson A, McAuley DF, Ranieri M, Rubenfeld G, Thompson BT, Wrigge H, **Slutsky AS**, Pesenti A; LUNG SAFE Investigators; ESICM Trials Group. Epidemiology, patterns of care, and mortality for patients with acute respiratory distress syndrome in intensive care units in 50 countries. *JAMA* 2016: 315(8): pp 788-800. **Coauthor or Collaborator.**
2. Adhikari NK, **Slutsky AS**. Pediatric high-frequency oscillation. The end of the road? *American Journal of Respiratory and Critical Care Medicine* 2016: 193(5): pp 471-472. **SeniorResponsible Author.**
3. Cabrera-Benitez NE, Perez-Roth E, Ramos-Nuez A, Solguren I, Padron JM, **Slutsky AS**, Villar J. Inhibition of endotoxin-induced airway epithelial cell injury by a novel family of pyrrol derivatives. *Laboratory Investigation* 2016: 96: pp 632-640. **Coauthor or Collaborator.**
4. Herridge MS, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flanner J, Bayley M, Batt J, Dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choon K, Fowler R, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Caparro C, Chow CW, Keshavjee S, Brochard L, Hebert P, **Slutsky AS**, et al. The RECOVER Program: Disability risk groups. One year outcome after greater than or equal to 7 days of mechanical ventilation. *American Journal of Respiratory and Critical Care Medicine*. 2016. **Coauthor or Collaborator.**
5. **Slutsky AS**, Villar J, Pesenti A. Happy 50th birthday ARDS!. *Intensive Care Medicine* 2016: 42(5): pp 637-639. **Principal Author.**

6. Cameron JI, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hebert P, **Slutsky AS**, et al. RECOVER Program Investigators (Phase 1: towards RECOVER): Canadian Critical Care Trials Group. *New England Journal of Medicine* 2016; 374(19): pp 1831-41. **Coauthor or Collaborator.**
7. Curley GF, Laffey JG, Zhang H, **Slutsky AS**. Biotrauma and ventilator induced lung injury: clinical implications. *Chest* 2016; 150(5): pp 1109-1117. **Senior Principal Author.**
8. Han B, Li M, Xu Y, Islam D, Khang J, Del Sorbo L, Lee W, Szaszi K, Zhong N, **Slutsky AS**, Li Y, Zhang H: Tsr chemoreceptor interacts with IL-8 provoking E. coli transmigration across human lung epithelial cells. *Scientific Reports* 2016; 6: pp 31087. **Coauthor or Collaborator.**
9. Husain-Syed F, **Slutsky AS**, Ronco C. Lung-kidney cross-talk in the critically ill patient. *American Journal of Respiratory and Critical Care Medicine* 2016; 194(4): pp 402-14. **Coauthor or Collaborator.**
10. Mao P, Li J, Huang Y, Wu S, Pang X, He W, Liu X, **Slutsky AS**, Zhang H, Li Y. miR-19b Mediates lung epithelial-mesenchymal transition via PTEN in response to mechanical stretch. *American Journal of Respiratory and Critical Care Medicine*. 2016. **Coauthor or Collaborator.**
11. Kasenda B, Sauerbrei W, Royston P, Mercat A, **Slutsky AS**, Cook D, Guyatt GH, Brochard L, Richard JC, Stewart TE, Meade M, Briel M. Multivariable fractional polynomial interaction to investigate continuous effect modifiers in a meta-analysis on higher versus lower PEEP for patients with ARDS. *BMJ Open* 2016; 6(9): pp e011148. **Coauthor or Collaborator.**
12. Neto AS, Schmidt M, Azevedo LCP, Bein T, Brochard L, Beutel G, Combes A, Costa ELV, Hodgson C, Lindskov C, Lubnow M, Lueck C, Michaels AJ, Paiva JA, Park M, Pesenti A, Pham T, Quintel M, Ranieri VM, Ried M, Roncon-Albuquerque Jr R, **Slutsky AS**, Takeda S, Terragni PP, Vejen M, Weber-Carstens S, Welte T, Gama de Abreu M, Pelosi P, Schultz MJ and The ReVA Research Network and the PROVE Network Investigators: Associations between ventilator settings during extracorporeal membrane oxygenation for refractory hypoxemia and outcome in patients with acute respiratory distress syndrome: a pooled individual patient data analysis. *Intensive Care Medicine*. 2016. **Coauthor or Collaborator.**

Peer-Reviewed Grants

Funded

- 2015 - 2022 **Principal Investigator.** Mechanisms and Therapies of ARDS. Co-PI: Zhang H: Canadian Institutes of Health Research - Foundation Scheme. 2,588,884 CAD. [Grants]
- 2014 - 2019 **Principal Investigator.** CIHR Health Researcher of the Year Prize Grant. Canadian Institutes of Health Research (CIHR). 500,000 CAD. [Grants]
- 2013 - 2016 **Principal Investigator.** Mechanisms of ventilator-induced lung injury and remodeling. Collaborator(s): Zhong N, Zhang H: CIHR. \$225,000 CAD; National Natural Science Foundation of China, 63,800 CAD. 338,800 CAD. [Grants]
- 2010 - 2016 **Principal Investigator.** From Bench to Bedside to Curbside. Clinical Research Consortium to Improve Resuscitation Outcomes. Collaborator(s): Morrison LJ, Dorian P: National Institutes of Health, 600,000 CAD. Funding partners: Heart and Stroke Foundation of Canada, 1,500,000 CAD; CIHR 1,000,000 CAD. 3,100,000 CAD. [Grants]
- 2010 - 2016 **Principal Investigator.** Resuscitation Outcomes Consortium Core Training Grant. Collaborator(s): Morrison LJ, Nathens A, Cheskes S, Dorian P. NIH, 1,009,800 CAD; Heart & Stroke Foundation of Canada, 1,500,000 CAD; Canadian Institutes of Health Research, 1,000,000) CAD; National Institutes of Health and funding partners. 3,509,800 CAD. [Grants]

Presentations and Special Lectures

International

- 2016 Nov 17-18 **Invited Speaker.** High Frequency Ventilation (HFV): What went wrong? 9th Scientific Symposium Life and Care. Swiss Paraplegic Centre, Lucerne, Switzerland.
- 2016 Oct 13-18 **Invited Speaker.** Mechanical Ventilation: From Velsalius to VILI. SECCM Annual Conference, Chi Mei Medical Center, Tainan, Taiwan.

- 2016 Sep 20 **Invited Speaker.** Lung Protective Ventilation: What is it and why is it Important? Department of Medicine Grand Rounds, Northwestern University. Chicago, Illinois, USA.
- 2016 Sep 16-17 **Invited Speaker.** ARDS: New insights; Lung protective ventilation: What is it, and why is it important?; History of Mechanical Ventilation. Departamento de Anestesia - Medicina Critica, Bogota, Columbia.
- 2016 May 25-26 **Invited Speaker.** PEEP in patients with ARDS (Interactive Twitter Session - PEEP: Challenging the Expert Opinions; Open Issues in ARDS with Dr. V.M. Ranieri; Considering driving pressure instead of tidal volume in ARDS. Simposio Mostra Anestesia Rianimazione e Terapia Intensiva (SMART), Milan, Italy.
- 2016 Apr 8-9 **Invited Speaker.** Mechanical ventilation historical perspective; Three papers published in the last two years that might change your practice. 17th International Conference on Mechanical Ventilation, Madrid, Spain.
- 2016 Mar 15-18 **Invited Speaker.** High frequency ventilation: What did we do wrong? Mechanical Ventilation in ARDS; Zero tidal volume is what we need - VILI: 40 years on using driving pressure in ventilation settings (pro).
- Moderator:** Respiratory Basics.
- 36th International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium.

Honours and Awards

- 2016 Distinguished Lecturer in Respiratory Sciences Award, Canadian Institutes of Health Research (CIHR) Institute of Circulatory and Respiratory Health (ICRH) and the Canadian Thoracic Society (CTS)

Peer-Reviewed Publications

Journal Articles

Tousignant C. Correspondence Reply. J Cardiothorac Vasc Anesth. 2016 Oct;30(5):e41-2. No abstract available. **Principal Author.**

Van Orman JR, Connelly K, Albinmoussa Z, **Tousignant C.** Early recovery of tricuspid annular isovolumic acceleration after mitral valve surgery – an observational study. Can J Anaesth. 2016 Aug;63(8):920-7. **Senior Responsible Author.**

Peer-Reviewed Publications

Journal Articles

1. Chopra AS, **Wong N**, Ziegler CP, Morrison LJ. Systematic review and meta-analysis of hemodynamic-directed feedback during cardiopulmonary resuscitation in cardiac arrest. *Resuscitation*. 2016 Apr 1;101:102-7. Available from: [https://www.ncbi.nlm.nih.gov/pubmed?term=%22Resuscitation%22\[Jour\]+AND+Systematic+review+and+meta-analysis+of+hemodynamic-directed+feedback+during+cardiopulmonary+resuscitation+in+cardiac+arrest.&Tran](https://www.ncbi.nlm.nih.gov/pubmed?term=%22Resuscitation%22[Jour]+AND+Systematic+review+and+meta-analysis+of+hemodynamic-directed+feedback+during+cardiopulmonary+resuscitation+in+cardiac+arrest.&Tran). Impact Factor 5.414. **Coauthor or Collaborator.**

Peer-Reviewed Grants

Funded

- 2014 - present **Principal Investigator.** Simulation Training of Cardiac Arrest Team for In-Patient Cardiac Arrests. Association of Fundraising Professionals (AFP). AFP grant. Collaborator(s): ER & Anesthesia Departments, St. Michael's Hospital. 91,000 CAD. [Grants].
- 2014 - present **Principal Investigator.** Optimizing End-tidal CO₂ (ETCO₂) use for in-hospital cardiac arrests using a novel inter-professional simulation training program and increased ETCO₂ availability. Association of Funding Professionals (AFP). Collaborator(s): Hicks C., Chandra D. 146,028 CAD. [Grants].

Honours and Awards

- 2016 Bob Hyland Teaching Award. General Internal Medicine, Dept of Medicine, Faculty of Medicine, St. Michael's Hospital. (Postgraduate MD, Core Program)

Peer-Reviewed Publications

Journal Articles

1. Han B, Li M, Xu Y, Islam D, Khang J, Del Sorbo L, Lee W, Szaszi K, Zhong N, Slutsky AS, Li Y, **Zhang H**. Tsr Chemoreceptor Interacts With IL-8 Provoking *E. coli* Transmigration Across Human Lung Epithelial Cells. *Scientific Reports*. 2016; Aug 10;6:31087 DOI: 10.1038/srep31087. **Senior Responsible Author**.
2. **Zhang H**, Li Y, van der Poll T. Immune modulation in sepsis: is there a place for progranulin? *American Journal of Respiratory and Critical Care Medicine*. 2016;194:1179-1180. **Principal Author**.
3. Curley G, Laffey J, **Zhang H**, Slutsky AS. Biotrauma and Ventilator Induced Lung Injury: Clinical implications. *Chest*. 2016;150:1109-1117. **Coauthor or Collaborator**.
4. Liu L, Yang C, Shen J, Huang L, Lin W, Tang H, Liang W, Shao W, **Zhang H**, He J. GABRA3 promotes lymphatic metastasis in lung adenocarcinoma by mediating upregulation of matrix metalloproteinases. *Oncotarget*. 2016;7(22):32341-50. **Coauthor or Collaborator**.
5. Vardy JL, Dhillon HM, Pond GR, Renton C, Dodd A, **Zhang H**, Clarke SJ, Tannock IF. Fatigue in people with localized colorectal cancer who do and do not receive chemotherapy: a longitudinal prospective study. *Annual of Oncology*. 2016;27:1761-1720. **Coauthor or Collaborator**.
6. Fanelli V, Morita Y, Cappello P, Ghazarian M, Sugumar B, Delsedime L, Batt J, Ranieri VM, **Zhang H**, Slutsky AS. Neuromuscular blocking agent cisatracurium attenuates lung injury by inhibition of nicotinic acetylcholine receptor- $\alpha 1$. *Anesthesiology*. 2016; 124(1):132-140. **Coauthor or Collaborator**.
7. Yin J, Michalick L, Tang C, Tabuchi A, Goldenberg N, Dan Q, Awwad K, Wang L, Erfinanda L, Nouailles-Kursar G, Witzernath M, Vogelzang A, Lv L, Lee WL, **Zhang H**, Rotstein O, Kapus A, Szaszi K, Fleming I, Liedtke WB, Kuppe H, Kuebler WM. Role of transient receptor potential vanilloid 4 in neutrophil activation and acute lung injury. *Am J Respir Cell Mol Biol*. 2016;54(3):370-83. **Coauthor or Collaborator**.

Peer-Reviewed Grants

Funded

- 2016 Jan-2018 Dec **Principal Investigator.** Yangcheng Research Chair, Respiratory Medicine, Government of Guangzhou, China. 130,000 CAD. [Grants].
- 2015 Sep-2016 Aug **Primary Supervisor.** 2015 Ontario Graduate Scholarship. University of Toronto, Jung-Eun Ustina Huh. 15,000 CAD. [Grants].
- 2014 Oct-2018 Sep **Principal Investigator.** Mechanisms of alveolar-capillary barrier injury and repair in acute injury: biophysical, biochemical and biological approaches of intervention. 160,000 CAD. [NSF Operating Grants].
- 2014 Jan-2016 Dec **Principal Investigator.** Canadian Institutes of Health Research. China-Canada Joint Health Research Initiative Grant, Mechanisms of ventilator-induced lung injury and remodeling. 225,000 CAD. [Grants].
- 2013 Sept-2017 Aug **Principal Investigator.** Targeting the signaling of human neutrophil peptides in lung injury. 145,000 CAD. [NSF Operating Grants].
- 2011 Oct-2016 Sep **Principal Investigator.** CIHR Operating Grant, Mechanisms of human neutrophil peptides in lung inflammation. 828,620 CAD. [Grants].

Presentations and Special Lectures

International

- 2016 Aug 7-12 **Invited Speaker.** Tissue niches & resident stem cells in adult epithelia Gordon Research Conference. The Hong Kong University of Science and Technology, Hong Kong.
- 2016 May 19-23 **Invited Speaker.** ARDS basic research in 2016-2020. 10th Congress of Chinese Society of Critical Care Medicine. Zhengzhou, China.
- 2016 Mar 18-20 **Invited Speaker.** Sepsis definition and therapy: where we stand and where we are going. 9th Guangdong Society of Critical Care Medicine. Guangzhou, China.

Local

2016 Jun 3 **Invited Speaker.** Infection and immunity in ARDS: where we stand and what we can do. St. Michael's Hospital Research Seminar. Toronto, Ontario, Canada.

Honours and Awards

2016 Yangcheng Research Chair, Respiratory Medicine, Government of Guangzhou in association with Gunagzhou Medical University, China

Peer-Reviewed Publications

Journal Articles

1. Tan C, Hansen M, Cohen G, Boyle K, Daneman N, **Adhikari NK**. Accuracy of administrative data for identification of patients with infective endocarditis. *Int J Cardiol*. 2016 Dec 1;224:162-164. **Senior Responsible Author**.
2. Li G, Thabane L, Cook DJ, Lopes RD, Marshall JC, Guyatt G, Holbrook A, Akhtar-Danesh N, Fowler RA, **Adhikari NK**, Taylor R, Arabi YM, Chittock D, Dodek P, Freitag AP, Walter SD, Heels-Ansdell D, Levine MA. Risk factors for and prediction of mortality in critically ill medical-surgical patients receiving heparin thromboprophylaxis. *Ann Intensive Care*. 2016 Dec;6(1):18. **Coauthor or Collaborator**.
3. Leligdowicz A, Bhagwanjee S, Diaz JV, Xiong W, Marshall JC, Fowler RA, **Adhikari NK**, Acute Care for Africa Research and Training (ACART) Group and the International Forum of Acute Care Trialists (InFACT). Development of an intensive care unit resource assessment survey for the care of critically ill patients in resource-limited settings. *J Crit Care*. 2016 Nov 5;38:172-176 (Trainee publication, Leligdowicz A). **Senior Responsible Author**.
4. Sklar MC, Burns K, Rittayamai N, Lanys A, Rauseo M, Chen L, Dres M, Chen GQ, Goligher EC, **Adhikari NK**, Brochard L, Friedrich JO. Effort To Breathe With Various Spontaneous Breathing Trial Techniques. A Physiological Meta-analysis. *Am J Respir Crit Care Med*. 2016 Oct 21. **Coauthor or Collaborator**.
5. Barwise A, Garcia-Arguello L, Dong Y, Hulyalkar M, Vukoja M, Schultz MJ, **Adhikari NK**, Bonneton B, Kilickaya O, Kashyap R, Gajic O, Schmickl CN. Checklist for Early Recognition and Treatment of Acute Illness (CERTAIN): evolution of a content management system for point-of-care clinical decision support. *BMC Med Inform Decis Mak*. 2016 Oct 3;16(1):127. **Coauthor or Collaborator**.

6. Herridge MS, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, **Adhikari NK**, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, Santos CD, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hebert P, Slutsky AS, Marshall JC, Cook D, Cameron JI, RECOVER Program Investigators (Phase 1: towards RECOVER)., Canadian Critical Care Trials Group. The RECOVER Program: Disability Risk Groups and 1-Year Outcome after 7 or More Days of Mechanical Ventilation. *Am J Respir Crit Care Med*. 2016 Oct 1;194(7):831-844. **Coauthor or Collaborator**.
7. Rose L, **Adhikari NK**, Poon J, Leasa D, McKim DA, CANuVENT Group. Cough Augmentation Techniques in the Critically Ill: A Canadian National Survey. *Respir Care*. 2016 Oct 1;61(10):1360-8. **Coauthor or Collaborator**.
8. Arabi YM, Phua J, Koh Y, Du B, Faruq MO, Nishimura M, Fang WF, Gomersall C, Al Rahma HN, Tamim H, Al-Dorzi HM, Al-Hameed FM, **Adhikari NK**, Sadat M, Asian Critical Care Clinical Trials Group. Structure, Organization, and Delivery of Critical Care in Asian ICUs. *Crit Care Med*. 2016 Oct 1;44(10):e940-8. **Coauthor or Collaborator**.
9. Hutton B, Burry LD, Kanji S, Mehta S, Guenette M, Martin CM, Fergusson DA, **Adhikari NK**, Egerod I, Williamson D, Straus S, Moher D, Ely EW, Rose L. Comparison of sedation strategies for critically ill patients: a protocol for a systematic review incorporating network meta-analyses. *Syst Rev*. 2016 Sep 20;5(1):157. **Coauthor or Collaborator**.
10. Burry LD, Hutton B, Guenette M, Williamson D, Mehta S, Egerod I, Kanji S, **Adhikari NK**, Moher D, Martin CM, Rose L. Comparison of pharmacological and non-pharmacological interventions to prevent delirium in critically ill patients: a protocol for a systematic review incorporating network meta-analyses. *Syst Rev*. 2016 Sep 8;5(1):153. **Coauthor or Collaborator**.
11. McCredie VA, Alali AS, Scales DC, **Adhikari NK**, Rubenfeld GD, Cuthbertson BH, Nathens AB. Effect of Early Versus Late Tracheostomy or Prolonged Intubation in Critically Ill Patients with Acute Brain Injury: A Systematic Review and Meta-Analysis. *Neurocrit Care*. 2016 Sep 6. **Coauthor or Collaborator**.
12. Leligidowicz A, Fischer WA 2nd, Uyeki TM, Fletcher TE, **Adhikari NK**, Portella G, Lamontagne F, Clement C, Jacob ST, Rubinson L, Vanderschuren A, Hajek J, Murthy S, Ferri M, Crozier I, Ibrahima E, Lamah MC, Schieffelin JS, Brett-Major D, Bausch DG, Shindo N, Chan AK, O'Dempsey T, Mishra S, Jacobs M, Dickson S, Lyon GM 3rd, Fowler RA. Ebola virus disease and critical illness. *Crit Care*. 2016 Jul 29;20(1):217. **Coauthor or Collaborator**.

13. Cameron JI, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Lefebvre M, Ferguson ND, **Adhikari NK**, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hébert P, Slutsky AS, Marshall JC, Cook D, Herridge MS, RECOVER Program Investigators (Phase 1: towards RECOVER), Canadian Critical Care Trials Group. One-Year Outcomes in Caregivers of Critically Ill Patients. *N Engl J Med*. 2016 May 12;374(19):1831-41. **Coauthor or Collaborator**.
14. Sud S, Sud M, Friedrich JO, Wunsch H, Meade MO, Ferguson ND, **Adhikari NK**. High-frequency oscillatory ventilation versus conventional ventilation for acute respiratory distress syndrome. *Cochrane Database Syst Rev*. 2016 Apr 4;4:CD004085. **Senior Responsible Author**.
15. Lamontagne F, Meade MO, Hébert PC, Asfar P, Lauzier F, Seely AJ, Day AG, Mehta S, Muscedere J, Bagshaw SM, Ferguson ND, Cook DJ, Kanji S, Turgeon AF, Herridge MS, Subramanian S, Lacroix J, **Adhikari NK**, Scales DC, Fox-Robichaud A, Skrobik Y, Whitlock RP, Green RS, Koo KK, Tanguay T, Magder S, Heyland DK, Canadian Critical Care Trials Group. Higher versus lower blood pressure targets for vasopressor therapy in shock: a multicentre pilot randomized controlled trial. *Intensive Care Med*. 2016 Apr 1;42(4):542-50. **Coauthor or Collaborator**.
16. Delaney JW, Pinto R, Long J, Lamontagne F, **Adhikari NK**, Kumar A, Marshall JC, Cook DJ, Jouvett P, Ferguson ND, Griesdale D, Burry LD, Burns KE, Hutchison J, Mehta S, Menon K, Fowler RA, Canadian Critical Care Trials Group H1N1 Collaborative. The influence of corticosteroid treatment on the outcome of influenza A(H1N1pdm09)-related critical illness. *Crit Care*. 2016 Mar 30;20(1):75. **Coauthor or Collaborator**.
17. Fleischmann C, Scherag A, **Adhikari NK**, Hartog CS, Tsaganos T, Schlattmann P, Angus DC, Reinhart K, International Forum of Acute Care Trialists. Assessment of Global Incidence and Mortality of Hospital-treated Sepsis. Current Estimates and Limitations. *Am J Respir Crit Care Med*. 2016 Feb 1;193(3):259-72. **Coauthor or Collaborator**.
18. Johnston BC, Alonso-Coello P, Friedrich JO, Mustafa RA, Tikkinen KA, Neumann I, Vandvik PO, Akl EA, da Costa BR, **Adhikari NK**, Dalmau GM, Kosunen E, Mustonen J, Crawford MW, Thabane L, Guyatt GH. Do clinicians understand the size of treatment effects? A randomized survey across 8 countries. *CMAJ*. 2016 Jan 5;188(1):25-32. **Coauthor or Collaborator**.

Book Chapters

1. Burns KEA, **Adhikari NK**. Noninvasive Ventilation and Weaning Outcome. In: Esquinas AM, editor(s). Noninvasive Mechanical Ventilation and Difficult Weaning in Critical Care: Key Topics and Practical Approaches. Cham (Switzerland): Springer International Publishing AG Switzerland; 2016. p. 451-61. **Senior Responsible Author**.

Editorials

1. Goddard SL, **Adhikari NK**. The Challenging Task of Improving the Recovery of ICU Survivors. JAMA. 2016 Jun 28;315(24):2671-2. **Senior Responsible Author**.
2. **Adhikari NK**, Slutsky AS. Pediatric High-Frequency Oscillation. The End of the Road? Am J Respir Crit Care Med. 2016 Mar 1;193(5):471-2. **Principal Author**.

Published Erratum

1. Magaret A, Angus DC, **Adhikari NK**, Banura P, Kissoon N, Lawler JV, Jacob ST. Corrigendum to “Design of a multi-arm randomized clinical trial with no control arm” [Contemporary Clinical Trials 46 (2016) 12-17]. Contemp Clin Trials. 2016 Jul 1;49:190. **Coauthor or Collaborator**.

Peer-Reviewed Grants

Funded

- | | |
|-------------------|--|
| 2015 Oct-2016 Sep | Co-Investigator . Delivery of supportive care during an Ebola outbreak: defining minimal requirements and identifying barriers and facilitators towards creating international guidelines. Canadian Institutes of Health Research (CIHR). Innovative Ebola Research Grants. PI: Lamontagne F. Collaborator(s): Bah E, Chan A, Clement C, Couturier F, Fowler R, Guyatt G, Hudon C, Lamah M, Mishra S, Murthy S. 247,570 CAD. [Grants] |
| 2015 Oct-2016 Sep | Co-Investigator . Gone, but not forgotten: A prospective cohort study to characterize the health effects of post-Ebola syndrome on survivors of Ebola Virus Disease in West Africa. Canadian Institutes of Health Research (CIHR). Innovative Ebola Research Grants. PI: Chan A. Collaborator(s): Fowler R, Mishra S, Glynn J, Hajek J, Lamontagne F, Murthy S, Vanderschuren A. 250,000 CAD. [Grants] |

- 2015 Oct-2016 Sep **Co-Principal Investigator.** Establishing Feasibility & Safety of Providing Critical Care for Patients with Ebola through design of a simulated Ebola Treatment Centre. Canadian Institutes of Health Research (CIHR). Innovative Ebola Research Grants. PI: Fowler R. Collaborator(s): Bah E, Chan A, Clement C, Christian M, Hajek J, Hall T, Lamah M, Lamontagne F, Marshall J, Mishra S, Murthy S, Piquette D, Simor A, Vanderschuren A. 249,973 CAD. [Grants]
- 2015 Jul-2020 Jun **Co-Investigator.** The NEUROlogically-impaired extubation Timing Trial (NEURO-ETT). Canadian Institutes of Health Research (CIHR). Operating Grant. PI: Scales D, Ferguson N. Collaborator(s): Alali A, Baker A, Bosma K, Brochard L, Chapman M, Charbonney E, Cuthbertson B, Fowler R, Griesdale D, Mainprize T, McCredie V, Meade M, Nathens A, Rubinfeld M, Seely A, Singh J, Turgeon A, Wilcox ME, Zygun D. 880,404 CAD. [Grants]
- 2015 Jul-2019 Jun **Co-Investigator.** STandard versus Accelerated initiation of Renal Replacement Therapy in Acute Kidney Injury (STARRT-AKI). Canadian Institutes of Health Research (CIHR). Operating Grant. PI: Wald R, Bagshaw S. Collaborator(s): Bellomo R, Burns K, Cailhier J, Chawla L, Dodek P, Friedrich J, Garg A, Herridge M, Hiremath S, Lamontagne F, Lapinsky S, Manns B, Mazer D, McGuinness S, Mcintyre L, Muscedere J, Ostermann M, Palevsky P, Pettilä V, Smith O, Soth M, Stelfox H, Thorpe K, Turgeon A, Weir M, Wilcox ME. 1,177,472 CAD. [Grants]
- 2015 May-2017 Apr **Principal Investigator.** An Acute Kidney Injury Follow-up Clinic to Improve Care Continuity and Outcomes: A Pilot Randomized Controlled Trial. Sunnybrook Health Sciences Centre (Toronto, ON). 2014-2015 Sunnybrook AFP Innovation Fund. Collaborator(s): Zahirieh, A. 39,805 CAD. [Grants]
- 2015 Apr-2019 Mar **Co-Investigator.** STandard versus Accelerated initiation of Renal Replacement Therapy in Acute Kidney Injury (STARRT-AKI). Canadian Institutes of Health Research (CIHR). Operating Grant: Industry-partnered Collaborative Research. PI: Wald R, Bagshaw S. 220,995 CAD. [Grants]
- 2015 Apr-2019 Mar **Co-Investigator.** STandard versus Accelerated initiation of Renal Replacement Therapy in Acute Kidney Injury (STARRT-AKI). Baxter Healthcare Corporation. Operating Grant: Industry-partnered Collaborative Research. PI: Wald R, Bagshaw S. 883,976 CAD. [Grants]

2014 Nov-2015 Oct **Co-Investigator.** Cough augmentation techniques to optimize weaning success and prevent reintubation for critically ill patients. Canadian Institutes of Health Research (CIHR). Knowledge Synthesis Grant. PI: Rose L. 80,000 CAD. [Grants]

Presentations and Special Lectures

International

2016 Nov 27 **Invited Speaker.** Challenges and opportunities for sepsis research in resource-limited settings. The Aga Khan University 3rd National Research Symposium and 10th Annual Research Retreat in Anaesthesia, Pain, and Intensive Care. Karachi, Pakistan.

2016 Apr 7-8 **Invited Speaker.** RRT: does any aspect of the prescription matter?; Sepsis in dispute - free discussion of ideas; Fighting sepsis in low and middle resource settings; The challenge of measuring sepsis burden. XIII Forum Internacional de Sepse. Sao Paulo, Brazil.

Abstracts

2016 Oct Cough augmentation techniques for extubation and weaning critically ill patients from mechanical ventilation; Methodological quality and reporting of cluster randomized controlled trials in critical care medicine: a systematic review. Presenter(s): Rose L, **Adhikari NK**, Leasa D, Fergusson D, McKim DA. Intensive Care Med Experimental. 2016 Sep 29;4(Suppl 1):A280. European Society of Intensive Care Medicine. Milan, Italy.

2016 May 17 Effects of Alternative Spontaneous Breathing Trial Techniques on Clinical Outcomes: A Systematic Review and Meta-Analysis. Presenter(s): Burns KEA, Soliman I, **Adhikari NK**, Zwein A, Wong J, Gomez-Builes C, Brochard LJ, Chen L, Rittayamai N, Sklar M, Lanys A, Chen G, Rauseo M, Friedrich JO. Am J Respir Crit Care Med. 2016 May;193:A529. American Thoracic Society International Conference. San Francisco, California, USA.

2016 May 15 Burden of Comorbid Illness Is Associated with 1-Year Survival but Not Early Disability After Critical Illness: Results from the RECOVER Program. Presenter(s): Merman E, Chu L, Robles P, Tomlinson G, Thomas C, Burns S, Matte AA, Matte A, Friedrich J, Lamontagne F, Mehta G, **Adhikari NK**, Ferguson N, Rudkowski J, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, Dos Santos C, Cook D, Cameron J, Herridge MS. Am J Respir Crit Care Med. 193:A1166. American Thoracic Society International Conference. San Francisco, California, USA.

2016 Mar Using selective serotonin re-uptake inhibitors and serotonin-norepinephrine re-uptake inhibitors in critical care: a systematic review of the evidence for benefit or harm. Presenter(s): Kelly JM, Rubenfeld GD, **Adhikari NK**. Crit Care. International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium.

National

2016 Nov 1 **Invited Speaker**. Antimicrobial resistance in low- and middle-income countries. Critical Care Canada Forum. Toronto, Ontario, Canada

2016 Dec 8 **Invited Speaker**. Be it resolved that the use of 5% albumin for volume expansion in the intensive care patient is evidence-based: con. University of Toronto Transfusion Medicine Rounds. Toronto, Ontario, Canada.

2016 Dec 7 **Invited Speaker**. Recent trials in AKI. University of Toronto Critical Care Nephrology Day. Toronto, Ontario, Canada.

2016 Sep 8 **Invited Speaker**. International Education Collaborations. University of Toronto Interdepartmental Division of Critical Care Education Retreat. Toronto, Ontario, Canada.

2016 Jun 14 **Invited Lecturer**. Large-scale trials in _resource-constrained settings:_ a tale of 2 (unfunded) studies. Interdepartmental Division of Critical Care Slutsky Day. Toronto, Ontario, Canada.

2016 Jun 9 **Invited Lecturer**. Pro: In-hospital Code Blue protocols should include ECLS. Critical Challenges Conference 2016. Toronto, Ontario, Canada.

Local

2016 Jan 20 **Invited Speaker**. When should dialysis be started for patients with acute kidney injury? Sunnybrook Department of Critical Care Medicine Grand Rounds.

Abstracts

2016 Feb A Study to Determine the Pharmacological Management _of Delirium in the Cardiovascular Intensive Care Unit. Presenter(s): Tsang L, Ng O, **Adhikari NK**. Canadian Society of Hospital Pharmacists Professional Practice Conference. Toronto, Ontario, Canada.

Honours and Awards

2016 Jun Interdepartmental Division of Critical Care Humanitarian Award, University of Toronto. (Distinction)

Peer Reviewed Publications

Journal Articles

1. Brooks SC, Scales DC, Pinto R, Dainty KN, Racz EM, Gaudio M, **Amaral AC**, Gray SH, Friedrich JO, Chapman M, Dorian P, Fam N, Fowler RA, Hayes CW, Baker A, Crystal E, Madan M, Rubenfeld G, Smith OM, Morrison LJ. The Postcardiac Arrest Consult Team: Impact on Hospital Care Processes for Out-of-Hospital Cardiac Arrest Patients. Crit Care Med. 2016 Aug 10. **Coauthor or Collaborator**.
2. **Amaral AC**, Fowler RA, Pinto R, Rubenfeld GD, Ellis P, Bookatz B, Marshall JC, Martinka G, Keenan S, Laporta D, Roberts D, Kumar A, and the Cooperative Antimicrobial Therapy of Septic Shock Database Research Group. Patient and Organizational Factors Associated With Delays in Antimicrobial Therapy for Septic Shock. Crit Care Med. 2016 Jul 20. **Principal Author**.
3. **Amaral AC**, Fowler RA, Pinto R, Rubenfeld GD, Ellis P, Bookatz B, Marshall JC, Martinka G, Keenan S, Laporta D, Roberts D, Kumar A, and the Cooperative Antimicrobial Therapy of Septic Shock Database Research Group. Patient and Organizational Factors Associated With Delays in Antimicrobial Therapy for Septic Shock. Crit Care Med. [Epub ahead of print]
Study concept and design, data analysis, manuscript writing. **Principal Author**.
4. Gotlib Conn L, Haas B, Rubenfeld GD, Scales DC, **Amaral AC**, Ferguson ND, Nathens AB. Exclusion of Residents from Surgery-Intensive Care Team Communication: A Qualitative Study Journal of Surgical Education. Journal of Surgical Education. 2016 Jul;73(4). July/August 2016. **Coauthor or Collaborator**.

Editorials

1. **Amaral AC**, Taneva S, Morita PP, Lane-Fall M. Who Is Responsible for Mitigating Work Fatigue of Critical Care Clinicians-the Individual or the System? Ann Am Thorac Soc. 2016 Sep 1;13(9):1453-5. **Principal Author**.
2. **Amaral AC**, Cuthbertson BH. Balancing quality of care and resource utilisation in acute care hospitals. BMJ Qual Saf. 2016 Jan 13. **Principal Author**.

Peer-Reviewed Grants

Funded

2015 Jul-2016 Jun **Co-Investigator.** A National Strategy on Quality of Care Research and Evaluation - With the Patient for the Patient. CIHR. Planning and Dissemination Grant- Institute Community Suppor. PI: Hebert, Paul. Collaborator(s): Bagshaw S, Chasse M, Debigaré S, Dodek P, Lamontagne F, Martin C, Muscedere J, Scales D, Turgeon A. 25,000 CAD. [Grants]

2014 Apr-2016 Mar **Principal Investigator.** Therapeutic Alliance in the ICU: Enhanced Information to Facilitate Decision-Making. AFP Association. Innovation Funds. Collaborator(s): Piquette D, Gotlib L, Walter G, Downar J, Taylor P. P. 99,945 CAD. [Grants]

Presentations and Special Lectures

International

2016 May 17 **Invited Lecturer.** Integrating the Evidence for Effective Rounding in the ICU. American Thoracic Society International Conference. San Francisco, California, USA.

Peer-Reviewed Publication

Journal Articles

1. McCredie VA, Piva S, Santos M, Xiong W, Manoel AL, Rigamonti A, Hare GMT, **Chapman MG**, Baker AJ. The Impact of Red Blood Cell Transfusion on Cerebral Tissue Oxygen Saturation in Severe Traumatic Brain Injury. *Neurocrit Care*. October 2016;1-9. **Coauthor or Collaborator.**
2. Park A, **Chapman MG**, McCredie VA, Debicki D, Gofton T, Norton L, Boyd JG. EEG utilization in Canadian intensive care units: A multicentre prospective observational study. *Seizure*. 2016;43:42-47. **Coauthor or Collaborator.**
3. Scales DC, Golan E, Pinto R, Brooks SC, **Chapman MG**, Dale CM, Jichici D, Rubenfeld G.
4. Improving Appropriate Neurologic Prognostication after Cardiac Arrest. A Stepped Wedge Cluster Randomized Controlled Trial. *Am J Respir Crit Care Med*. 2016;194(9):1083-1091. **Coauthor or Collaborator.**
5. Brooks SC, Scales DC, Pinto R, Racz EM, Gaudio M, Amaral ACK, Gray SH, Friedrich JO, **Chapman MG**, Dorian P, Fam N, Fowler RA, Hayes CW, Baker A, Crystal E, Madan M, Rubenfeld G, Smith OM, Morrison LJ. The Postcardiac Arrest Consult Team: Impact on Hospital Care Processes for Out-of-Hospital Cardiac Arrest Patients. *Crit Care Med*. 2016;44(11):2037-2044. **Coauthor or Collaborator.**
6. Robinson L, **Chapman MG**, Schwartz M, Bethune A, Strauss R, Potapova E, Scales D. Patterns of Use of Somatosensory Evoked Potentials for Comatose Patients in Canada. *J Critical Care*. 2016; 36:130-133. **Coauthor or Collaborator.**

Peer Reviewed Grants

Funded

- 2015 Jul-2020 Jun **Collaborator.** The NEUROlogically-impaired extubation Timing Trial (NEURO-ETT). Canadian Institutes of Health Research. Operating Grant. PI: Scales D. Collaborator(s): Adhikari NK, Alali A, Baker A, Bosma K, Brochard L, Chapman M, Charbonney E, Cuthbertson B, Fowler R, Griesdale D, Mainprize T, McCredie V, Meade M, Nathens A, Rubenfeld G, Seely A, Singh J, Turgeon A, Wilco ME, Zygun D. 880,404 CAD. [Grants]
- 2014 Dec-2019 Nov **Co-Investigator.** Canadian Traumatic Brain Injury Research Consortium. CIHR. 2,000,000 CAD. [Grants]

Presentations and Special Lectures

International

Oral Presentation

- 2016 **Presenter.** Skull bone marrow injury caused by MR-guided focused ultrasound (MRgFUS) for cerebral functional procedures. Presenter(s): Schwartz ML, Yeung R, Huang YX, Lipsman N, Jain J, Chapman M, Lozano AM, Hynynen K.
- Presenter.** Long term follow up of 6 essential tremor patients treated with MR-guided focused ultrasound thalamotomy. Presenter(s): Schwartz ML, Huang YX, Lipsman N, Jain J, Chapman M, Lozano AM, Hynynen K.
- International Society for Therapeutic Ultrasound Symposium. Tel Aviv, Israel.

Provincial

Poster

- 2016 Massive Transfusion Protocol: Does it Translate into Improved Outcomes in Postpartum Hemorrhage? An Exploratory Cohort Study. Canadian Anesthesia Society Annual Meeting. Presenter(s): Ribeiro T, Halpern S, Callum J, Amaral AC, Andrews L, Chapman M, Nascimento B, Herer E, Barrett J, Knapp C, Hards A, Margarido C. Vancouver, Canada.

National

2016

Invited Speaker. Keeping ahead of the game. Critical Care Nursing - Critical Challenges Conference. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. Hodgson C, **Cuthbertson BH**. Improving outcomes after critical illness: harder than we thought! *Intensive Care Med*. 2016 Nov;42(11):1772-1774. **Senior Responsible Author**.
2. Chan KS, Aronson Friedman L, Bienvenu OJ, Dinglas VD, **Cuthbertson BH**, Porter R, Jones C, Hopkins RO, Needham DM. Distribution-based estimates of minimal important difference for hospital anxiety and depression scale and impact of event scale-revised in survivors of acute respiratory failure. *DM.Gen Hosp Psychiatry*. 2016 Sep-Oct;42:32-5. doi: 10.1016/j.genhosppsych.2016.07.004. **Coauthor or Collaborator**.
3. McCredie VA, Alali AS, Scales DC, Adhikari NK, Rubenfeld GD, **Cuthbertson BH**, Nathens AB. Effect of Early Versus Late Tracheostomy or Prolonged Intubation in Critically Ill Patients with Acute Brain Injury: A Systematic Review and Meta-Analysis. *McCredie Neurocrit Care*. 2016 Sep 6. **Coauthor or Collaborator**.
4. Pfoh ER, Chan KS, Dinglas VD, **Cuthbertson BH**, Elliott D, Porter R, Bienvenu OJ, Hopkins RO, Needham DM. The SF-36 Offers a Strong Measure of Mental Health Symptoms in Survivors of Acute Respiratory Failure. A Tri-National Analysis. *Ann Am Thorac Soc*. 2016 Aug 1;13(8):1343-50. **Coauthor or Collaborator**.
5. **Cuthbertson BH**, Wunsch H. Long-Term Outcomes after Critical Illness. The Best Predictor of the Future Is the Past. *Am J Respir Crit Care Med*. 2016 Jul 15;194(2):132-4. **Principal Author**.
6. Conn LG, Haas B, **Cuthbertson BH**, Amaral AC, Coburn N, Nathens AB. Communication and Culture in the Surgical Intensive Care Unit: Boundary Production and the Improvement of Patient Care. *Qual Health Res*. 2016 Jun 1;26(7):895-906. [Epub ahead of print]. **Coauthor or Collaborator**.

7. Cameron JI, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, Scales DC, Sinuff T, **Cuthbertson BH**, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hébert P, Slutsky AS, Marshall JC, Cook D, Herridge MS, RECOVER Program Investigators (Phase 1: towards RECOVER), Canadian Critical Care Trials Group. One-Year Outcomes in Caregivers of Critically Ill Patients. *N Engl J Med*. 2016 May 12;374(19):1831-41. **Coauthor or Collaborator**.
8. Price RJ, **Cuthbertson BH**, SuDDICU collaboration. Selective decontamination of the digestive tract and oropharynx: after 30 years of debate is the definitive answer in sight? *Curr Opin Crit Care*. 2016 Apr 1;22(2):161-6. **Senior Responsible Author**.
9. Hill AD, Fowler RA, Pinto R, Herridge MS, **Cuthbertson BH**, Scales DC. Long-term outcomes and healthcare utilization following critical illness--a population-based study. *Crit Care*. 2016 Mar 31;20:76. **Coauthor or Collaborator**.
10. Herridge MS, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, Dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, Scales DC, Sinuff T, **Cuthbertson BH**, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hebert P, Slutsky AS, Marshall JC, Cook D, Cameron JI, RECOVER Program Investigators (Phase 1: towards RECOVER) and the Canadian Critical Care Trials Group. The RECOVER Program: Disability Risk Groups & One Year Outcome after ≥ 7 Days of Mechanical Ventilation. *Am J Respir Crit Care Med*. 2016 Mar 14. [Epub ahead of print]. **Coauthor or Collaborator**.
11. Wijeyesundera DN, Pearse RM, Shulman MA, Abbott TE, Torres E, Croal BL, Granton JT, Thorpe KE, Grocott MP, Farrington C, Myles PS, **Cuthbertson BH**, METS Study Investigators. Measurement of Exercise Tolerance before Surgery (METS) study: a protocol for an international multicentre prospective cohort study of cardiopulmonary exercise testing prior to major non-cardiac surgery. *BMJ Open*. 2016 Mar 11;6(3):e010359. **Senior Responsible Author**.
12. Webster F, Weijer C, Todd L, Grimshaw JM, Marshall AP, Cook D, MacLennan G, **Cuthbertson BH**, Francis JJ, SuDDICU international group. The ethics of future trials: qualitative analysis of physicians' decision making. *Trials*. 2016 Jan 6;17:12. **Coauthor or Collaborator**.

13. Vanniyasingam T, Rodseth RN, Lurati Buse GA, Bolliger D, Burkhart CS, **Cuthbertson BH**, Gibson SC, Mahla E, Leibowitz DW, Biccarrd BM, Thabane L. Predicting the occurrence of major adverse cardiac events within 30 days of a vascular surgery: an empirical comparison of the minimum p value method and ROC curve approach using individual patient data meta-analysis. Springerplus. 2016 Jan 1;5:304. **Coauthor or Collaborator**.

Journal Articles, Multicenter Study

1. McCredie VA, Alali AS, Xiong W, Rubenfeld GD, **Cuthbertson BH**, Scales DC, Nathens AB. Timing of withdrawal of life-sustaining therapies in severe traumatic brain injury: Impact on overall mortality. J Trauma Acute Care Surg. 2016 Mar 1;80(3):484-91. [Epub ahead of print]. **Coauthor or Collaborator**.

Journal Articles, Multicenter Study, Randomized Controlled Trial

1. Deschamps A, Hall R, Grocott H, Mazer CD, Choi PT, Turgeon AF, de Medicis E, Bussi eres JS, Hudson C, Syed S, Seal D, Herd S, Lambert J, Denault A, Deschamps A, Mutch A, Turgeon A, Denault A, Todd A, Jerath A, Fayad A, Finnegan B, Kent B, Kennedy B, **Cuthbertson BH**, Kavanagh B, Warriner B, MacAdams C, Lehmann C, Fudorow C, Hudson C, McCartney C, Mclsaac D, Dubois D, Campbell D, Mazer D, Neilpovitz D, Rosen D, Cheng D, Drapeau D, Dillane D, Tran D, Mckeen D, Wijeysondera D, Jacobsohn E, Couture E, de Medicis E, Alam F, Abdallah F, Ralley FE, Chung F, Lellouche F, Dobson G, Germain G, Djaiani G, Gilron I, Hare G, Bryson G, Clarke H, McDonald H, Roman-Smith H, Grocott H, Yang H, Douketis J, Paul J, Beaubien J, Bussi eres J, Pridham J, Armstrong JN, Parlow J, Murkin J, Gamble J, Duttchen K, Karkouti K, Turner K, Baghirzada L, Szabo L, Lalu M, Wasowicz M, Bautista M, Jacka M, Murphy M, Schmidt M, Verret M, Perrault MA, Beaudet N, Buckley N, Choi P, MacDougall P, Jones P, Drolet P, Beaulieu P. Cerebral Oximetry Monitoring to Maintain Normal Cerebral Oxygen Saturation during High-risk Cardiac Surgery: A Randomized Controlled Feasibility Trial. Anesthesiology. 2016 Apr 1;124(4):826-36. **Coauthor or Collaborator**.

Non-Peer Reviewed Publications

Editorials

1. Amaral AC, **Cuthbertson BH**. Balancing quality of care and resource utilisation in acute care hospitals. BMJ Qual Saf. 2016 Jan 13. [Epub ahead of print]. **Senior Responsible Author**.

Peer-Reviewed Grants

Funded

- 2015 Jul-2020 Jun **Co-Investigator.** The NEUROlogically-impaired extubation Timing Trial (NEURO-ETT). Canadian Institutes of Health Research. Operating Grant. PI: Scales D, Ferguson N. Collaborator(s): Adhikari N, Alali A, Baker A, Bosma K, Brochard L, Chapman M, Charbonney E, Fowler R, Griesdale D, Mainprize T, McCredie V, Meade M, Nathens A, Rubenfeld G, Seely A, Singh J, Turgeon A, Wilcox ME, Zygun D. 880,404 CAD. [Grants]
- 2015 Jan-2019 Jan **Chief International Investigator.** SuDDICU study. Health Research Council of New Zealand. PI: Young, Paul. Collaborator(s): MacArthur C, Seaton H. . 1,200,000 NZD. [Grants]
- 2015 Jan-2019 Jan **Chief International Investigator.** SuDDICU study. Australian National Health and Medical Research Council. PI: Seppelt I. Collaborator(s): Finfer S, Jan S, Marshall A, Myburgh J, Young P. 3,960,000 AUD. [Grants]
- 2014 Apr-2017 Mar **Co-Investigator.** Using the Six-Minute Walk Test to Predict Quality of Recovery and Disability-Free Survival Following Major Noncardiac Surgery. Australian and New Zealand College of Anaesthetists. PI: Myles P. Collaborator(s): Pearse R, Shulman M, Wallace S, Wijeyesundera, D. 130,420 AUD. [Grants]
- 2013 Jul-2016 Jun **Principal Investigator.** The METS (Measurement of Exercise Tolerance before Surgery) Study: An International Multicentre Prospective Cohort Study of Cardiopulmonary Exercise Testing For Improving Preoperative Risk Stratification for Major Non-Cardiac Surgery. Heart and Stroke Foundation of Ontario (The) (HSFO). Grant in Aid. 144,000 CAD. [Grants]
- 2012 Apr-2016 Mar **Principal Investigator.** The METS (Measurement of Exercise Tolerance before Surgery) Study: An International Multicentre Prospective Cohort Study of Cardiopulmonary Exercise Testing For Improving Preoperative Risk Stratification for Major Non-Cardiac Surgery. Canadian Institutes of Health Research. Operating Grant. Collaborator(s): Beattie W, Chan V, Croal B, Granton J, Hoch J, Mamdani M, Mazer D, McCartney C, Oh P, Pearse R, Smith A, Thorpe K, Wijeyesundera H. 987,066 CAD. [Grants]

Presentations and Special Lectures

International

2016 Jun 23 **Invited Lecturer.** SUDDICU: finding UK funding for an international “mega” trial.

Chair. Research Proposals.

UKCCTF Newcastle. United Kingdom.

2016 May 15 **Invited Speaker.** To Ask or Not To Ask? Ethics, Informed Consent, and Stopping Rules in Comparative Effectiveness Trials in Critical Illness. American Thoracic Society (ATS conference). San Francisco, California, USA.

National

2016 May 2 **Provocateur.** Resuscitation in Motion (RiM) 2016: Igniting Canadian and international synergies for future impact in resuscitation science. St. Michael's Hospital. Toronto, Ontario, Canada. Scientific Sessions # 1. Presentation # 5. Presenter(s): Gupta S. University of Toronto
Heat Shock Protein 90...prolong PMN survival and regulate respiratory burst activity.

Provocateur. Resuscitation in Motion (RiM) 2016: Igniting Canadian and international synergies for future impact in resuscitation science. St. Michael's Hospital. Toronto, Ontario, Canada. Scientific Sessions # 4. Presenter(s): Smith C. Durham College – Peterborough
Paramedic Service. Prehospital recognition of sepsis using QSOFA.

Invited Speaker. Resuscitation in Motion (RiM) 2016: Igniting Canadian and international synergies for future impact in resuscitation science. Speed Dating Session - Brian Cuthbertson / Steve Brooks - How To negotiate an MD Scientist Position.

St. Michael's Hospital. Toronto, Ontario, Canada.

DR. SHELLY DEV, SUNNYBROOK HOSPITAL

Peer Reviewed Grants

Funded

- 2014 Mar-present **Co-Investigator.** Therapeutic Alliance in the ICU: Enhanced Information to Facilitate Decision-Making. AFP Sunnybrook Health Sciences Centre. PI: Amaral AC. 99,000 CAD. [Grants]
- 2011 Mar-present **Principal Investigator.** Is a Multimedia-Based Teaching Tool as Effective As Bedside Teaching? Proposal for a Validation Study. Education Development Fund, University of Toronto. Educational Development Fund Grant. Collaborator(s): Chow CM, Bandiera G. 4,993 CAD. [Grants]
- 2010 Nov-present **Principal Investigator.** Multimedia Teaching Tools: A Video Series on Splinting Techniques. Sunnybrook Health Sciences Centre. ACMS Fund. PI: Stefan A. 10,000 CAD. [Grants]
- 2008 Mar-present **Consultant/Producer.** Lung Injury Knowledge Network, Educational Website Development. National Heart, Lung, and Blood Institute (NHLBI) (USA). PI: Rubinfeld G. 1,500,000 USD. [Grants]

Presentations and Special Lectures

Provincial

- 2016 Mar 19 **Keynote Speaker.** Role Models, Professionalism and The Hidden Curriculum. University of Calgary Department of Medicine. Annual Department of Medicine Resident Retreat. (Trainee Presentation). Calgary, Alberta, Canada.

National

- 2016 Apr 25 **Invited Speaker.** It's Not Me, It's You: You Can Give Quality Feedback in a Busy Clinical Environment. Toronto East General Professional Development Program, Department of Family Medicine. Toronto, Ontario, Canada.

2016 Mar **Invited Speaker.** Making Learning Stick. Students As Teachers, University of Toronto Faculty of Medicine. Toronto, Ontario, Canada.

2016 Jan **Invited Speaker.** Great Expectations: Setting Objectives and Identifying Learner Needs. Toronto East General Hospital, Department of Continuing Medical Education. Toronto, Ontario, Canada.

Local

2016 Mar **Invited Speaker.** Everybody Hurts: The Epidemic of Burnout in the Intensive Care Unit. Department of Critical Care Medicine, Grand Rounds, Sunnybrook Health Sciences Centre. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journals

1. McCredie VA, Ferguson ND, Pinto RL, Adhikari NK, **Fowler RA**, Chapman MG, Burrell A, Baker AJ, Cook DJ, Meade MO, Scales DC; Canadian Critical Care Trials Group. Airway Management Strategies for Brain-injured Patients Meeting Standard Criteria to Consider Extubation: A Prospective Cohort Study. *Ann Am Thorac Soc*. 2016 Nov 21. **Coauthor or Collaborator.**
2. Fléchelles O, Brissaud O, **Fowler RA**, Ducruet T, Jouvett P, The Pediatric Canadian Critical Care Trials Group H N Collaborative And Groupe Francophone de Réanimation Et Urgences Pédiatriques. Pandemic influenza 2009: Impact of vaccination coverage on critical illness in children, a Canada and France observational study. *World J Clin Pediatr*. 2016 Nov 8;5(4):374-382. **Coauthor or Collaborator.**
3. Ive RM, Vail EA, Wunsch H, Goldklang MP, **Fowler RA**, Moitra VK. Patient Eligibility for Randomized Controlled Trials in Critical Care Medicine: An International Two-Center Observational Study. *Crit Care Med*. 2016 Oct 24. **Coauthor or Collaborator.**
4. Marshall JC, Bosco L, Adhikari NK, Connolly B, Diaz JV, Dorman T, **Fowler RA**, Meyfroidt G, Nakagawa S, Pelosi P, Vincent JL, Vollman K, Zimmerman J. What is an intensive care unit? A report of the task force of the World Federation of Societies of Intensive and Critical Care Medicine. *J Crit Care*. 2016 Jul 25. pii: S0883-9441(16)30240-4. **Coauthor or Collaborator.**

5. Goba A, Khan SH, Fonnies M, Fullah M, Moigboi A, Kovoma A, Sinnah V, Yoko N, Rogers H, Safai S, Momoh M, Koroma V, Kamara FK, Konowu E, Yillah M, French I, Mustapha I, Kanneh F, Foday M, McCarthy H, Kallon T, Kallon M, Naiebu J, Sellu J, Jalloh AA, Gbakie M, Kanneh L, Massaly JL, Kargbo D, Kargbo B, Vandi M, Gbetuwa M, Gevao SM, Sandi JD, Jalloh SC, Grant DS, Blyden SO, Crozier I, Schieffelin JS, McLellan SL, Jacob ST, Boisen ML, Hartnett JN, Cross RW, Branco LM, Andersen KG, Yozwiak NL, Gire SK, Tariyal R, Park DJ, Haislip AM, Bishop CM, Melnik LI, Gallaher WR, Wimley WC, He J, Shaffer JG, Sullivan BM, Grillo S, Oman S, Garry CE, Edwards DR, McCormick SJ, Elliott DH, Rouelle JA, Kannadka CB, Reyna AA, Bradley BT, Yu H, Yenni RE, Hastie KM, Geisbert JB, Kulakosky PC, Wilson RB, Oldstone MB, Pitts KR, Henderson LA, Robinson JE, Geisbert TW, Sapphire EO, Happi CT, Asogun DA, Sabeti PC, Garry RF; (Collaborator Adachi T, Bhadelia N, Bausch D, Brett-Major D, Crozier I, Donovan S, Ferri M, Fletcher T, **Fowler RA**, Kyobe H, Houlihan C, Hurley K, Jacob S, Jacquerioz F, McLellan S, O Dempsey T, Porembka D, Risi G, Rubinson L, Schieffelin J, Pooley W, Flint M, Goodman CH, Spiropoulou CF, Ströher U, Towner JS, Nichol ST, Bird BH. Viral Hemorrhagic Fever Consortium. An Outbreak of Ebola Virus Disease in the Lassa Fever Zone. *J Infect Dis.* 2016 Jul 11. pii: jiw239. **Coauthor or Collaborator.**

6. Riviello ED, Kiviri W, **Fowler RA**, Mueller A, Novack V, Banner-Goodspeed VM, Weinkauff JL, Talmor DS, Twagirimugabe T. Predicting Mortality in Low-Income Countries: the Rwanda Mortality Probability Model (R-MPM). *PLoSOne.* 2016 May 19. <http://dx.doi.org/10.1371/journal.pone.0155858>. **Coauthor or Collaborator.**

7. Leligdowicz A, Fischer WA, Uyeki TM, Fletcher TE, Adhikari NK, Portella G, Lamontagne F, Clement C, Jacob ST, Rubinson L, Vanderschuren A, Hajek J, Murthy S, Ferri M, Crozier I, Ibrahima E, Lamah MC, Schieffelin JS, Brett-Major D, Bausch DG, Shindo N, Chan AK, O'Dempsey T, Mishra S, Jacobs M, Dickson S, Lyon GM 3rd, **Fowler RA**. Ebola virus disease and critical illness. *Crit Care.* 2016; 20(1):217. **Senior Responsible Author.**

8. Aleksova N, Demers C, Strachan PH, MacIver J, Downar J, **Fowler RA**, Heyland DK, Ross HJ, You JJ. Barriers to goals of care discussions with hospitalized patients with advanced heart failure: feasibility and performance of a novel questionnaire. *ESC Heart Fail.* 2016; 3(4):245-252. **Coauthor or Collaborator.**

9. Amaral AC, **Fowler RA**, Pinto R, Rubenfeld GD, Ellis P, Bookatz B, Marshall JC, Martinka G, Keenan S, Laporta D, Roberts D, Kumar A; and the Cooperative Antimicrobial Therapy of Septic Shock Database Research Group. Patient and Organizational Factors Associated With Delays in Antimicrobial Therapy for Septic Shock. *Crit Care Med.* 2016; 44(12):2145-2153. **Coauthor or Collaborator.**

10. Jones M, **Fowler RA**. Immortal time bias in observational studies of time-to-event outcomes. *J Crit Care.* 2016;36:195-199. **Senior Responsible Author.**

11. Brooks SC, Scales DC, Pinto R, Dainty KN, Racz EM, Gaudio M, Amaral AC, Gray SH, Friedrich JO, Chapman M, Dorian P, Fam N, **Fowler RA**, Hayes CW, Baker A, Crystal E, Madan M, Rubenfeld G, Smith OM, Morrison LJ. The Postcardiac Arrest Consult Team: Impact on Hospital Care Processes for Out-of-Hospital Cardiac Arrest Patients. *Crit Care Med* 2016 ;44(11):2037-2044. **Coauthor or Collaborator.**
12. Arabi YM, Al-Enezi F, Longuere KS, Balkhy HH, Al-Sultan M, Al-Omari A, Al-Hameed FM, Carson G, Shindo N, **Fowler RA**. Feasibility of a randomized controlled trial to assess treatment of Middle East Respiratory Syndrome Coronavirus (MERS-CoV) infection in Saudi Arabia: a survey of physicians. *BMC Anesthesiol.* 2016;16(1):36. **Senior Responsible Author.**
13. Daneman N, Rishu A, Xiong , Palmay L, **Fowler RA**. Antimicrobial cost savings associated with shorter duration treatment for bloodstream infections. *JAMMI.* 2016;1(2):99-100. **Senior Responsible Author.**
14. Arabi YM, **Fowler RA**, Balkhy HH. Proceedings of the Middle East Respiratory Syndrome (MERS) Coronavirus research initiative workshop, September 9-10 2015 in Riyadh, KSA. *J Infect Public Health.* 2016;9(3):205-7. **Coauthor or Collaborator.**
15. Hill AD, **Fowler RA**, Pinto R, Herridge MS, Cuthbertson BH, Scales DC. Long-term outcomes and healthcare utilization following critical illness - a population-based study. *Crit Care* 2016;20(1):76. **Coauthor or Collaborator.**
16. Senga M, Pringle K, Ramsay A, Brett-Major DM, **Fowler RA**, French I, Vandi M, Sellu J, Pratt C, Saidu J, Shindo N, Bausch DG; Sierra Leone Kenema District Task Force and Kenema Government Hospital. Factors Underlying Ebola Virus Infection Among Health Workers, Kenema, Sierra Leone, 2014-2015. *Clin Infect Dis.* 2016;63(4):454-9. **Coauthor or Collaborator.**
17. Savage RD, **Fowler RA**, Rishu AH, Bagshaw SM, Cook D, Dodek P, Hall R, Kumar A, Lamontagne F, Lauzier F, Marshall J, Martin CM, McIntyre L, Muscedere J, Reynolds S, Stelfox HT, Daneman N. The Effect of Inadequate Initial Empiric Antimicrobial Treatment on Mortality in Critically Ill Patients with Bloodstream Infections: A Multi-Centre Retrospective Cohort Study. *PLoS One.* 2016;11(5):e0154944. **Coauthor or Collaborator.**
18. Duggal A, Pinto R, Rubenfeld G, Fowler RA. Global Variability in Reported Mortality for Critical Illness during the 2009-10 Influenza A(H1N1) Pandemic: A Systematic Review and Meta-Regression to Guide Reporting of Outcomes during Disease Outbreaks. *PLoS ONE* 11(5): e0155044. **Senior Responsible Author.**

19. Li G, Thabane L, Cook DJ, Lopes RD, Marshall JC, Guyatt G, Holbrook A, Akhtar-Danesh N, **Fowler RA**, Adhikari NK, Taylor R, Arabi YM, Chittock D, Dodek P, Freitag AP, Walter SD, Heels-Ansdell D, Levine MA. Risk factors for and prediction of mortality in critically ill medical-surgical patients receiving heparin thromboprophylaxis. *Ann Intensive Care*. 2016;6(1):18. **Coauthor or Collaborator**.
20. Cameron JI, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, **Fowler RA**, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hébert P, Slutsky AS, Marshall JC, Cook D, Herridge MS; RECOVER Program Investigators (Phase 1: towards RECOVER); Canadian Critical Care Trials Group. One-Year Outcomes in Caregivers of Critically Ill Patients. *N Engl J Med*. 2016;374(19):1831-41. **Coauthor or Collaborator**.
21. Senga M, Arabi YM, **Fowler RA**. Clinical spectrum of the Middle East respiratory syndrome coronavirus (MERS-CoV). *J Infect Public Health*. 2016. pii: S1876-0341(16)30025-9. **Senior Responsible Author**.
22. Arabi YM, Balkhy HH, Hayden FG, Hui DS, Van Kerkhove MD, **Fowler RA**. The search for therapeutic options for Middle East Respiratory Syndrome (MERS). *J Infect Public Health*. 2016. pii: S1876-0341(16)30016-8. **Senior Responsible Author**.
23. Herridge MS, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, Dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, **Fowler RA**, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hébert P, Slutsky AS, Marshall JC, Cook D, Cameron JI; RECOVER Program Investigators (Phase 1: towards RECOVER) and the Canadian Critical Care Trials Group. The RECOVER Program: Disability Risk Groups & One Year Outcome after ≥ 7 Days of Mechanical Ventilation. *Am J Respir Crit Care Med* 2016. **Coauthor or Collaborator**.
24. Arabi YM, **Fowler RA**, Bright RA, Van Kerkhove MD, Balkhy HH. Knowledge gaps in therapeutic and non-therapeutic research on the Middle East respiratory syndrome. *Lancet Respir Med* 2016;4(2):93-4. **Coauthor or Collaborator**.

25. Delaney JW, Pinto R, Long J, Lamontagne F, Adhikari NK, Kumar A, Marshall JC, Cook DJ, Jouvét P, Ferguson ND, Griesdale D, Burry LD, Burns KE, Hutchison J, Mehta S, Menon K, **Fowler RA**; Canadian Critical Care Trials Group H1N1 Collaborative. The influence of corticosteroid treatment on the outcome of influenza A(H1N1pdm09)-related critical illness. *The influence of corticosteroid treatment on the outcome of influenza A(H1N1pdm09)-related critical illness. Critical Care* 2016;20(1):75. **Senior Responsible Author.**
26. Mattia JG, Vandy MJ, Chang, JC, Platt DE, Dierberg K, Bausch DG, Brooks T, Conteh S, Crozier I, **Fowler RA**, Kamara AP, Kang C, Mahadevan S, Mansaray Y, Marcell L, McKay G, O'Dempsey T, Parris V, Pinto R, Rangel A, Salam AP, Shantha J, Wolfman V, Yeh S, Chan AK, Mishra S. Early clinical sequelae of Ebola virus disease in Sierra Leone: a cross-sectional study. *Lancet Infect Dis.* 3099(15)00489-2. **Coauthor or Collaborator.**
27. Li G, Thabane L, Cook D, Lopes R, Marshall J, Guyatt G, Holbrook A, Akhtar-Danesh N, **Fowler RA**, Adhikari N, Taylor R, Arabi Y, Chittock D, Dodek P, Freitag A, Walter S, Heels-Ansdell D, Levine M. Risk factors for and prediction of mortality in critically ill medical-surgical patients receiving heparin thromboprophylaxis. *Annals of Intensive Care* 2016;6:18. **Coauthor or Collaborator.**
28. Dominguez-Cherit G, De la Torre A, Rishu A, Pinto R, Ñamendys-Silva SA, Camacho-Ortiz A, Silva-Medina MA, Hernández-Cárdenas C, Martínez-Franco M, Quesada-Sánchez A, López-Gallegos GC, Mosqueda-Gómez JL, Rivera-Martinez NE, Campos-Calderón F, Rivero-Sigarroa E, Hernández-Gilsoul T, Espinosa-Pérez L, Macías AE, Lue-Martínez DM, Buelna-Cano C, Ramírez-García Luna A-S, Cruz-Ruiz NG, Poblano-Morales M, Molinar-Ramos F, Hernandez-Torre M, León-Gutiérrez MA, Rosaldo-Abundis O, Baltazar-Torres JA, Stelfox HT, Light B, Jouvét P, Reynolds S, Hall R, Shindo N, Daneman N, **Fowler RA**. Influenza A (H1N1pdm09)-Related Critical Illness and Mortality in Mexico and Canada, 2014. *Critical Care Medicine* 2016;44(10):1861-1870. **Senior Responsible Author.**
29. Costa V, Earle CC, Esplen MJ, **Fowler RA**, Goldman R, Grossman D, Levin L, Manuel DG, Sharkey S, Tanuseputro P, You JJ. The determinants of home and nursing home death: a systematic review and meta-analysis. *BMC Palliative Care* (2016) 15:8. **Coauthor or Collaborator.**

Non-Peer Reviewed

Journal Articles

1. **Fowler RA**, Mishra S, Chan A. The crucial importance of long-term follow up for Ebola virus survivors. Lancet ID 2016. **Principal Author.**
2. Yarnell C, **Fowler RA**. The Case for routine goals-of-care documentation. BMJ Qual Saf 2016;25(9):647-8. **Senior Responsible Author.**
3. Daneman N, Rishu AH, **Fowler RA**. Author Reply. Crit Care Med. 2016;44(8):e776. **Senior Responsible Author.**

Book Chapters

1. BASIC Clinical Research. Adhikari NK, Delaney A, **Fowler RA**, Gomersall C, Leung C, McGuinness S, Parke R. Eds McGuinness S, Parke R. Chinese University of Hong Kong, Shatin, Hong Kong. 2016 October. **Coauthor or Collaborator.**

Letters

1. Ahmed W, **Fowler RA**, McCredie VA. Does Sample Size Matter When Interpreting the Fragility Index. Crit Care Med 2016;44(11):e1142-e1143. **Coauthor or Collaborator.**

Peer-Reviewed Grants

Funded

- 2016-2021 **Principal Investigator.** Bacteremia Antibiotic Length Actually Needed for Clinical Effectiveness (BALANCE): A Randomized Controlled Clinical Trial. Co-PI: Daneman N. Collaborator(s): Aslanian P, Bagshaw S, Bestman-Smith J, Carignan A, Coburn B, Conly J, Cook D, Detsky M, Dodek P, Elsayed S, Evans G, Hall R, Johnston B, Kumar A, Lamontagne F, Lauzier F, Leung V, Marshall J, Martin C, Mcintyre L, Morris A, Muscedere J, Reynolds S, Sligl W, Stelfox H, Taggart L, Toyne B, Wilcox ME. CIHR. 2,010,635 CAD. [Grants]
- 2016-2018 **Co-Investigator.** Physicians' Services Ontario. BALANCE of the microbiome. PI: Daneman N. 165,500 CAD. [Grants]
- 2016-2018 **Supervisor.** Level of training and end-of-life predictions: a prospective study of resident and attending physicians prognosis agreement and accuracy. Resident: Yarnell C. Physicians' Services Incorporated Resident Research Award (Ontario). 19,000 CAD. [Grants]

- 2016-2017 **Co-Investigator.** Thromboprophylaxis After Significant Traumatic Brain Injury: A Randomized Controlled Trial. PI: Pirouzmand F, Scales D. Collaborator(s): English S, Fourney D, Geerts W, Griesdale D, Jabehtar M, Kramer A, Kutsogiannis D, Macdonald R, Machnowska M, Mansouri A, Midha R, O'Kelly C, Patel C, Pronovost A. CIHR. 100,000 CAD. [Grants]
- 2016-2017 **Co-Investigator.** PROACT: Using Rapid Response Teams as a Proactive Intervention to Improve End-of-Life Care. PI: Rubinfeld G. Collaborator(s): Torabi S, Smith K, Pinto R, Chapman M. Ontario Ministry of Health and Long-term Care Alternate Funding Plan Innovation Fund. 99,837 CAD. [Grants]
- 2015-2017 **Principal Investigator.** Regional and temporal variations in incidence, prevalence and outcomes of critical illness among pregnant and post-partum women and newborns in Canada. Collaborator(s): Aoyama K, Hladunewich M, Lapinsky S, Ray J, Scales D, Seaward P, Shah P. CIHR Clinical Investigation. 46,416 CAD. [Grants]
- 2015-2016 **Principal Investigator.** Gone, but not forgotten: A prospective cohort study to characterize the health effects of post-Ebola syndrome on survivors of Ebola Virus Disease in West Africa. Co-PIs: Chan A, Mishra A. Collaborator(s): Adhikari N, Glynn J, Hajek J, Murthy S, Vanderschuren A. CIHR. 250,000 CAD. [Grants]
- 2015-2016 **Co-Investigator.** Delivery of supportive care during an Ebola outbreak: defining minimal requirements and identifying barriers and facilitators towards creating international guidelines. PI: Lamontagne F. Collaborator(s): Adhikari A, Bah E, Chan A, Clement C, Couturier F, Guyatt G, Hudon C, Lamah M, Mishra S, Murthy S. CIHR. 247,570 CAD. [Grants]
- 2015-2016 **Principal Investigator.** Establishing Feasibility & Safety of Providing Critical Care for Patients with Ebola through design of a simulated Ebola Treatment Centre. Co-PI: Adhikari A. Collaborator(s): Bah E, Chan A, Christian M, Hajek J, Hall T, Lamah M, Lamontagne F, Marshall J, Mishra S, Murthy S, Piquette D, Simor A, Vandershuren A. CIHR Infection and Immunity; Population and Public Health; Health Services and Policy Research. 249,973 CAD. [Grants]
- 2015-2016 **Principal Investigator.** Bacteremia Antibiotic Length Actually Needed for Clinical Effectiveness (BALANCE): A Randomized Controlled Clinical Trial. Co-PI: Daneman N. Collaborator(s): Bagshaw S, Coburn B, Cook D, Dodek P, Hall R, Kumar A, Lamontagne F, Lauzier F, Marshall J, Martin C, McIntyre L, Muscedere J, Reynolds S, Stelfox H. CIHR. 100,000 CAD. [Grants]

- 2014-2019 **Principal Investigator.** CIHR-ICRH Community Development Program Grants - Critical Care Clinical Trials. The Canadian Critical Care Trials Group. Collaborator(s): Hebert P, Burns K, Choong K, Cook D, Gilfoyle E, Lamontagne F, Marshall J, McIntyre L, Meade M, Muscedere J, Seely A, Sinuff T, Turgeon A. 1,500,000 CAD. [Grants]
- 2014-2018 **Principal Investigator.** Bacteremia Antibiotic Length Actually Needed for Clinical Effectiveness (BALANCE): a Pilot Randomized Clinical Trial. Co-PI: Daneman N. Ontario Ministry of Health and Long-term Care Alternate Funding Plan Innovation Fund. 81,892 CAD. [Grants]

Presentations and Special Lectures

International

- 2016 Nov 27 **Invited Speaker.** Challenges and Opportunities for Clinical Care and Clinical Research During Ongoing Outbreaks and Epidemics. Aga Khan University. 3rd National Research Symposium and 10th Annual Research Retreat in Anaesthesia, Pain & Intensive Care. Karachi, Pakistan.
- 2016 Jun 1-3 **Invited Speaker.** How to avoid pitfalls when performing clinical studies; How can I manage my ICU patient differently to improve outcomes; Physical Sequelae after critical illness. The 2nd Scandinavian Intensivist Meeting. Helsinki, Finland.
- 30 Mar 2016 **Invited Speaker.** Care at the End of Life: Global Differences, Shared Challenges; Caring for Patients During Outbreaks. King Faisal Specialist Hospital. Jeddah, Saudi Arabia.
- 24 Feb 2016 **Invited Speaker.** Ebola Virus Disease: what have learned. Society of Critical Care Medicine. Orlando, Florida, USA.
- 11 Feb 2016 **Invited Speaker.** Ebola Virus Disease – a Simulated Treatment Unit. EDCTP-TDR-CIHR Ebola Virus Disease workshop. Accra, Ghana.

Abstracts

- 2016 Dec 4 Predictors for ICU Admission and Clinical Outcomes of Malignant Hematology Patients Admitted to Critical Care Units. Presenter(s): Jacobson D, Chiu N, Cheung M, **Fowler RA**, Buckstein R. 58th American Society of Hematology. San Diego, California, USA.

2016 Nov 15 Outcomes of Heart Failure (HF) Patients Admitted to the Intensive Care Unit (ICU): Impact of Early or Late ICU Admission. Presenter(s): Lee, D Stelfox H, Scales D, **Fowler RA**, Mak S, Farkouh M, Wunsch H, Wang X, Tu T, Stukel A, Austin P. American Heart Association, New Orleans, USA.

2016 Critically Ill Patients with the Middle East Respiratory Syndrome (MERS): A Multicenter Study. Presenter(s): Arabi YM, ALOmari A, Mandourah Y, Al-Hameed F, Sindi A, Al-Raddadi B, Shalhoub S, Almotairi A, Qushmaq I, Alkhatib K, Mady A, Solaiman O, Abdulmomen A, Alaithan A, Alradadi R, Rajab A, Almekhlafi G, Alharthy A, Alahmadi M, Sadat M, Almutairi H, Abdukahil S, Alqasim E, Toledo A, Nasim M, Bafqeeh F, Alshankeety O, Anwar A, Aldawood AS, Merson L, **Fowler RA**, Hayden F, Balkhy H. Riyadh, Saudi Arabia,

2016 Critically Ill Healthcare Workers with the Middle East Respiratory Syndrome (MERS). Presenter(s): Arabi YM, ALOmari A, Mandourah Y, Al-Hameed F, Sindi A, Al-Raddadi B, Shalhoub S, Almotairi A, Qushmaq I, Alkhatib K, Mady A, Solaiman O, Abdulmomen A, Alaithan A, Alradadi R, Rajab A, Almekhlafi G, Alharthy A, Alahmadi M, Sadat M, Almutairi H, Abdukahil S, Alqasim E, Toledo A, Nasim M, Bafqeeh F, Alshankeety O, Anwar A, Aldawood AS, Merson L, **Fowler RA**, Hayden F, Balkhy H. Riyadh, Saudi Arabia.

Provincial

29 Feb 2016 **Invited Speaker.** The BALANCE Trial. InFACT Symposium. Whistler, British Columbia, Canada.

27 Jan 2016 **Invited Speaker.** Bacteremia Antibiotic Length Actually Needed for Clinical Effectiveness (BALANCE) Trial. Canadian Critical Care Trials Group. Co-Speaker: Daneman N. Toronto, Ontario, Canada.

Abstracts

2016 Male Predominance in Admission to Intensive Care Units (ICU) Disappears After Surviving One ICU Admission. Presenter(s): Ramsey CD, Hill A, Dodek P, **Fowler RA**, Kozak J, Wong H, Fransoo R, Doupe M, Yogendran M, Garland A. Winnipeg, Canada.

National

- 2016 Nov 3 **Invited Speaker.** Bacteremia Antibiotic Length Actually Needed for Clinical Effectiveness (BALANCE) Trial. Canadian Critical Care Trials Group. Co-Speaker: Daneman N.
- 2016 Nov 1-2 **Invited Speaker.** End-of-Life Care – are all Canadians Equal; Antibiotics: How Long do we Need to Treat; Pitfalls in Observational Studies. Critical Care Canada Forum. Toronto, Ontario, Canada.
- 2016 Oct 25 **Invited Speaker.** The Art of Medicine: Unplugged. Toronto Western Hospital Department of Medicine. Toronto, Ontario, Canada.
- 2016 Sept 21 **Invited Speaker.** Clinical Epidemiology and Health Care Research. PhD Comprehensive Lecture Series. Institute of Health Policy Management and Evaluation, University of Toronto. Toronto, Ontario, Canada.
- 2016 Sep 9 **Invited Speaker.** Lessons to be Learned from the H1N1 Influenza Pandemic. Virtual World Sepsis Congress. Toronto, Ontario, Canada.
- 2016 Jun 4 **Invited Speaker.** Ebola - Risky Business, Critical Care. 8th World Congress on Pediatric Intensive and Critical Care, Toronto, Canada.

Abstracts

- 2016 Marital Status Does Not Explain the Male Predominance of ICU Admission Among Home Care Clients. Presenter(s): Hill CD, Dodek P, Kozak J, Doupe M, **Fowler RA**, Wong H, Fransoo R, Scales DC, Garland A. Toronto, Canada,

Local

- 8 Jun 2016 **Invited Speaker.** The Who of Research: the Student. Department of Critical Care Medicine, Sunnybrook Hospital. Toronto, Ontario, Canada.

Honours and Awards

- 2016 Order of Ontario (OOnt), Lieutenant Governor of Ontario

DR. SHANNON GODDARD, SUNNYBROOK HOSPITAL

Peer-Reviewed Publications

Editorials

1. **Goddard SL**, Adhikari NK. The Challenging Task of Improving the Recovery of ICU Survivors. JAMA. 2016 Jun 28;315(24):2671-2. **Principal Author**.

Peer Reviewed Grants

Funded

- 2013 Oct - present **Co-Principal Investigator** (Mentored by Cuthbertson B). Intensive Care Rehabilitation Study (ICARuS): Barriers to Early Physical Rehabilitation in the ICU - A Delphi Study. Canadian Institutes of Health Research (CIHR). PI: Cuthbertson B. Collaborator(s): Fan E, Francis J, Kho M, Rose L, Rubenfeld G. 84,627 CAD. [Grants]

Presentations and Special Lectures

International

Oral Presentation

- 2016 May **Presenter**. READS – Randomized Educational ARDS Diagnosis Study: A LUNG-SAFE Sub-Study. Presenter(s): Fan E, Manoharan V, Rubenfeld G, on behalf of the LUNG SAFE Investigators and the ESICM Trials group. American Thoracic Society Annual Meeting. San Francisco, California, USA.

National

- 2016 Oct **Invited Speaker**. Barriers to Early Rehabilitation in Mechanically Ventilated Patients. Canadian Critical Care Forum. Toronto, Ontario, Canada.

Local

2016 Oct **Invited Speaker.** Slow Down, You Move too Fast. Early Mobility in the Critically Ill. Sunnybrook Health Sciences Centre Medical Grand Rounds. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. Wong CL, Al Atia R, McFarlan A, Lee HY, Valiaveetil C, **Haas B**. Sustainability of a proactive geriatric trauma consultation service. *Can J Surg*. 2016 Oct 1. **Senior Responsible Author**.
2. Gomez D, **Haas B**, Larsen K, Alali AS, MacDonald R, Singh JM, Tien H, Iwashyna TJ, Rubenfeld GD, Nathens AB. A novel methodology to characterize inter-facility transfer strategies in a trauma transfer network. *J Trauma Acute Care Surg*. 2016 Oct; 81(4):658-65. **Coauthor or Collaborator**.
3. **Haas B**, Wunsch H. How does prior health status (age, comorbidities and frailty) determine critical illness and outcome? *Curr Opin Crit Care*. 2016 Oct; 22(5):500-5. **Principal Author**.
4. Gotlib Conn L, **Haas B**, Cuthbertson B, Amarala AC, Coburn NG, Nathens AB. Communication and culture in the Surgical Intensive Care Unit: boundary production and the improvement of patient care. *Qual Health Res*. 2016 Jun; 26(7):895-906. **Coauthor or Collaborator**.
5. Gotlib Conn L, **Haas B**, Rubenfeld GD, Scales DC, Amaral AC, Ferguson ND, Nathens AB. Exclusion of residents from surgery-intensive care team communication: a qualitative study. *J Surg Educ*. 2016 Mar 15. pii: S1931-7204(16)00031-3. **Coauthor or Collaborator**.

Book Chapters

1. **Haas B**, Nathens AB. Postoperative Care Including Chest Tube Management. In: McKee M and Schemitsch E, editors. *Injuries to the Chest Wall: Diagnosis and Management*. Springer. 2016. **Principal Author**.

Presentations and Special Lectures

National

2016 Sep 10 **Invited Speaker.** Challenges and controversies in trauma and acute care surgery. Canadian Surgical Forum. Toronto, Ontario, Canada.

2016 Feb 25 **Invited Speaker.** Road Traffic Trauma, Anatomy of a Crash: Fundamental concepts in management, sequelae and prevention - a interdisciplinary. Clinical acute care updates. Trauma conference. Toronto, Ontario, Canada.

Local

2016 Nov 21 **Invited Speaker.** Too much, too little, too early, too late: the challenges of fluid resuscitation in the week following trauma. Trauma Clinical Update. Sunnybrook Health Sciences Centre. Toronto, Ontario, Canada.

DR. VICTORIA MCCREDIE, SUNNYBROOK HOSPITAL

Peer-Reviewed Publications

Journal Articles

1. Park A, Chapman M, **McCredie VA**, Debecki D, Gofton T, Norton L, Boyd G. EEG Utilization in Canadian Intensive Care Units: a Multicenter Prospective Observational Study. (Accepted to Seizure: European Journal of Epilepsy. **Coauthor or Collaborator**.
2. **McCredie VA**, Alali A, Scales DC, Adhikari N, Rubenfeld GR, Cuthbertson B, Nathens AB. Effect of early versus late tracheostomy or prolonged intubation in critically ill patients with acute brain injury: a systematic review and meta-analysis. *Neurocritical Care*. 2016 Sep 6. PMID: 27601069. **Principal Author**.
3. **McCredie VA**, Piva S., Rigamonti A., Airton L., Hare G., Baker A. The Effect of Red Blood Cell Transfusion on Cerebral Tissue Oxygen Saturation in Severe Traumatic Brain Injured Patients. *Neurocritical Care*. 2016 Oct 18. PMID: 27757915. **Principal Author**.
4. **McCredie VA**, Alali A, Xiong W, Cuthbertson B, Rubenfeld G, Scales DC, Nathens AB. Timing of withdrawal of life support in patients with severe traumatic brain injury does not explain variations in mortality between trauma centres. *J Trauma Acute Care Surg*. 2016 Mar;80(3):484-91. PMID: 26595711. **Principal Author**.
5. **McCredie VA**, Ferguson ND, Pinto RL, Adhikari NKJ, Fowler RA, Chapman MG, Baker AJ, Cook DJ, Meade MO, Scales DC. Airway management strategies for brain-injured patients meeting standard criteria to consider extubation: An observational cohort study. 2016. **Principal Author**.
6. Alali AS, Gomez D, **McCredie VA**, Mainprize TG, Nathens AB. Understanding Hospital Volume-Outcome Relationship in Severe Traumatic Brain Injury. *Neurosurgery*. 2016. **Coauthor or Collaborator**.

Non-Peer Reviewed Publications

Editorials

1. **McCredie VA**, & Scales DC. Surrogate endpoints and competing risk of death in cardiac arrest research. *Critical Care* 2016 Jun 29;20(1):189. PMID: 27353499. **Principal Author**.

Letters to Editor

1. Ahmed W, Fowler R, **McCredie VA**. Does sample size matter when interpreting the Fragility Index? *Critical Care Medicine*. 2016 Nov;44(11):e1142-e1143. PMID: 27755081. **Senior Responsible Author**.

Peer-Reviewed Grants

Funded

- 2015-2020 **Co-Investigator**. Canadian Traumatic Brain Injury Research Consortium (CTRC). Canadian Institutes of Health Research (CIHR). Co-PIs: Hutchison J, Turgeon AF, Emery CA, Gagnon I, Wellington CL, Riopelle RJ. Co-Is: Archambault P, Baker AJ, Barlow KM, Bayley MT, Beauchamp MH, Chapman MG, Chasse M, Clarke DB, Colantonio A, Cusimano MD, Emeriaud G, English SW, Esser MJ, Fraser DD, Griesdale D, Guerguerian A-M, Lacroix J, Lauzier F, Marshall SC, **McCredie VA**, Mcfadyen BJ, Panenka WJ, Ptito A, Reed N, Winston BW, Yeates KO, Zarychanski R, Zemek R, Zygun DA, Fox-Robichaud AE. Collaborator(s): Babul S, Brubacher J, Cullen N, De Beaumont L, de Guise E, De Matteo C, Fox-Robichaud A, Gélinas C, Gosselin N, Green R, Green R, Kramer A, Kutsogiannis J, Lamontagne M, Levine B, Marcoux J, McKerral M, Moore L, Ouellet M-C, Rizoli S, Rowe B, Scales D, Schachar R, Schneider K, Sutherland G, Swaine B, Tator C H, Teasell R, Wang YT, Van DonKelaar P, Wheeler, A. CIHR Team Grant \$1,824,513 CAD. [Grants].
- 2015-2020 **Co-Investigator**. The NEUROlogically-impaired extubation Timing Trial (NEURO-ETT). Canadian Institutes of Health Research (CIHR). Co-PIs: Scales D, Ferguson N. Collaborators: **McCredie VA**, Bosma K, Charbonney E, Griesdale D, Meade M, Seely S, Wilcox E, Alali A, Brochard L, Cuthbertson B, Mainprize T, Nathens A, Singh J, Zygun D, Baker A, Chapman M, Turgeon A, Adhikari N, Rubenfeld R. CIHR Operating Grant \$880,404 CAD. [Grants].

Invited Lectures and Presentations

Provincial

2016 **Invited Speaker.** Organization, Monitoring and Treatment Thresholds for Acutely Brain Injury Patients within Canada Canadian Critical Care Trials Group, Lake Louise, Canada.

National

2016 **Moderator.** NeuroCritical Care – Prognosis & Outcomes; Critical Care Residents Day. Presenter(s): with Baker AJ.
Invited Speaker. Precision Medicine in Neurocritical Care: Should We Individualize Care? Critical Care Canada Forum. Toronto, Ontario, Canada.

Abstracts

2016 The Influence of Organizational Characteristics and Physician Factors on the Timing of Withdrawal of Life-Sustaining Therapies in Traumatic Brain Injury. Co-Investigators: Alali A, Xiong W, **McCredie V**, Cuthbertson B, Rubinfeld G, Scales DC, Nathens AB.

Effect of early versus late tracheostomy or prolonged intubation in critically ill patients with acute brain injury: a systematic review and meta-analysis. Co-Investigators: Alali A, Scales DC, McCredie V, Adhikari N, Rubinfeld GR, Cuthbertson B, Nathens AB.

Institute of Health Policy, Management and Evaluation Annual Research Day, University of Toronto. Toronto, Ontario, Canada.

Honours and Awards

2016 Canadian Critical Care Trials Group Young Investigator Retreat award. Training workshop for a small group of junior investigators selected in a competitive process from the CCCTG membership. (\$5,000 per year)

2016 Gillian Hawker Best PhD Poster Student Award, Clinical Epidemiology & Health Care Research, Institute of Health Policy, Management and Evaluation Annual Research Day, University of Toronto. (\$200)

DR. DOMINIQUE PIQUETTE, SUNNYBROOK HOSPITAL

Peer-Reviewed Publications

Journal Articles

1. Jain S, Menon K, **Piquette D**, Gottesman R, Hutchison J, Gilfoyle E. The development of a critical care resident research curriculum: a needs assessment. *Canadian Respiratory Journal*. 2016 May. **Coauthor or Collaborator**.
2. Alam F, Boet S, **Piquette D**, Lai A, Perkes CP, LeBlanc VR. E-learning optimization: the relative and combined effects of mental practice and modeling on enhanced podcast-based learning- a randomized controlled trial. *Advances in health sciences education: Theory and practice*. 2016:1-14. **Coauthor or Collaborator**.

Peer-Reviewed Grants

Funded

- | | |
|-------------------|---|
| 2016 Jul-2019 May | Principal Investigator . Programmatic Assessment in the Workplace: A Realist Exploration of Contexts, Mechanisms, and Outcomes in Critical Care Medicine. Co-Investigators: Brydges R, Lee C, Mema B, Ng S, Tavara W. RCPSC - Medical Education Research Grant. 49,945 CAD. [Grants] |
| 2016 Jul-2017 Jul | Principal Investigator . InCURS: Intensive Care Unit Residents Scheduling Study. PI: Parshuram C. Co-investigators: Scales D, H Stelfox H, Amaral A, Walsh C, et al. CIHR - Project Grant - Bridge Money. 100,000 CAD. [Grants] |
| 2016 Jun-2017 Jun | Principal Investigator . Overnight Hospital Supervision of Housestaff In Training in Intensive Care Units. Co-investigators: Katz D, Detsky M. MSH Innovation in Education Grant. 5000 CAD. [Grants] |
| 2016 May-2017 May | Principal Investigator . Evaluation of a new program of workplace-based formative assessment for critical care medicine trainees. Chief Fund of Department of Critical Care Medicine. Sunnybrook Health Sciences Centre. 12,500 CAD. [Grants] |

- 2015 Sep-2016 Sept **Co-Investigator.** Establishing Feasibility & Safety of Providing Critical Care for Patients with Ebola through design of a simulated Ebola Treatment Centre. PI: Fowler R, Adhikari N. Collaborator(s): Bah E, Chan A, Christian M, Hajek J, Hall T, Lamah M, Lamontagne F, Marshall J, Mishra S, Murthy S, Simor A, Vanderschuren A. CIHR Operating Grant - Innovative Ebola Research Grants. 250,000 CAD. [Grants]
- 2015 Sep-2016 Dec **Principal Investigator.** Physicians' lived experience of end of life discussions during acute hospitalizations: A phenomenological study. Trainee: El-Rouby D. The Physicians' Services Incorporated Foundation - Resident Research Grant. 4,500 CAD. [Grants].
- 2015 Mar-2016 Aug **Principal Investigator.** Effects of level of trainee autonomy during acute care episodes on learning of technical and non-technical skills to prevent harm. Co-investigators: Brydges R, Lee C, Goffi A, Amaral AC, Ringsted C. Sunnybrook Education Advisory Council (SEAC) and Education Research Unit (ERU) Education Research and Scholarship Grant. 10,000 CAD. [Grants]
- 2014 Jun-2016 Jun **Co-investigator.** Therapeutic Alliance in the ICU: Enhanced Information to Facilitate Decision-Making. PI: Amaral AC. Co-investigators: Gotlib L, Dev S, Taylor P, Downar J. Sunnybrook AFP Innovation Fund. 99,949 CAD. [Grant]

Presentations and Special Lectures

National

- 2016 Dec 15 **Invited Speaker.** Programmatic Assessment in the Workplace: A Realist Exploration of Contexts, Mechanisms, and Outcomes in Critical Care Medicine. SickKids Department of Critical Care Research Rounds. SickKids Hospital. Toronto, Ontario, Canada.
- 2016 Nov 2 **Invited Speaker.** Transition to competency-based medical education: Is the apprenticeship model dead? Canadian Critical Care Forum. Toronto, Ontario, Canada.
- 2016 Sept 22 **Invited Speaker.** Competency-Based Medical Education. University of Toronto Medical Education Seminar. SickKids Hospital. Toronto, Ontario, Canada.

2016 Jun 6 **Invited Speaker.** Simulation-based medical education: Curricular integration in the competency-based medical education era. 8th World Congress on Pediatric Intensive and Critical Care. Toronto, Ontario, Canada.

Local

2016 Jun 22 **Invited Speaker.** Medical Education Beyond Certification. Grand Rounds, Department of Critical Care Medicine, Sunnybrook Health Sciences Centre. Toronto, Ontario, Canada.

2016 Jan 6 **Invited Speaker.** Competency-based medical education: Rising Star or Black Hole? Medical Grand Rounds, Sunnybrook Health Sciences Centre. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. Sauthier M, **Rose L**, Jouvett P. Prolonged mechanical ventilation in children: a proposed definition. *Respiratory Care*. 2016 Nov. **Coauthor or Collaborator**.
2. Jordan J, **Rose L**, Dainty KN, Noyes J, Blackwood B. Factors that impact on the use of mechanical ventilation weaning protocols in critically ill adults and children: a qualitative evidence-synthesis. *Cochrane Database Syst Rev*. 2016 Oct 4;10:CD011812. **Coauthor or Collaborator**.
3. Herridge MS, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee SM, Wilcox ME, Ayas N, Choong K, Fowler R, Rubinfeld GD, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow C, Keshavjee S, Brochard L, Hebert P, Slutsky AS, Marshall JC, Cook D, Cameron JI. The RECOVER Program: One-Year Disability in Critically Ill Patients Mechanically Ventilated (MV) for 7 Days. *American Journal of Respiratory and Critical Care Medicine*. 2016 Mar 14. **Coauthor or Collaborator**.
4. Leung D, Angus J, Sinuff T, Bavley S, **Rose L**. Transitions to end of life care for patients with chronic critical illness: A meta-synthesis. *American Journal of Palliative and Supportive Care*. 2016 May 17. **Senior Responsible Author**.
5. Foster JR, Burry LD, Thabane L, Choong K, Menon K, Duffett M, Cheung A, Guenette M, Chimunda T, **Rose L**. Melatonin and melatonin agonists to prevent and treat delirium in critical illness: A systematic review protocol. *Systematic Reviews*. 2016; 24;5(1):199. **Senior Responsible Author**.
6. **Rose L**, Burns K, Dodek P, Mallick R, Cook D, Burry L, Meade M, Fergusson D, Mehta S. for the SLEAP investigators and Canadian Critical Care Trials Group. Spontaneous breathing trials in patients managed with a sedation protocol or a sedation protocol with daily interruption. *Anaesthesia and Critical Care Medicine Journal*. 2016; 1:(2), <https://medwinpublishers.com/ACCMJ/ACCMJ16000111.pdf>. **Principal Author**.

7. **Rose L**, Dale C, Smith O, Burry L, Enright G, Fergusson D, Sinha S, Wiesenfeld L, Sinuff T, Mehta S. A mixed-methods systematic review protocol to examine the use of physical restraint with critically ill adults and strategies for minimizing their use. *Systematic Reviews*. 2016; 5(1):194. **Principal Author**.
8. **Rose L**, Adhikari N, Poon J, Leasa D, McKim D. Cough augmentation techniques for the critically ill: a national survey. *Respiratory Care*. 2016; 61(10):1360-8. **Principal Author**.
9. Burry L, Hutton B, Guenette M, Williamson D, Mehta S, Egerod I, Kanji S, Adhikari N, Moher D, Martin C, **Rose L**. Comparison of pharmacological and non-pharmacological interventions to prevent delirium in critically ill patients: A protocol for a systematic review incorporating network meta-analyses. *Systematic Reviews*. 2016; 5(1),153. **Senior Responsible Author**.
10. Dale C, Wiechula R, Lewis A, McArthur A, Breen H, Scarborough A, **Rose, L**. Partnerships to improve oral hygiene practices: two complementary approaches. *Nursing Leadership*. 2016; 29(1), 47-58. **Senior Responsible Author**.
11. Dale CM, Angus JE, Sinuff T, **Rose L**. Ethnographic analysis of oral care in the intensive care unit. *American Journal of Critical Care*. 2016; 25(3):249-56. **Senior Responsible Author**.
12. Thiboutot Z, Perreault MM, Williamson DR, Mehta S, **Rose L**, Lapinsky S, Cook D, Burry L. Delirium screening and use of antipsychotics in mechanically ventilated patients in Canadian intensive care units. *Canadian Journal of Hospital Pharmacists*. 2016;69(2):107-13. **Coauthor or Collaborator**.
13. Cameron JI, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, Adhikari N K, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee SM, Wilcox ME, Ayas N, Choong K, Fowler R, Rubenfeld GD, Scales DC, Sinuff T, Cuthbertson BH, **Rose L**, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow C, Keshavjee, S, Brochard L, Hebert P, Slutsky AS, Marshall JC, Cook D, Herridge MS. The RECOVER Program: One-Year Outcomes in Caregivers of Critically Ill Patients Mechanically Ventilated for 7 Days. *New England Journal of Medicine*. 2016; 374(19):1831-41. **Coauthor or Collaborator**.
14. **Rose L**, Scales D, Atzema C, Burns K, Gray S, Doing C, Kiss A, Rubenfeld G, Lee J. Emergency department length of stay for critical care admissions: a Canadian population-based study. *Annals of the American Thoracic Society*. 2016;(8):1324-32. **Principal Author**.

15. Smith O, Dale C, Mehta S, Pinto R, **Rose L**. Nurse attitudes to the conduct of critical care research: a questionnaire study. *Critical Care Medicine*. 2016; 44(1)153-161. **Senior Responsible Author**.

Abstracts

1. **Rose L**, Adhikari NK, Leasa D, Fergusson D, Mckim DA. Cough augmentation techniques for extubation and weaning critically ill patients from mechanical ventilation. *Intensive Care Medicine Experimental*. 2016;4(1) A280. **Principal Author**.

Papers

1. **Rose L**, Adhikari NKJ, Leasa D, Fergusson DA, McKim D. Cough augmentation techniques for extubation and weaning of critically ill patients. Accepted by Cochrane Database of Systematic Reviews. 2016 Dec 1. **Principal Author**.
2. Guenette M, Burry L, Cheung A, Farquharson T, Traille M, Mantas I, Mehta S, **Rose L**. Psychotropic drug use in physically restrained, mechanically ventilated, critically ill adults: A prospective observational study. Accepted by *American Journal of Critical Care*. 2016 Nov 30. **Senior Responsible Author**.
3. Hill A, **Rose L**, Burns K, Fowler R, Scales D. Long-term outcomes and health care utilization following prolonged mechanical ventilation. Accepted by *ATS Annals*. 2016 Oct 20. **Coauthor or Collaborator**.
4. Kerlin M, Adhikari N, **Rose L**, Wilcox ME, Bellamy CJ, Costa DK, Gershngorin HB, Halpern SP, Kahn JM, Lane-Fall M, Wallace D, Weiss CH, Wunsch H, Cooke C. An Official American Thoracic Society Systematic Review: The effect of nighttime intensivist staffing on mortality and length of stay among ICU patients. Accepted by *American Journal of Respiratory and Critical Care Medicine*. 2016 Aug 29. **Coauthor or Collaborator**.
5. Dale C, King J, Amin R, Katz S, McKim D, **Rose L**. Health transition experiences of Canadian ventilator-assisted adolescents and their family caregivers: A qualitative interview study. Accepted by *Pediatrics & Child Health*. 2016 Aug 22. **Senior Responsible Author**.

Peer-Reviewed Grants

Funded

- 2016 **Co-investigator.** Development & pilot evaluation of an online peer support program for family caregivers of ventilator-assisted individuals with neuromuscular disease living in the community. Muscular Dystrophy Canada. Collaborator(s): Nonoyama M, Bastawrous-Wasilewski M, Dale C, McKim D, Jeremy R, Leasa D, Goldstein R, King J, Dennis, C-L. 49,998 CAD. [Grants]
- 2016 **Co-investigator.** Managing Pain in Collaboration in the Intensive Care Unit (MPIC-ICU): A stepped wedge cluster randomized trial. CIHR Project Scheme. Collaborator(s): Gelinas C, Berube M, Burry L, Charbonney E, Chiochio F, Choiniere M, De Marchie D, Dube J, Francis B, Houle J, Laporta D, Lavoie-Tremblay M, Perreault M, Purden M, Raboythaw J, Scales D, Thiffault N, Tousignant-laflamme Y, Vasilica Boitor M, Williamson D, Wilcox E. 100,000 CAD [Bridging Funds]
- 2016 **Co-investigator.** Relaxation for critically ill Patient Outcomes and Stress-coping Enhancement (REPOSE): Clinical Trial of an integrative intervention to improve critically ill patients' delirium and related outcomes. CIHR Project Scheme. Collaborator(s): Papathanasoglu E, Ashmore R, Bagshaw S, DeVries J, Doody M, Hegadoren K, Hewer T, Kutsogiannis J, LoCicero C, Macala K, MacDonald G, Meier M, Norris C, Park T, Skrobik Y, Stelfox T, Tanguay T. 275,000 CAD. [Grants]
- 2016 **Co-investigator.** PROSPECT: Probiotics to Prevent Severe Pneumonia and Endotracheal Colonization Trial. CIHR Project Scheme. Collaborator(s): Johnstone J, Meade M, Marshall J, Lamontagne F, Mehta S, Karachi T, Dodek P, McIntyre L, Wood G, Ovakim D, Charbonney E, Muscedere J, Rochweg B, Rodrigo C, Oeckler R, Smith O, Henderson W, Duan E, Dionne J, Lamarche D, Surette M, Hall R, Zarychanski R, Lauzier F, Thabane L, Ball L, Golan E, Herridge M, Morris A, Kristof A, Khwaja K, Girard M, Chau L, Cook D. 1,665,000 CAD. [Grants]
- 2016 **Co-investigator.** Quality metrics for patients experiencing persistent critical illness: a program of research. Michael Garron Hospital Community Based Research Fund. Collaborator(s): Istanbulian L, Fraser I, Soledad Amaral A, Fan E, Herridge M, Burry L, Dale C, Lo V, Campbell V, Varma D. 25,000 CAD. [Grants]

2016 **Co-Principal Investigator.** Cough Assist: use education needs, health service utilization, and outcomes International Ventilator Users Network. Co-PI: Nonoyama M. Collaborator(s): Leasa D, McKim D, Goldstein R, Tandon A, Pizutti R, Gershon A, Sinuff T, Katz S, Dale C, Amin R. 147,000 CAD. [Grants]

Presentations and Special Lectures

International

2016 Dec 5-7 **Invited Speaker.** Collaborate to mobilise: who does what?; Transition from paediatric to adult healthcare services - the technology-dependent adolescent. UK Intensive Care Society State of the Art meeting. London, United Kingdom.

Oral Poster

2016 Oct 21-25 **Presenter.** Perceived nurse autonomy and influence around mechanical ventilation in European PICUs. 6th Congress of the European Academy of Paediatric Societies. Presenter(s): Tume L, Kneijber M. Geneva, Switzerland.

2016 Oct 1-5 **Presenter.** Cough augmentation techniques for extubation and weaning critically ill patients from mechanical ventilation. Presenter(s): Adhikari NK, Leasa D, Fergusson D, McKim D.

Presenter. Variation in definition of prolonged mechanical ventilation: a scoping review. Presenter(s): Mcginlay M, Amin R, Burns K, Connolly B, Hart N, Jouvett P, Katz S, Leasa D, Mawdsley C, McAuley D, Schultz M, Blackwood B

Presenter. Describing sleep and sedation practices in the ICU: a multinational survey. Presenter(s): Hofhuis J, Blackwood B, Akerman E, McGaughey J, Egerod I, Fossum M, Foss H, Georgiou E, Graff H, Kalafati M, Sperlinga R, Schäfer A, Wojnicka A, Spronk PE.

European Society of Intensive Care Medicine. Milan, Italy.

Posters

2016 May 19-24

Presenter. Patterns of non-invasive home ventilation usage in the province of Alberta, Canada: A retrospective population-based cohort study. Presenter(s): MacIntyre EJ, Rimmer K, Cyr C, McKim DA, Chan M, Heule M, Massia , Bagshaw SM.

Presenter. Patterns of home ventilator assistance in the province of Alberta, Canada: A retrospective population-based cohort study.

American Thoracic Society Annual Congress. San Francisco, California, USA.

National

2016 Oct 30 - Nov 1

Invited Speaker.Physical restraint in the ICU. Canada Critical Care Forum. Toronto, Ontario, Canada.

2016 June 28

Invited Speaker. Long term mechanical ventilation: it's not really about the ventilator: Canada Critical Care Forum Mechanical Ventilation Day. Toronto, Ontario, Canada.

2016

Invited Speaker. Non-invasive oxygen strategies for adults with hypoxemic respiratory failure. SPARC Annual meeting. Toronto, Ontario, Canada.

Posters

2016 Jun 4-8

Presenter. Management of mechanical ventilation and weaning in European PICUs: VESPER Survey. 8th World Congress on Paediatric Intensive and Critical Care. Presenter(s): Tume L, Kneijber M. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. Amaral AC, Fowler RA, Pinto R, **Rubinfeld GD**, Ellis P, Bookatz B, Marshall JC, Martinka G, Keenan S, Laporta D, Roberts D, Kumar A, Cooperative Antimicrobial Therapy of Septic Shock Database Research Group. Patient and Organizational Factors Associated With Delays in Antimicrobial Therapy for Septic Shock. *Crit Care Med*. 2016 Dec 1;44(12):2145-2153. **Coauthor or Collaborator**.
2. Laffey JG, Bellani G, Pham T, Fan E, Madotto F, Bajwa EK, Brochard L, Clarkson K, Esteban A, Gattinoni L, van Haren F, Heunks LM, Kurahashi K, Laake JH, Larsson A, McAuley DF, McNamee L, Nin N, Qiu H, Ranieri M, **Rubinfeld GD**, Thompson BT, Wrigge H, Slutsky AS, Pesenti A, LUNG SAFE Investigators and the ESICM Trials Group. Potentially modifiable factors contributing to outcome from acute respiratory distress syndrome: the LUNG SAFE study. *Intensive Care Med*. 2016 Dec 1;42(12):1865-1876. **Coauthor or Collaborator**.
3. Scales DC, Golan E, Pinto R, Brooks SC, Chapman M, Dale CM, Jichici D, **Rubinfeld GD**, Morrison LJ, Strategies for Post-Arrest Resuscitation Care Network. Improving Appropriate Neurologic Prognostication after Cardiac Arrest. A Stepped Wedge Cluster Randomized Controlled Trial. *Am J Respir Crit Care Med*. 2016 Nov 1;194(9):1083-1091. **Coauthor or Collaborator**.
4. Scales DC, Golan E, Pinto R, Brooks SC, Chapman M, Dale CM, Jichici D, **Rubinfeld GD**, Morrison LJ, Strategies for Post-Arrest Resuscitation Care Network. Improving Appropriate Neurologic Prognostication after Cardiac Arrest. A Stepped Wedge Cluster Randomized Controlled Trial. *Am J Respir Crit Care Med*. 2016 Nov 1;194(9):1083-1091. **Coauthor or Collaborator**.
5. Scales DC, Golan E, Pinto R, Brooks SC, Chapman M, Dale CM, Jichici D, **Rubinfeld GD**, Morrison LJ, Strategies for Post-Arrest Resuscitation Care Network. Improving Appropriate Neurologic Prognostication after Cardiac Arrest. A Stepped Wedge Cluster Randomized Controlled Trial. *Am J Respir Crit Care Med*. 2016 Nov 1;194(9):1083-1091. **Coauthor or Collaborator**.

6. Bellani G, Laffey JG, Pham T, Madotto F, Fan E, Brochard L, Esteban A, Gattinoni L, Bumbasirevic V, Piquilloud L, van Haren F, Larsson A, McAuley DF, Bauer PR, Arabi YM, Ranieri M Md, Antonelli M, **Rubinfeld GD**, Thompson BT, Wrigge H, Slutsky AS, Pesenti A, LUNG SAFE Investigators and the ESICM Trials Group. Non-invasive Ventilation of Patients with ARDS: Insights from the LUNG SAFE Study. *Am J Respir Crit Care Med*. 2016 Oct 18. **Coauthor or Collaborator**.

7. Weiss CH, Krishnan JA, Au DH, Bender BG, Carson SS, Cattamanchi A, Cloutier MM, Cooke CR, Erickson K, George M, Gerald JK, Gerald LB, Goss CH, Gould MK, Hyzy R, Kahn JM, Mittman BS, Mosesón EM, Mularski RA, Parthasarathy S, Patel SR, Rand CS, Redeker NS, Reiss TF, Riekert KA, **Rubinfeld GD**, Tate JA, Wilson KC, Thomson CC, ATS Ad Hoc Committee on Implementation Science. An Official American Thoracic Society Research Statement: Implementation Science in Pulmonary, Critical Care, and Sleep Medicine. *Am J Respir Crit Care Med*. 2016 Oct 15;194(8):1015-1025. **Coauthor or Collaborator**.

8. Munshi L, Gershengorn HB, Fan E, Wunsch H, Ferguson ND, Stukel TA, **Rubinfeld GD**. Adjuvants to Mechanical Ventilation for Acute Respiratory Failure: Adoption, De-adoption and Factors Associated with Selection. *Ann Am Thorac Soc*. 2016 Oct 13. [Epub ahead of print]. **Senior Responsible Author**.

9. McCredie VA, Alali AS, Scales DC, Adhikari NK, **Rubinfeld GD**, Cuthbertson BH, Nathens AB. Effect of Early Versus Late Tracheostomy or Prolonged Intubation in Critically Ill Patients with Acute Brain Injury: A Systematic Review and Meta-Analysis. *Neurocrit Care*. 2016 Sep 6. **Coauthor or Collaborator**.

10. Sivakumar S, Taccone FS, Desai KA, Lazaridis C, Skarzynski M, Sekhon M, Henderson W, Griesdale D, Chapple L, Deane A, Williams L, Strickland R, Lange K, Heyland D, Chapman M, Rowland MJ, Garry P, Westbrook J, Corkill R, Antoniadis CA, Pattinson KT, Fatania G, Strong AJ, Myers RB, Lazaridis C, Jermaine CM, Robertson CS, Rusin CG, Hofmeijer J, Sondag L, Tjepkema-Cloostermans MC, Beishuizen A, Bosch FH, van Putten MJ, Carteron L, Patet C, Solari D, Oddo M, Ali MA, Dias C, Almeida R, Vaz-Ferreira A, Silva J, Monteiro E, Cerejo A, Rocha AP, Elsayed AA, Abougabal AM, Beshey BN, Alzahaby KM, Pozzebon S, Ortiz AB, Cristallini S, Lheureux O, Brasseur A, Vincent JL, Creteur J, Taccone FS, Hravnak M, Yousef K, Chang Y, Crago E, Friedlander RM, Abdelmonem SA, Tahon SA, Helmy TA, Meligy HS, Puig F, Dunn-Siegrist I, Pugin J, Gupta S, Govil D, Srinivasan S, Patel SJ, N JK, Gupta A, Tomar DS, Shafi M, Harne R, Arora DP, Talwar N, Mazumdar S, Papakrivou EE, Makris D, Manoulakas E, Tsolaki B, Karadodas. ESICM LIVES 2016: part two : Milan, Italy. 1-5 October 2016. *Intensive Care Med Exp*. 2016 Sep 1;4(Suppl 1):30. **Coauthor or Collaborator**.

11. Gotlib Conn L, Haas B, **Rubinfeld GD**, Scales DC, Amaral AC, Ferguson ND, Nathens AB. Exclusion of Residents From Surgery-Intensive Care Team Communication: A Qualitative Study. *J Surg Educ*. 2016 Jul 1;73(4):639-47. **Coauthor or Collaborator**.

12. Shankar-Hari M, Ambler M, Mahalingasivam V, Jones A, Rowan K, **Rubinfeld GD**. Evidence for a causal link between sepsis and long-term mortality: a systematic review of epidemiologic studies. *Crit Care*. 2016 Apr 13;20(1):101. **Senior Responsible Author**.
13. McCredie VA, Alali AS, Xiong W, **Rubinfeld GD**, Cuthbertson BH, Scales DC, Nathens AB. Timing of withdrawal of life-sustaining therapies in severe traumatic brain injury: Impact on overall mortality. *J Trauma Acute Care Surg*. 2016 Mar 1;80(3):484-91. **Coauthor or Collaborator**.
14. Singer M, Deutschman CS, Seymour CW, Shankar-Hari M, Annane D, Bauer M, Bellomo R, Bernard GR, Chiche JD, Coopersmith CM, Hotchkiss RS, Levy MM, Marshall JC, Martin GS, Opal SM, **Rubinfeld GD**, van der Poll T, Vincent JL, Angus DC. The Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3). *JAMA*. 2016 Feb 23;315(8):801-10. **Coauthor or Collaborator**.
15. Shankar-Hari M, Phillips GS, Levy ML, Seymour CW, Liu VX, Deutschman CS, Angus DC, **Rubinfeld GD**, Singer M, Sepsis Definitions Task Force. Developing a New Definition and Assessing New Clinical Criteria for Septic Shock: For the Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3). *JAMA*. 2016 Feb 23;315(8):775-87. **Coauthor or Collaborator**.

Non-Peer Reviewed Publications

Journal Articles

1. Shankar-Hari M, **Rubinfeld GD**. Understanding Long-Term Outcomes Following Sepsis: Implications and Challenges. *Curr Infect Dis Rep*. 2016 Nov 1;18(11):37. **Senior Responsible Author**.

Editorials

1. **Rubinfeld GD**. Rebuttal From Dr Rubinfeld. *Chest*. 2016 Mar 1;149(3):629-30. **Principal Author**.
2. **Rubinfeld GD**. COUNTERPOINT: Does the United States Need More Intensivist Physicians? *No. Chest*. 2016 Mar 1;149(3):625-8. **Principal Author**.

Peer-Reviewed Grants

Funded

- 2015 Jul-2020 Jun **Co-Investigator.** Paramedic Initiated Treatment of Sepsis Trial in Out-of-hospital Patients (PITSTOP). Canadian Institutes of Health Research. Operating Grant. PI: Scales D. Collaborator(s): Cheskes S, Drennan I, Mazzulli T, Morris A, Morrison L, Seymour C, Verbeek R. 900,554 CAD. [Grants]
- 2015 Jul-2020 Jun **Co-Investigator.** The NEUROlogically-impaired extubation Timing Trial (NEURO-ETT). Canadian Institutes of Health Research. Operating Grant. PI: Scales D, Ferguson N. Collaborator(s): Adhikari NK, Alali A, Baker A, Bosma K, Brochard L, Chapman M, Charbonney E, Cuthbertson B, Fowler R, Griesdale D, Mainprize T, McCredie VA, Meade M, Nathens A, Seely A, Singh J, Turgeon A, Wilcox ME, Zygun D. 880,404 CAD. [Grants]
- 2014 Sep-2016 Sep **Co-Investigator.** The Weaning and Variability Evaluation (WAVE) Research Program: pioneering a groundbreaking advance in assessment and prediction of extubation outcomes. Physicians' Services Incorporated Foundation (PSI). Health Research Grant. PI: Seely A, Ferguson N. Collaborator(s): Burns K, McIntyre L, Fergusson D, Ramsay T, Marshall J, Martin C, Maziak D, Mehta S. 169,285 CAD. [Grants]
- 2014 Jan-2016 Jan **Co-Investigator.** COGWELL - Cognitive outcomes and wellness in survivors of critical illness. Physicians Services Incorporated Foundation. Health Research Grant. PI: Wilcox ME. 139,000 CAD. [Grants]

Non-Peer Reviewed Grants

Funded

- 2012 Oct-2017 Sep **Co-Investigator.** Catecholamines as primary mediators of post-burn hypermetabolism: A clinical prospective trial. Canadian Institutes of Health Research (CIHR). PI: Jeschke M. Collaborator(s): Boehning D. 851,939 CAD. [Grants]

Presentations and Special Lectures

International

- 2016 Sep 23-25 **Invited Lecturer.** Update in ARDS definitions: has anything changed with Berlin?; Plenary Session II - Why we like evidence but hate guidelines; What is New in ARDS? - Update in ARDS definitions: has anything changed. National Congress of Respiratory Diseases organized by Chinese Thoracic Society. Dalian, Beijing, China.
- 2016 May 18 **Co-Chair.** Critical Care: Reducing Variation in Usual Care. Presenter(s): with H.B. Gershengorn, MD, Bronx, NY; A.J. Walkey, MD, MSc, Boston, MA. Mini Symposium.
- Chair.** CON: Patient and Family Satisfaction is a Key Quality Metric in Critical Care. Scientific Symposium, The Patient-Centered Juggernaut: The right move for clinical care, policy, and research?.
- American Thoracic Society. San Francisco, California, USA.
- 2016 Apr 6-7 **Invited Speaker.** Evidence-Based Practice in the ICU; Web-based Ventilator Management Tested via Cluster RCT NHLBI. Implementation Science in Critical Care Workshop. Bethesda, Maryland, USA.
- 2016 Mar 31-Apr 1 **Visiting Professor.** Why We Agree on the Evidence but Disagree on the Medicine; Pulmonary Disease & Critical Care Medicine Grand Rounds Lecture - (The Intensivist Workforce "Crisis": Too Few Doctors or too Many ICU Beds?). UVM Medical Center Medicine Grand Rounds - Tisdale Lecture Series. Burlington, Vermont, USA.
- 2016 Mar 12-16 **Invited Speaker.** Big data or big hype? - How big the trial?; Can the physician decide alone? - End-of-life issues; Is Berlin the final word? G Rubenfeld - 50 shades of ARDS; The big picture: There is no unique post-ICU syndrome - Long-term outcomes; How can we build a rehabilitation trial that will be positive?; Round Table Conference - Recovery after Critical Illness: Putting the Puzzle Together.
- Moderator.** How much oxygen? - Standard presentation. International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium.
- 2016 Jan 10 **Visiting Professor.** ARDs: Where are We Now; Where Do We Go from Here?; Too Few Intensivists or Too Much Intensive Care?: The Workforce "Crisis". University of Washington - Seattle Conference. Seattle, Washington, USA.

Abstracts

2016 May 16-18 Diaphragm Inactivity and Eccentric Contractile Activity Are Common and Impair Diaphragm Function During Mechanical Ventilation. Presenter(s): Goligher E. (Trainee Presentation).

Adoption and De-Adoption of Adjuvant Treatments for Acute Respiratory Failure. Presenter(s): with Munshi L. (Trainee Presentation).

READS - Randomized Educational ARDS Diagnosis Study: A LUNG-SAFE Sub-Study. Presenter(s): with Goddard S. (Trainee Presentation).

American Thoracic Society. San Francisco, California, USA.

National

2016 Oct 30-31 **Invited Speaker.** If Dead, Nothing else Matters; Lung Protective Ventilation: beyond 6//kg; Intractable conflicts over end-of-life care after Rasouli. Critical Care Canada Forum, CCCF/CCCS Critical Care Fellows' Day. Toronto, Ontario, Canada.

2016 Oct 19 **Invited Lecturer.** If you have a hammer you can find some really interesting nails: clinical epidemiology as a gateway to a research career. Clinical Epidemiology Synthesis Sessions 2016. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. Robinson LR, Chapman M, Schwartz M, Bethune AJ, Potapova E, Strauss R, **Scales DC**. Patterns of use of somatosensory-evoked potentials for comatose patients in Canada. *J Crit Care*. 2016 Dec;36:130-133. **Senior Responsible Author**.
2. **Scales DC**, Golan E, Pinto R, Brooks SC, Chapman M, Dale CM, Jichici D, Rubenfeld GD, Morrison LJ; Strategies for Post-Arrest Resuscitation Care Network. Improving Appropriate Neurologic Prognostication after Cardiac Arrest. A Stepped Wedge Cluster Randomized Controlled Trial. *Am J Respir Crit Care Med*. 2016 Nov 1;194(9):1083-1091. **Principal Author**.
3. Karkouti K, Callum J, Wijeyesundera DN, Rao V, Crowther M, Grocott HP, Pinto R, **Scales DC**; TACS Investigators. Point-of-Care Hemostatic Testing in Cardiac Surgery: A Stepped-Wedge Clustered Randomized Controlled Trial. *Circulation*. 2016 Oct 18;134(16):1152-1162. **Senior Responsible Author**.
4. Brooks SC, **Scales DC**, Pinto R, Dainty KN, Racz EM, Gaudio M, Amaral AC, Gray SH, Friedrich JO, Chapman M, Dorian P, Fam N, Fowler RA, Hayes CW, Baker A, Crystal E, Madan M, Rubenfeld G, Smith OM, Morrison LJ. The Postcardiac Arrest Consult Team: Impact on Hospital Care Processes for Out-of-Hospital Cardiac Arrest Patients. *Crit Care Med*. 2016 Nov;44(11):2037-2044. **Coauthor or Collaborator**.
5. Worthington H, Pickett W, Morrison LJ, **Scales DC**, Zhan C, Lin S, Dorian P, Dainty KN, Ferguson ND, Brooks SC; Rescu Investigators. The impact of hospital experience with out-of-hospital cardiac arrest patients on post cardiac arrest care. *Resuscitation*. 2017 Jan;110:169-175. **Senior Responsible Author**.
6. Gershengorn HB, **Scales DC**, Kramer A, Wunsch H. Association Between Overnight Extubations and Outcomes in the Intensive Care Unit. *JAMA Intern Med*. 2016 Nov 1;176(11):1651-1660. **Coauthor or Collaborator**.
7. McCredie VA, **Scales DC**. Surrogate endpoints and competing risk of death in cardiac arrest research. *Crit Care*. 2016 Jun 29;20(1):189. doi: 10.1186/s13054-016-1345-y. **Senior Responsible Author**.

8. Lin S, **Scales DC**. Cardiopulmonary resuscitation quality and beyond: the need to improve real-time feedback and physiologic monitoring. *Crit Care*. 2016 Jun 28;20(1):182. **Senior Responsible Author**.
9. Ko DT, Qiu F, Koh M, Dorian P, Cheskes S, Austin PC, **Scales DC**, Wijeyesundera HC, Verbeek PR, Drennan I, Ng T, Tu JV, Morrison LJ. Factors associated with out-of-hospital cardiac arrest with pulseless electric activity: A population-based study. *Am Heart J*. 2016 Jul;177:129-37. **Coauthor or Collaborator**.
10. Cameron JI, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, **Scales DC**, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hébert P, Slutsky AS, Marshall JC, Cook D, Herridge MS; RECOVER Program Investigators (Phase 1: towards RECOVER).; Canadian Critical Care Trials Group. One-Year Outcomes in Caregivers of Critically Ill Patients. *N Engl J Med*. 2016 May 12;374(19):1831-41. **Coauthor or Collaborator**.
11. Rose L, **Scales DC**, Atzema C, Burns KE, Gray S, Doing C, Kiss A, Rubenfeld G, Lee JS. Emergency Department Length of Stay for Critical Care Admissions. A Population-based Study. *Ann Am Thorac Soc*. 2016 Aug;13(8):1324-32. **Coauthor or Collaborator**.
12. Dale CM, Sinuff T, Morrison LJ, Golan E, Scales DC. Understanding Early Decisions to Withdraw Life-Sustaining Therapy in Cardiac Arrest Survivors. A Qualitative Investigation. *Ann Am Thorac Soc*. 2016 Jul;13(7):1115-22. **Senior Responsible Author**.
13. Gotlib Conn L, Haas B, Rubenfeld GD, **Scales DC**, Amaral AC, Ferguson ND, Nathens AB. Exclusion of Residents From Surgery-Intensive Care Team Communication: A Qualitative Study. *J Surg Educ*. 2016 Jul-Aug;73(4):639-47. **Coauthor or Collaborator**.
14. Herridge MS, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, Santos CD, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, **Scales DC**, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hébert P, Slutsky AS, Marshall JC, Cook D, Cameron JI; RECOVER Program Investigators (Phase 1: towards RECOVER).; Canadian Critical Care Trials Group. The RECOVER Program: Disability Risk Groups and 1-Year Outcome after 7 or More Days of Mechanical Ventilation. *Am J Respir Crit Care Med*. 2016 Oct 1;194(7):831-844. **Coauthor or Collaborator**.

15. Lamontagne F, Meade MO, Hébert PC, Asfar P, Lauzier F, Seely AJ, Day AG, Mehta S, Muscedere J, Bagshaw SM, Ferguson ND, Cook DJ, Kanji S, Turgeon AF, Herridge MS, Subramanian S, Lacroix J, Adhikari NK, **Scales DC**, Fox-Robichaud A, Skrobik Y, Whitlock RP, Green RS, Koo KK, Tanguay T, Magder S, Heyland DK; Canadian Critical Care Trials Group. Higher versus lower blood pressure targets for vasopressor therapy in shock: a multicentre pilot randomized controlled trial. *Intensive Care Med*. 2016 Apr;42(4):542-50. **Coauthor or Collaborator**.
16. Lane D, Ichelson RI, Drennan IR, **Scales DC**. Prehospital management and identification of sepsis by emergency medical services: a systematic review. *Emerg Med J*. 2016 Jun;33(6):408-13. doi: 10.1136/emered-2015-205261. Review. **Senior Responsible Author**.
17. Elmer J, Torres C, Aufderheide TP, Austin MA, Callaway CW, Golan E, Herren H, Jasti J, Kudenchuk PJ, **Scales DC**, Stub D, Richardson DK, Zive DM; Resuscitation Outcomes Consortium. Association of early withdrawal of life-sustaining therapy for perceived neurological prognosis with mortality after cardiac arrest. *Resuscitation*. 2016 May;102:127-35. **Coauthor or Collaborator**.
18. McCredie VA, Alali AS, Xiong W, Rubenfeld GD, Cuthbertson BH, **Scales DC**, Nathens AB. Timing of withdrawal of life-sustaining therapies in severe traumatic brain injury: Impact on overall mortality. *J Trauma Acute Care Surg*. 2016 Mar;80(3):484-91. **Coauthor or Collaborator**.
19. **Scales DC**, Fischer HD, Li P, Bierman AS, Fernandes O, Mamdani M, Rochon P, Urbach DR, Bell CM. Unintentional Continuation of Medications Intended for Acute Illness After Hospital Discharge: A Population-Based Cohort Study. *J Gen Intern Med*. 2016 Feb;31(2):196-202. **Principal Author**.

Book Chapters

1. Doyle, J, **Scales, DC**. Tracheostomy in the ICU. *Principles of Critical Care*. Role: Wrote manuscript, supervised principle author. 2016. **Senior Responsible Author**.

Editorials

1. McCredie VA, **Scales DC**. Surrogate endpoints and competing risk of death in cardiac arrest research. *Crit Care*. 2016 Jun 29;20(1):189. **Senior Responsible Author**.
2. Lin S, **Scales DC**. Cardiopulmonary resuscitation quality and beyond: the need to improve real-time feedback and physiologic monitoring. *Crit Care*. 2016 Jun 28;20(1):182. **Senior Responsible Author**.

3. Rubulotta F, **Scales DC**, Halpern SD. Night shifts, human factors, and errors in the ICU: a causal pathway? *Intensive Care Med.* 2016 Mar 1;42(3):456-7. **Coauthor or Collaborator.**

Peer-Reviewed Grants

Funded

- 2016 Sep-2018 Aug **Co-Investigator.** Opioid use after critical illness. CIHR. Project Grant. PI: Wunsch H. Collaborator(s): Fan E, Gomes T, Juurlink D, Neuman M, Wang HT, Wijeyesundera DN. 183,480 CAD. [Grants]
- 2016 Sep-2017 Oct **Co-Investigator.** Managing Pain In Collaboration in the Intensive Care Unit (MPIC-ICU): A Stepped Wedge Cluster Randomized Trial. CIHR. Project Grant. PI: Gelinac C, Laporta D. Collaborator(s): Bernard F, Bérubé M, Boitor M, Burry L, Charbonney E, Chiochio F, Choinière M, De Marchie M, Dubé JN, Houle J, Lavoie-Tremblay M, Perreault M, Purden M, Raboy Thaw J, Rose L, Thiffault N, Tousignant-Laflamme Y, Wilcox ME, Williamson D. 100,000 CAD. [Grants]
- 2016 Sep-2017 Aug **Co-Investigator.** The changing face of trauma care: a comprehensive evaluation of the impact of severe injury on elderly patients. CIHR. Project Grant. PI: Haas B, Nathens A. Collaborator(s): Gotlib Conn L, Wong C, Wunsch H. 92,500 CAD. [Grants]
- 2016 Sep-2017 Aug **Co-Principal Investigator.** Thromboprophylaxis After Significant Traumatic Brain Injury: A Randomized Controlled Trial. CIHR. Project Grant. PI: Pirouzmand F. Collaborator(s): English S, Fourny D, Fowler R, Geerts W, Griesdale D, Jabejdar Maralani P, Kramer A, Kutsogiannis D, Macdonald R, Machnowska M, Mansouri A, Midha R, O'Kelly C, Patel C, Pronovost A. 100,000 CAD. [Grants]
- 2016 Sep-2017 Aug **Co-Investigator.** InCURS: Intensive Care Unit Residents Scheduling Study. CIHR. Project Grant. PI: Parshuram C, Piquette C. Collaborator(s): Amaral AC, Ayas N, Bagshaw S, Baker G, Brydges R, Ferguson N, Frank J, Friedrich J, Imrie K, Karachi T, Kirpalani H, Haresh, Mema B, Sen M, Stelfox H, Tomlinson G, Walsh C, Willan A. 100,000 CAD. [Grants]

- 2016 Sep-2017 Aug **Co-Investigator.** Effectiveness of intermittent electrical stimulation in preventing the formation of pressure ulcers in acute care facilities. CIHR. Project Grant. PI: Mushahwar V, Emmons K. Collaborator(s): Dukelow S, Ferguson N, McCabe C, Tsuyuki R, Zygun D. 100,000. [Grants]
- 2016 Jan-2018 Dec **Co-Investigator.** Evaluating the PulsePoint Mobile Device Application to Increase Bystander Resuscitation for Victims of Sudden Cardiac Arrest. CIHR. Partnerships for Health System Improvement (PHSI). PI: Brooks S, Dick W. Collaborator(s): Christenson J, Day A, Grierson R, Morrison L, Wax R, Weldon E. 375,000 CAD. [Grants]
- 2015 Oct-2020 Sep **Co-Investigator.** CanROC - Canadian Resuscitation Outcomes Consortium: Toward a National Resuscitation Clinical Research Network. Canadian Institutes of Health Research. ICRH Community Development Program Grants - Resus Clin Res. PI: Morrison LJ, Christenson JM, Stiell IG. Collaborator(s): Atkinson PR, Bhanji F, Brooks SC, Cheskes S, Dainty KN, de Caen A, Dorian P, Hutchison JS, Kirkpatrick AW, Lin S, Nascimento B, Osmond MH, Parker MJ, Ramanathan K, Rizoli SB, Travers AH, Vaillancourt C, Verbeek PR, Wells GA. 1,499,760 CAD. [Grants]
- 2015 Aug-2016 Jul **Co-Investigator.** Efficacy and safety of melatonin for prevention of delirium in critically ill patients: A multi-centre, randomized, double blind, placebo-controlled feasibility study. Centre for Collaborative Drug Research. Pilot Project Fund. PI: Fowler R. Collaborator(s): Azar A, Boon H, Fan E, Mehta, S, Rose L, Wilcox, ME, Williamson D. 50,000 CAD. [Grants]
- 2015 Jul-2020 Jun **Principal Investigator.** The NEUROlogically-impaired extubation Timing Trial (NEURO-ETT). Canadian Institutes of Health Research. Operating Grant. Collaborator(s): Adhikari NK, Alali A, Baker A, Bosma K, Brochard L, Chapman M, Charbonney E, Cuthbertson B, Fowler R, Griesdale D, Mainprize T, McCredie V, Meade M, Nathens A, Rubenfeld G, Seely A, Singh J, Turgeon A, Wilco ME, Zygun D. 880,404 CAD. [Grants]
- 2015 Jul-2020 Jun **Principal Investigator.** Paramedic Initiated Treatment of Sepsis Trial in Out-of-hospital Patients (PITSTOP). Canadian Institutes of Health Research. Operating Grant. Collaborator(s): Cheskes S, Drennan I, Mazzulli T, Morris A, Morrison L, Rubenfeld G, Seymour C, Verbeek PR. 900,554 CAD. [Grants]

- 2015 Jul-2017 Jun **Co-Investigator.** Regional and temporal variations in incidence, prevalence and outcomes of critical illness among pregnant and post-partum women and newborns in Canada. Canadian Institutes of Health Research. Operating Grant. PI: Fowler, Robert A. Collaborator(s): Aoyama K, Hladunewich M, Lapinsky S, Ray J, Seaward P, Shah P. 46,415 CAD. [Grants]
- 2014 Oct-2017 Sep **Co-Investigator.** Identifying Risk Factors for and Outcomes following Rehospitalizations for Elderly Critically Ill Patients. Canadian Institutes of Health Research. Operating Grant. PI: Wunsch H. Collaborator(s): Fowler RA. 189,225 CAD. [Grants]
- 2014 Sep-2017 Sep **Co-Investigator.** Assessing and improving the quality of care of patients with out-of-hospital cardiac arrest. Canadian Institutes of Health Research. 2527. PI: Ko D. Collaborator(s): Austin P, Cheskes S, Dorian P, Morrison L, Rac V, Stukel T, Tu J, Verbeek P, Wijeyesundera H. 443,022 CAD. [Grants]
- 2014 Jun-2015 May **Co-Investigator.** Structuring Patient-Oriented Research: Developing a National Agenda in Patient Care Research and Evaluation. Canadian Institutes of Health Research. Planning and Dissemination Grant-Institute Community Support. PI: Hébert P. Collaborator(s): Bagshaw S, Dodek P, Lamontagne F, Martin C, Muscedere J, Stelfox H, Turgeon A, 25,000 CAD. [Grants]
- 2014 Apr-2017 Mar **Co-Investigator.** Clinical outcomes and predictors of PITuitary disorders in patients with moderate and severe Traumatic Brain Injury: the PIT-TBI prospective multicenter pilot cohort study. Canadian Institutes of Health Research. Operating Grant. PI: Lauzier F. Collaborator(s): Archambaul P, Bernard F, Boutin A, Cook D, Gagnon C, Griesdale D, Herridge M, Margaret S, Houde G, Lamontagne F, Mcintyre L, Menon K, Moore L, Pagliarello G, Perron P, Rousseau F, Turgeon A. 278,469 CAD. [Grants]
- 2014 Apr-2016 Oct **Co-Investigator.** Blood conservation in cardiac surgery using a novel transfusion algorithm based on point-of-care testing: a stepped-wedge cluster randomized controlled trial. Canadian Institutes of Health Research. PI: Karkouti K. Collaborator(s): Callum J, Crowther M, Grocott H, Rao V, Wijeyesundera D. 484,584 CAD. [Grants]
- 2014 Jan-2017 Jan **Co-Investigator.** Identifying and Evaluating Intensive Care Unit Capacity Strain in Alberta. Alberta Innovates Health Solutions. Partnership for Research and Innovation in the Health System. PI: Bagshaw S. 743,818 CAD. [Grants]

- 2012 Oct-2016 Sep **Co-Investigator.** Early Determination of long-term Prognosis in critically ill patients with Severe Traumatic Brain Injury (TBI- Prognosis multicenter prospective study). Canadian Institutes of Health Research (CIHR). Operating Grant. PI: Turgeon A. Collaborator(s): Lauzier F, Bernard F, Lamontagne F, Burns K, Rigamonti A, McIntyre L, Pagliarello J, Meade M. 1,053,131 CAD. [Grants]
- 2010 Feb-2016 Feb **Co-Investigator.** From Bench to Bedside to Curbside. Clinical Research Consortium to improve Resuscitation Outcomes. National Institutes of Health, Heart and Stroke Foundation of Canada, CIHR. PI: Slutsky, Arthur. Collaborator(s): Black SE, Davis D, Dorian P, Hutchison JS, Lavery J, Morrison LJ, Redelmeier DA, Rotstein OD, Sibbald W. 3,100,000 CAD. [Grants]

Presentations and Special Lectures

International

- 2016 Apr 6 **Invited Speaker.** Implementation Science in Critical Care Workshop. National Heart, Lung, and Blood Institute (NHLBI) -NIH. Bethesda, Maryland, USA.

Provincial

- 2016 Jan **Presenter.** The Neuro_ETT study protocol. Canadian Critical Care Trials Group (CCCTG). Lake Louise, Alberta, Canada.

National

- 2016 Nov 2 **Invited Speaker.** Cardiac Arrest and Organ Donation - Neuroprognostication after Resuscitated Cardiac Arrest.
- Moderator.** Resuscitation. Co-Moderator: McIntyre L.
- Critical Care Canada Forum. Toronto, Ontario, Canada.
- 2016 Nov 1 **Invited Speaker.** Plenary RCT - The ICE-PACs Trial. Critical Care Canada Forum. Toronto, Ontario, Canada.
- 2016 Oct 30 **Moderator.** Session 8, Practice in 2016. Co-Moderator: Sen M.
- Critical Care Canada Forum. Toronto, Ontario, Canada.

- 2016 Sep 20 **Invited Speaker.** Deceased Donation Process and Data Definitions. Potential Organ Donor Identification and System Accountability Workshop, Canadian Blood Services. Ottawa, Ontario, Canada.
- 2016 Jul 8 **Invited Speaker.** Therapeutic Hypothermia study. Kidney Pancreas Working Group meeting. Toronto, Ontario, Canada.
- 2016 Jun 9 **Invited Lecturer.** Should ECLS replace CPR? Pro: In-hospital Code Blue protocols should include ECLS; Con: We need more data before adding ECLS to crash carts. Critical Challenges Conference 2016. Toronto, Ontario, Canada. Co-Presenter(s): Adhikari N.
- 2016 May 2 **Facilitator.** Human umbilical cord mesenchymal stem/stromal cells....patients with severe sepsis. Presenter(s): Grace Hogan. "Provocateur". Provide critical feedback to trainees on their new, never presented research.
- Facilitator.** Cost effectiveness of cardiac arrest management. Presenter(s): Guillaume Geri. 'Provocateur'. Provide critical feedback to trainees on new, never presented research. (Trainee Presentation).
- Chair.** Resuscitation in Motion (RiM2016), Scientific Sessions # 3 (Bedside Research).
- University of Toronto, Resuscitation in Motion (RiM2016). Toronto, Ontario, Canada.
- 2016 Apr 21 **Keynote Speaker.** Life after Death: Improving Outcomes After Cardiac Arrest.
- Invited Speaker.** Moving Sepsis Therapy Upstream.
- Queens University, Department of Emergency Medicine Research Day. Kingston, Ontario, Canada.
- 2016 Apr 21 **Invited Speaker.** Update on Cooling and Other Post-Cardiac Arrest Treatments. Southlake Interprofessional Care Rounds. Toronto, Ontario, Canada.
- 2016 Apr 14 **Invited Speaker.** Lessons Learned From Quality Improvement Research. University of Toronto Critical Care Medicine Academic Half Day. Toronto, Ontario, Canada.

2016 Jan 15 **Invited Speaker.** What to Do When Critical Illness is First Seen by Paramedics? Toronto Paramedics. Toronto, Ontario, Canada.

Local

2016 May 27 **Invited Speaker.** The What of Research - What do I do When I am not in the ICU. 1st Critical Care Central Research Summit. Sunnybrook CCM Grand Rounds. Toronto, Ontario, Canada.

2016 Jan 14 **Invited Speaker.** Weaned bun Unawake - Extubate, Trach or Just Wait? Sunnybrook Critical Care Grand Rounds. Toronto, Ontario, Canada.

Honours and Awards

2015 Jul-2018 Jun Merit Award. Barriers to Early Rehabilitation in Mechanically Ventilated Patients. (Research Award)

Peer-Reviewed Publications

Journal Articles

1. Rose L, Dale C, Smith OM, Burry L, Enright G, Fergusson D, Sinha S, Wiesenfeld L, **Sinuff T**, Mehta S. A mixed-methods systematic review protocol to examine the use of physical restraint with critically ill adults and strategies for minimizing their use. *Syst Rev*. 2016 Nov;21(5):194. **Coauthor or Collaborator**.
2. St-Onge M, Anseeuw K, Cantrell FL, Gilchrist IC, Hantson P, Bailey B, Lavergne V, Gosselin S, Kerns W 2nd, Laliberté M, Lavonas EJ, Juurlink DN, Muscedere J, Yang CC, **Sinuff T**, Rieder M, Mégarbane B. Experts Consensus Recommendations for the Management of Calcium Channel Blocker Poisoning in Adults. *Crit Care Med*. 2016 Oct 3. **Coauthor or Collaborator**.
3. Heyland DK, Heyland R, Dodek P, You J, **Sinuff T**, Hiebert T, Jiang X, Day AG. Discordance between patients' stated values and treatment preferences for end-of-life care: results of a multicentre survey. *BMJ Supportive & Palliative Care*. 2016 Oct 3:1-8. **Coauthor or Collaborator**.
4. Herridge MS, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Lefebvre M, Fergusson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, Dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, Scales DC, **Sinuff T**, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hebert P, Slutsky AS, Marshall JC, Cook D, Cameron JI, RECOVER Program Investigators (Phase 1: towards RECOVER) and the Canadian Critical Care Trials Group. The RECOVER Program: Disability Risk Groups & One Year Outcome after ≥ 7 Days of Mechanical Ventilation. *Am J Respir Crit Care Med*. 2016 Oct 1;194(7):831-844. **Coauthor or Collaborator**.
5. Heyland DK, Dodek P, You JJ, **Sinuff T**, Hiebert T, Tayler C, Jiang X, Simon J, Downar J for the ACCEPT Study Team and the Canadian Researchers at the End of Life Network (CARENET). Validation of Quality Indicators for End of Life Communication: Results of a multicentre survey. 2016 Sep. **Coauthor or Collaborator**.
6. Leung D, Angus JE, **Sinuff T**, Bavly S, Rose L. Transitions to End-of-Life Care for Patients With Chronic Critical Illness: A Meta-Synthesis. *Am J Hosp Palliat Care*. 2016 May 17. **Coauthor or Collaborator**.

7. Cameron JI, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, Scales DC, **Sinuff T**, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hébert P, Slutsky AS, Marshall JC, Cook D, Herridge MS, RECOVER Program Investigators (Phase 1: towards RECOVER), Canadian Critical Care Trials Group. One-Year Outcomes in Caregivers of Critically Ill Patients. *N Engl J Med*. 2016 May 12;374(19):1831-41. **Coauthor or Collaborator**.
8. Dale CM, Angus JE, **Sinuff T**, Rose L. Ethnographic Investigation of Oral Care in the Intensive Care Unit. *Am J Crit Care*. 2016 May 1;25(3):249-56. **Coauthor or Collaborator**.
9. Dale CM, **Sinuff T**, Morrison LJ, Golan E, Scales DC. Understanding Early Decisions to Withdraw Life-sustaining Therapy in Cardiac Arrest Survivors: A Qualitative Investigation. *Ann Am Thorac Soc*. 2016 Apr 13;13(7):115-22. **Coauthor or Collaborator**.
10. Daneman N, Rishu AH, Xiong W, Bagshaw SM, Dodek P, Hall R, Kumar A, Lamontagne F, Lauzier F, Marshall J, Martin CM, McIntyre L, Muscedere J, Reynolds S, Stelfox HT, Cook DJ, Fowler RA, Canadian Critical Care Trials Group. Duration of Antimicrobial Treatment for Bacteremia in Canadian Critically Ill Patients. *Crit Care Med*. 2016 Feb 1;44(2):256-64. **Collaborator, Group Author**.
11. Howes D, Gray SH, Brooks SC, Boyd JG, Djogovic D, Golan E, Green RS, Jacka MJ, **Sinuff T**, Chaplin T, Smith OM, Owen J, Szulewski A, Murphy L, Irvine S, Jichici D, Muscedere J. Canadian Guidelines for the use of targeted temperature management (therapeutic hypothermia) after cardiac arrest: A joint statement from The Canadian Critical Care Society (CCCS), Canadian Neurocritical Care Society (CNCCS), and the Canadian Critical Care Trials Group (CCCTG). *Resuscitation*. 2016 Jan;98:48-63. **Coauthor or Collaborator**.

Non-Peer Reviewed Publications

Book Chapters

1. Duggal A, **Sinuff T**. Non-Invasive ventilation in patients with blunt chest trauma: What have we learned? Key response determinants and practical implications. In: Antonio M. Esquinas, editor(s). *Non Invasive Ventilation Theory, Equipment & Clinical Applications*. 2nd. (Switzerland): Springer International Publishing; 2016. p. 425-433. **Senior Responsible Author**.

Peer-Reviewed Grants

Funded

- 2016 Jul-2020 Jun **Co-Investigator.** Development and Evaluation of a Family-Partnered Care Pathway for Critically Ill Older Patients. CIHR. Team Grant. PI: Stelfox H, Heyland D. Collaborator(s): Boucher P, O'Neill B, Robertson D, Wickson P, Zygun D, Allatt P, Au S, Berg B, Cohen S, Coyle D, Day A, Downar J, Ely W, Fiest K, Gramlich L, Grant C, Harries B, Hartwick K, Holroyd-Leduc J, Jenkins J, Kyeremanteng K, Mourtzakis M, Niven D, Oczkowski S, Papathanasoglou E, Parsons L, Jeanna J, Potestio M, Rahman A. 1,388,754 CAD. [Grants]
- 2016 Jul-2018 Jun **Co-Investigator.** Identifying Spiritual Distress in Families of ICU Patients: The INSPIRE Study. Alberta MSI Grant. PI: Lee Rose Des Ordons A. Collaborator(s): Sinclair S. 147,686 CAD. [Grants]
- 2016 Jan-2018 Jan **Co-Investigator.** Cough Assist: Use, Education Needs, Health Services Utilization, and Outcomes. PHI (Post-polio Health International). PI: Rose L. 24,863. [Grants]
- 2016 Jan-2016 Dec **Co-Investigator.** Advancing patient-oriented outcomes in oral hygiene: Experiences and recommendations of critical care survivors. Sunnybrook Health Sciences Centre. PRBI Seed Grant. PI: Dale C. Collaborator(s): Farrow N, Montgomery K, Rose L, Sutherland S, Thompson B. 10,000 CAD. [Grants]
- 2015 Jul-2017 Jul **Co-Investigator.** Translating Recommendations for Airway Clearance from the Canadian Thoracic Society Home Mechanical Ventilation Guidelines (Phase 1). Muscular Dystrophy Canada. PI: Rose L. 49,505. [Grants]
- 2015 Jan-2020 Jan **Co-Investigator.** The Canadian Critical Care Trials Group. Canadian Institutes of Health Research (CIHR). ICRH Community Development Prog Grants-Crit Care Clin Trials. PI: Hebert P. Collaborator(s): Burns K, Choong K, Cook D, Fowler R, Gilfoyle E, Lamontagne F, Marshall J, McIntyre L, Meade M, Muscedere J, Seely A, Turgeon Alexis. 1,500,000 CAD. [Grants]

- 2014 Mar-2016 Mar **Co-Investigator.** Improving DECision-making about goals of care for hospitalized, eLderly patiEnts: a “multi-incubator unit” Study (iDECIDE Study). Tech Value Net (TVN). PI: You J. Collaborator(s): Heyland D, Simon J, Jayaraman D, Sargious P, Green L, Frolic A, Day A, Straus S, Sudore R, Fowler R, Dodek P, Myers J. 593,746 CAD. [Grants]
- 2011 Dec-2017 Dec **Co-Investigator.** Technology Evaluation in the Elderly Network (TECH VALUE NET). Networks of Centres of Excellence (NCE). Network Grant. PI: Heyland D. 23,888,157 CAD. [Grants]

Presentations and Special Lectures

Provincial

Abstracts

- 2016 Oct Developing an Intensive Care Unit Clinician-Led BEREAVement Screening and Support Program for ICU Family Members (ICU BEREAVE). Presenter(s): Koo E, Downar J. Co-authors(s): **Sinuff T**, Kalocsai C, Roze des Ordons A, Smith O, Cook C, Golan E, Hales S, Strachan D, MacKinnon C.
- Intensive Care Unit Clinicians’ Experiences and Needs in Supporting Bereaved Family Members (ICU BEREAVE). Presenter(s): Kalocsai C. Co-authors: **Sinuff T**, Roze des Ordons A, Koo E, Smith O, Cook D, Golan E, Downar J.
- Palliative Care International Congress. Montreal, Quebec, Canada.

DR. TERRY SMITH, SUNNYBROOK HOSPITAL

Peer-Reviewed Grants

- 2013-present **Primary Investigator.** Retrospective burden of illness analysis of massively transfused trauma patients. Novo Nordisk Canada. Manuscript.\$20,000.00 CDN. [Grants]
- 2013-present **Co-Investigator.**Pharmacoeconomic analysis of burden of illness of massively transfused trauma patients. Manuscript.\$40,000.00 CDN. [Grants]

Peer-Reviewed Publications

Letters

1. **Tillmann B**, Takematsu M, Lugassy D Letter to the editor: Acetylcysteine for acetaminophen overdose in patients who weigh > 100Kg. American Journal of Therapeutics. 2016 Jan-Feb; 23(1): e244-5. **Principal Author.**

DR. LORRAINE TREMBLAY, SUNNYBROOK HOSPITAL

Peer-Reviewed Grants

Funded

- 2014 Apr-present **Co-Investigator.** The impact of an institutional multidisciplinary tracheostomy team on patient care and clinical outcomes: An observational before and after cohort study. Sunnybrook General Surgery AEF Grant. AEF Grant. PI: Chu P; Chapman M. Collaborator(s): Tien H. 9,750 CAD. [Grants]
- 2012 May-present **Co-Investigator.** The impact of an institutional multidisciplinary tracheostomy team on patient care and clinical outcomes: An observational before and after cohort study. Sunnybrook AFP Association. AFP Innovation Funding. PI: Chu P, Chapman M. Collaborator(s): Tien H. 10,000 CAD. [Grants]
- 2011 Jul-present **Principal Site Investigator.** Implementation and assessment of a novel multidisciplinary e-discharge summary to improve efficiency, satisfaction and safety of transfer of care for complex patients. Sunnybrook AFP Association. AFP Innovation Funding. Collaborator(s): Etchells E, Chan K, Farquharson L. 71,342 CAD. [Grants]

Presentations and Special Lectures

Local

- 2016 Feb 25-27 **Invited Speaker.** ATLS Intro, Initial Assessment, Airway & Ventilation, Shock, Thoracic Trauma, Abdominal Trauma; ATLS Thoracic Xrays and assessment; ATLS Transfer to Definitive Care, Triage and Assessment. Faculty of Medicine, Dept of Surgery, General Surgery. Sunnybrook Health Sciences Centre. Toronto, Ontario, Canada.

Honours and Awards

- 2016 Jun Award for Individual Teaching Excellence. Sunnybrook Health Sciences Centre.

Peer-Reviewed Publications

Journal Articles

1. Freiheit EA, Hogan DB, Patten SB, **Wunsch H**, Anderson T, Ghali WA, Knudtson M, Maxwell CJ. Frailty trajectories after treatment for coronary artery disease in older patients. *Circulation: Cardiovascular Quality and Outcomes*. 2016 May 1;9(3):230-8. **Coauthor or Collaborator**.
2. Kramer AA, Gershengorn HB, **Wunsch H**, Zimmerman JE. Variations in Case-Mix–Adjusted Duration of Mechanical Ventilation Among ICUs. *Critical Care Medicine*. 2016 Jun 1;44(6):1042-8. **Coauthor or Collaborator**.
3. Moitra VK, Guerra C, Linde-Zwirble WT, **Wunsch H**. Relationship between ICU length of stay and long-term mortality for elderly ICU survivors. *Critical Care Medicine*. 2016 Apr 1;44(4):655-62. **Senior Responsible Author**.
4. **Wunsch H**, Wijeyesundera DN, Neuman MD. Opioids prescribed after low-risk surgical procedures in the United States (2004-2012), *JAMA* 2016: doi:10.1001/jama.2016.0130. **Principal Author**.

Editorials, Letters, and Review Chapters

1. Haas B, **Wunsch H**. How does prior health status (age, comorbidities and frailty) determine critical illness and outcome? *Current Opinion in Critical Care*. 2016 Jul 29. **Senior Responsible Author**.
2. Cuthbertson BH, **Wunsch H**. Long Term Outcomes After Critical Illness – The Best Predictor of the Future is the Past! *Am J Respir Crit Care Med* 2016; Mar 8. **Senior Responsible Author**.

Book Chapters

1. Vail E, Gershengorn HB, **Wunsch H**. Have the Outcomes in the Critically Ill Improved? In: *Evidence-Based Practice of Critical Care*, Deutschmann (Ed). Elsevier Inc. **Senior Responsible Author**. [in press]
2. Sobol J, **Wunsch H**. Triage of Surgical Patients for Intensive Care, In: *Surgical Intensive Care Medicine*, 3rd Edition, O'Donnell & Nacul (Eds). Springer Inc. **Senior Responsible Author**. [in press]

3. **Wunsch H**, Kramer AA. The role and limitation of scoring systems, In: Oxford Textbook of Critical Care, Webb, Angus, Finfer, Gattinoni & Singer (Eds). Oxford University Press. **Principal Author**. [in press]

Peer-Reviewed Grants

Funded

- 2016-2018 **Principal Investigator**. Opioid use after critical illness. CIHR. 183,480 CAD. [Grants]
- 2015-2017 **Co-Investigator**. Changes in Work and Earnings After Heart Attack, Stroke and Cardiac Arrest. Heart & Stroke. 245,000 CAD. [Operating Grants]
- 2015-2020 **Mentor**. Determinants of Critical Care Intensity for Hospitalized Older Adults: the Effect of Hospital-based Palliative Care Services NIH/NIA. 862,510 CAD. [Beeson Award]
- 2014-2017 **Principal Investigator**. Identifying Risk Factors for and Outcomes following Rehospitalizations for Elderly Critically Ill Patients. CIHR. 189,225 CAD [Operating Grants]

Presentations and Special Lectures

International

- 2016 May **Invited Speaker**. Trials you should be aware of Society of Critical Care Anesthesiologists. Canadian Critical Care Trials Group Annual Meeting. San Francisco, California, USA.
- 2016 Mar **Invited Speaker**. Dementia after Critical Illness; Pros and Cons of Intermediate Care; ICU Care in Over-Resourced Settings. International Society of Intensive Care & Emergency Medicine Annual Meeting. Brussels, Belgium
- 2016 Mar **Invited Speaker**. How does prior health status determine critical illness outcomes?; Recovery after critical illness: putting the puzzle together. International Society of Intensive Care & Emergency Medicine Round Table. Brussels, Belgium.

- 2016 Mar **Invited Speaker.** How different is UK critical care?; Illuminating the black box of high-dependency care. Northern England Intensive Care Society. Darlington, UK.
- 2016 Feb **Invited Speaker.** Lost in Translation: The Evidence in Support of Follow-up Clinics; How Should a Region Design Critical Care? SCCM. Orlando, Florida, USA.
- 2016 Feb **Invited Speaker.** Triaging Surgical Patients for the ICU. Grand Rounds, Department of Anesthesiology, Johns Hopkins University. Baltimore, Maryland, USA.

Provincial

- 2016 May **Invited Speaker.** Triaging Patient for Intensive Care. University of Manitoba, Department of Critical Care Medicine Research Seminar. Winnipeg, Manitoba, Canada.

Local

- 2016 Jan **Invited Speaker.** Use of intermediate care beds for surgical patients Anesthesia Grand Rounds, Dept of Anesthesia. Sunnybrook Hospital. Toronto, Ontario, Canada.

Honours and Awards

- 2016 Presidential Scholars Award, American Society of Anesthesiology

Peer-Reviewed Publications

Journal Articles

1. **Del Sorbo L**, Vendramin A, Mehta S. High flow oxygen therapy in adult critically ill patients. *Minerva Anesthesiol.* 2016 Dec 1. Epub ahead of print. **Principal Author.**
2. Han B, Li M, Xu Y, Islam D, Khang J, **Del Sorbo L**, Lee W, Szaszi K, Zhong N, Slutsky AS, Li Y, Zhang H. Tsr Chemoreceptor Interacts With IL-8 Provoking E.coli Transmigration Across Human Lung Epithelial Cells. *Sci Rep.* 2016 Aug;10(6):31087. **Coauthor or Collaborator.**
3. Iskender I, Sakamoto J, Nakajima D, Lin H, Chen M, Kim H, Guan Z, **Del Sorbo L**, Hwang D, Waddell TK, Cypel M, Keshavjee S, Liu M. Human α 1-antitrypsin improves early post-transplant lung function: Pre-clinical studies in a pig lung transplant model. *J Heart Lung Transplant.* 2016 Jul;35(7):913-21. **Coauthor or Collaborator.**
4. Terragni PP, Fanelli V, Boffini M, Filippini C, Cappello P, Ricci D, **Del Sorbo L**, Faggiano C, Brazzi L, Frati G, Venuta F, Mascia L, Rinaldi M, Ranieri VM. Ventilatory Management During Normothermic Ex Vivo Lung Perfusion: Effects on Clinical Outcomes. *Transplantation.* 2016 May;100(5):1128-35. **Coauthor or Collaborator.**
5. **Del Sorbo L**, Ranieri VM, Ferguson ND. The Berlin definition met our needs: yes. *Intensive Care Med.* 2016 May;42(5):643-7. **Principal Author.**
6. **Del Sorbo L**, Costamagna A, Muraca G, Rotondo G, Civiletti F, Vizio B, Bosco O, Martin Conte E, Delsedime L, Lupia E, Fanelli V, and Ranieri VM. Intra-tracheal administration of small interfering RNA targeting Fas reduces lung ischemia-reperfusion injury. *Crit Care Med.* 2016 Mar 9. Epub ahead of print. **Principal Author.**
7. **Del Sorbo L**, Costamagna A, Muraca G, Rotondo G, Civiletti F, Vizio B, Bosco O, Martin Conte E, Delsedime L, Lupia E, Fanelli V, and Ranieri VM. Intra-tracheal administration of small interfering RNA targeting Fas reduces lung ischemia-reperfusion injury. *Crit Care Med.* 2016 Mar 9. Epub ahead of print. **Principal Author.**
8. **Del Sorbo L**, Jerath A, Dres M, Parotto M. Non-invasive ventilation in immune-compromised patients with acute hypoxemic respiratory failure. *J Thorac Dis.* 2016 Mar;8(3):E208-16. **Principal Author.**

Book Chapters

1. **Del Sorbo L**, Ranieri VM. ECCO2R in Obstructive Diseases: Evidence, Indications, Exclusions. Chapter 4. In: Schmidt GA, editor(s). Extracorporeal Life Support for Adults. Springer; 2016. p. 87-103. **Principal Author**.
2. Yeung JC, **Del Sorbo L**, Keshavjee S. Ventilatory Support of the Thoracic Surgical Patient. In: Shields TW, LoCicero J, Reed CE, Feins RH, editor(s). General Thoracic surgery. Wolters Kluwer; 2016. **Principal Author**.
3. **Del Sorbo L**, Fan E. Indications and Contraindications for ECLS in Adults with Respiratory Failure. In: 5th Edition of ECMO, Extracorporeal Support in Critical Care, (the "Red Book"). Extracorporeal Life Support organization; 2016. **Principal Author**.

Letters to Editor

1. **Del Sorbo L**, Fan E, Nava S, Ranieri VM. ECCO2R in COPD exacerbation only for the right patients and with the right strategy. Intensive Care Med. 2016 Sep 1. Epub ahead of print. **Principal Author**.

Non-Peer Reviewed Publications

1. Goligher EC, **Del Sorbo L**, Cheung AM, Alibhai SM, Liao L, Easson A, Halpern J, Ely EW, Sulmasy DP, Hwang SW. Why conscientious objection merits respect. CMAJ. 2016 Aug 9;188(11):822-3. **Principal Author**.

Non-Peer Reviewed Grants

Funded

- | | |
|-----------|---|
| 2016 | Co-Investigator . Start-AKI: Standard vs. Accelerated Initiation of RRT in Acute Kidney Injury. NCT02568722. [Clinical Trials] |
| 2016 | Co-Investigator . A simple approach to estimate alveolar recruitability in patients with acute respiratory distress syndrome: a validation study. NCT02457741. [Clinical Trials] |
| 2013-2016 | Co-Investigator . Safety and Efficacy of Polymyxin B Hemoperfusion (PMX) for Septic Shock (EUPHRATES). NCT01046669. [Clinical Trials] |

Presentations and Special Lectures

International

National

- 2016 **Invited Speaker.** Extracorporeal CO₂ removal in acute exacerbations of COPD. Critical Care Canada Forum. Toronto, Ontario, Canada.
- 2016 **Invited Speaker.** Ventilator Management for the Intensivist Workshop: Beside Strategies For Optimizing PEEP: When and how to measure esophageal pressure. Canadian Critical Care Review. Toronto, Ontario, Canada.
- 2016 **Presenter.** Advances in Extracorporeal Life Support. Annual physiotherapy Cardiorespiratory Course. Toronto, Ontario, Canada.

Peer Reviewed Publications

Journal Articles

1. Heyland DK, Dodek P, You JJ, Sinuff T, Hiebert T, Tayler C, Jiang X, Simon J, **Downar J**. Validation of Quality Indicators for End of Life Communication: Results of a multicentre survey. CMAJ. 2016 Dec 31. In Press. **Senior Responsible Author**.
2. **Downar J**, Goldman R, Pinto R, Englesakis M, Adhikari N. The "surprise question" for predicting mortality in seriously ill patients: a systematic review and meta-analysis. CMAJ. 2016 Dec 26. In Press. **Principal Author**.
3. Rucker G, **Downar J**, Morrison RS. Palliative care for chronic illness: driving change. CMAJ. 2016 Dec 6;188(17-18):E493-E498. **Coauthor or Collaborator**.
4. Aleksova N, Demers C, Strachan PH, MacIver J, **Downar J**, Fowler R, Heyland DK, Ross HJ, You JJ. Barriers to goals of care discussions with hospitalized patients with advanced heart failure: feasibility and performance of a novel questionnaire. ESC Heart Fail. 2016 Dec 1;3(4):245-252. **Coauthor or Collaborator**.
5. Delaney JW, **Downar J**. How is life support withdrawn in intensive care units: A narrative review. J Crit Care. 2016 Oct 1;35:12-8 (Trainee publication). **Senior Responsible Author**.
6. Abrahao A, **Downar J**, Pinto H, Dupré N, Izenberg A, Kingston W, Korngut L, O'Connell C, Petrescu N, Shoosmith C, Tandon A, Vargas-Santos AB, Zinman L. Physician-assisted death: A Canada-wide survey of ALS health care providers. Neurology. 2016 Sep 13;87(11):1152-60. **Coauthor or Collaborator**.
7. **Downar J**, You J, Grossman D, Sinha S, Sussman T, Kaasalainen S, Goldman R, MacDonald S, Moorhouse P, Moser A. Improving End-of-Life Care and Advance Care Planning in Frail Elderly Canadians. 2016 Sep 6. In Press. **Principal Author**.
8. **Downar J**, McNaughton N, Abdelhalim T, Wong N, Lapointe-Shaw L, Seccareccia D, Miller K, Dev S, Ridley J, Lee C, Richardson L, McDonald-Blumer H, Knickle K. Standardized patient simulation versus didactic teaching alone for improving residents' communication skills when discussing goals of care and resuscitation: A randomized controlled trial. Palliat Med. 2016 Jun 15. **Principal Author**.

9. **Downar J**, Delaney JW, Hawryluck L, Kenny L. Guidelines for the withdrawal of life-sustaining measures. *Intensive Care Med.* 2016 Jun 1;42(6):1003-17. **Principal Author.**
10. Kryworuchko J, Strachan PH, Nouvet E, **Downar J**, You JJ. Factors influencing communication and decision-making about life-sustaining technology during serious illness: a qualitative study. *BMJ Open.* 2016 May 23;6(5):e010451. **Coauthor or Collaborator.**
11. **Downar J**, Warner M, Sibbald R. Mandate to obtain consent for withholding nonbeneficial cardiopulmonary resuscitation is misguided. *CMAJ.* 2016 Mar 1;188(4):245-6. **Principal Author.**
12. Cape D, Fox-Robichaud A, Turgeon AF, Seely A, Hall R, Burns K, Singal RK, Dodek P, Bagshaw S, Sibbald R, **Downar J**. The impact of the Rasouli decision: a Survey of Canadian intensivists. *J Med Ethics.* 2016 Mar 1;42(3):180-5 (Trainee publication). **Senior Responsible Author.**
13. Nouvet E, Strachan P, Kryworuchko J, **Downar J**, You JJ. Waiting for the Body to Fail: Limits of end of life care in Canadian hospitals. *Mortality.* 2016 Feb 3;21(4). **Coauthor or Collaborator.**

Letters to Editor

1. **Downar J**, Colman R, Horton R, Hernandez P, Rocker G. Opioids in COPD: a cause of death or a marker of illness severity? *Eur Respir J.* 2016 Nov 1;48(5):1520-1521. **Principal Author.**

Commissioned Report from Law Commission of Ontario

1. **Downar J**, Sibbald R, Kalocsai C, Wood A, Brown S, Richards J, Hawryluck L. Balancing the interests of patients, substitute decision-makers, family and health care providers in decision-making over the withdrawal and withholding of life-sustaining treatment. 2016 Dec 20. In Press. **Principal Author.**

Commissioned Review

1. **Downar J**. Paper 4c: Resources for Educating, Training and Mentoring all Physicians providing Palliative Care. 2016 Nov 7. In Press. **Principal Author.**

Non-Peer Reviewed Publications

Letters to Editor

1. **Downar J**, Delaney J, Hawryluck L, Kenny L. Neither guidelines nor symptom-targeted opioids are harmful when withdrawing life-sustaining measures. *Intensive Care Med.* 2016 Aug 1;42(8):1303-4. **Principal Author.**

Peer-Reviewed Grants

Funded

- | | |
|-------------------|---|
| 2016 Aug-2017 Jul | Co-Investigator. Death, Dying, and Doctors: A Qualitative Exploration of Physician-Assisted Death to Guide Continuing Professional Development. University of Toronto. Education Development Fund. PI: Sheehan K. Collaborator(s): Sockalingam S, Bell J. 9,997.5 CAD. [Grants] |
| 2016 Jul-2019 Jun | Co-Investigator. Reducing post-discharge adverse drug events among the elderly: a multi-centre electronic deprescribing intervention. Canadian Institutes of Health Research. PI: Lee T. 1,500,000 CAD. [Grants] |
| 2016 Jul-2017 Jun | Principal Investigator. Creating an ICU-based screening and support system for bereaved family members, and using patient-level feedback to help medical trainees improve their communication skills. Associated Medical Services Inc. (AMS). AMS Phoenix Fellowship. 50,000 CAD. [Research Fellowships] |
| 2016 Jul-2019 Jan | Co-Investigator. Better tArgetting, Better outcomes for frail ELderly patients (BABEL). Canadian Frailty Network, Transformative Grant Program. PI: Hebert P. 2,996,168 CAD. [Grants] |

- 2016 Apr-2020 Mar **Co-Investigator.** Development and Evaluation of a Family-Partnered Care Pathway for Critically Ill Older Patients. Canadian Institutes of Health Research (CIHR). Team Grant - Late Life Issues. PI: Heyland D. Collaborator(s): Stelfox HT (PA), Heyland D (PA), Boucher P (KU), O'Neill B (KU), Robertson D (KU), Wickson P (KU), Zygun D (KU), Allatt P (CA), Au S (CA), Berg B(CA), Cohen R(CA), Coyle D (CA), Day A (CA), Ely W (CA), Fiest K (CA), Gramlich L (CA), Grant C (CA), Harries B (CA), Hartwick M (CA), Holroyd-Leduc J (CA), Jenkins J (CA), Kyeremanteng K (CA), Mourtzakis M (CA), Niven D (CA), Oczkowski S (CA), Papathanasoglou E (CA), Parsons Leigh J (CA), Potestio M (CA), Rahman A (CA), Rockwood K (CA). 1,388,754 CAD. [Grants]
- 2016 Apr-2017 Mar **Principal Investigator.** Pilot study of an automated one-year mortality prediction tool to trigger Advance Care Planning. National Centre for Excellence. TechValueNet. Collaborator(s): Kobewka D, Anstey K, O'Connor E, Hartwick M, Kyeremanteng K, Costello J, You J, Bell C, Wu R, Frost D, Steinberg L, Ansari S, Mclsaac D, Fischer L, Lee L, Borgundvaag B, Delicaet K, Kalocsai C, Reynolds S, Goldman R, van Walraven C. 153,000 CAD. [Grants]
- 2016 Mar-2016 Jul **Principal Investigator.** Research Paper on Balancing the interests of patients, substitute decision-makers, family and health care providers in decision-making over the withholding and withdrawal of life-sustaining treatment. Law Commission of Ontario. Collaborator(s): Hawryluck L, Wood A, Brown S, Richards J, Sibbald R, Gibson J, Kalocsai C. 15,000 CAD. [Grants]
- 2015 Apr-2016 Mar **Principal Investigator.** A pilot study of a MEducation RAationalization (MERA) Intervention. National Centre for Excellence. TechValueNet. Collaborator(s): Whitty R, Delicaet K, Wu R, Bogoch I, Weiss A, Kaya E, Reynolds S, Wong G, Wentlandt K, Porter S, Battu K, Wu P. 128,600 CAD. [Grants]

Invited Lectures and Presentations

International

2016 Oct 26 **Invited Speaker.** Opioids for the palliation of breathlessness..CHEST 2016, American College of Chest Physicians. Co-Speaker(s): Rocker G, Mularski R. Los Angeles, California, USA.

Provincial

2016 Nov 25 **Keynote Speaker.** Medical Aid in Dying. John Dossetor Health Ethics Centre Symposium. Edmonton, Alberta, Canada.

2016 Nov 11 **Invited Speaker.** Soins Palliatifs pour les maladies non-cancéreuses; La vie après la mort: le chagrin et deuil compliqué. Symposium Quebecois de soins intensifs. Centre Hospitalier de l'Université de Sherbrooke Fleurimont. Sherbrooke, Quebec, Canada.

2016 Nov 4 **Invited Speaker.** Physician Assisted Death- the first 6 months. D.A. Boyes Society Meeting. Vancouver, British Columbia, Canada.

2016 Oct 25 **Invited Speaker.** Pacemaker deactivation and end of life care- a panel discussion. Canadian Cardiovascular Congress 2016. Co-Speaker(s): Redpath C, Simpson C. Montreal, Quebec, Canada.

2016 Oct 20-21 **Chair.** Session on Palliative Care in Noncancer Illness. 21st International Congress on Palliative Care. 21st International Congress on Palliative Care. Montreal, Quebec, Canada.

2016 Jun 3 **Presenter.** Palliative Care and Frailty. Canadian Hospice and Palliative Care Association. Banff, Alberta, Canada.

2016 May 10-11 **Visiting Professor.** Physician Assisted Death in Canada: Where we are, where we are going; Non beneficial Treatment in the ICU: Finding the Least Worst Option. University of Alberta, Dosseter Centre for Ethics. Edmonton, Alberta, Canada.

2016 May 9 **Visiting Professor.** Palliative Care in the ICU. Canadian Association of Critical Care Nurses. Edmonton, Alberta, Canada.

2016 May 3-4 **Visiting Professor.** Developing policies and protocols for Physician-Assisted Death. Division of Palliative Care; Physician Hastened Death – Next Steps and Implementation Challenges. Dept. of Oncology; Palliative Care and Physician-Hastened Death in Noncancer Illness. Dept. of Medicine; Non beneficial Treatment in Canada. Division of Critical Care. Dalhousie University. Halifax, Nova Scotia, Canada.

- 2016 Mar 11 **Invited Speaker.** Physician Assisted Death: An Ethics Education Event. Provincial Health Ethics Network of Newfoundland and Labrador. Co-Speaker(s): MacDonald S, Hawboldt J, Anstey P. Newfoundland and Labrador, Canada.
- 2016 Mar 3 **Invited Speaker.** Physician-Assisted Death in Canada. Nonbeneficial Treatment in Canada: Finding the Least Worst Option, Co-Speaker(s): Ely EW; Grief and Bereavement. Canadian Critical Care Conference 2016. Whistler, British Columbia, Canada.

Abstracts

- 2016 Oct 19-21 Canadian Critical Care Society Guidelines for the Withdrawal of Life Support; Developing an Intensive Care Unit Clinician-Led BEREAVEMENT Screening and Support Program for ICU Family Members (ICU BEREAVE). Presenter(s): **Downar J**, Koo E, Kalocsai C, Sinuff T, Roze des Ordons A, Smith O, Cook D, Golan E, Hales S, Strachan D, MacKinnon C.
- Intensive Care Unit Clinicians' Experiences and Needs in Supporting Bereaving Family Members. Presenter(s): **Downar J**, Kalocsai, Roze des Ordons A, Koo E, Sinuff T, Smith O, Cook D, Golan E, Hales S, Strachan D, MacKinnon C.
- Process Evaluation Ethnography of the Medication RAationalization (MERA) – Pilot Study. Presenter(s): Kalocsai C, Koo E, Whitty R, Porter S, Battu K, **Downar, J**, Bhatt P.
- Towards Skilled Feedback on Challenging Conversations – A Simulation-Based Faculty Workshop. Presenter(s): Roze des Ordons A, **Downar J**, Gaudet J, Cheng A.
- A Pilot Study of a MEdication RAationalization (MERA) Intervention. Presenter(s): Whitty R, Koo E, Porter S, Battu K, Kalocsai C, Bhatt P, Delicaet K, **Downar J**, Wong G, Wu R, Bogoch I.
- 21st International Congress on Palliative Care. Montreal, Quebec, Canada.

Media Appearances

- 2016 Jun 7 **Presenter.** Medical Aid in Dying. Interviewer: Catherine Rolfson. The Early Edition, Canadian Broadcasting Corporation. Aired Vancouver, British Columbia, Canada.

National

- 2016 Nov 24 **Invited Speaker.** Physician-Assisted Death: The first 6 months. Ontario College of Family Physicians Annual Scientific Assembly. Toronto, Ontario, Canada.
- 2016 Nov 24 **Invited Speaker.** Palliative and Critical Care. Ontario College of Family Physicians Annual Scientific Assembly 2016. Toronto, Ontario, Canada.
- 2016 Nov 8 **Invited Speaker.** Palliative Care Matters Consensus Development Conference - Topic 4C Educational Needs for Physicians. Ontario, Canada.
- 2016 Nov 7 **Invited Speaker.** Opioids in Chronic Obstructive Pulmonary Disease. University of Ottawa Division of Respiriology. Ottawa, Ontario, Canada.
- 2016 Oct 31 **Invited Speaker.** Bereavement and Support. Critical Care Canada Forum. Toronto, Ontario, Canada.
- 2016 Oct 22 **Invited Speaker.** Physician Assisted Death- the first 6 months. Ontario Long-Term Care Physicians Annual Meeting - 2016. Toronto, Ontario, Canada.
- 2016 Oct 8 **Invited Speaker.** End of Life Decisions and Physician-Assisted Death in Canada. Georgian Triangle Late Life Learning Institute. Presentation to Patients/Public. Collingwood, Ontario, Canada.
- 2016 Sep 17-18 **Invited Speaker.** Workshop on Physician-Assisted Death.
- Keynote Speaker.** Physician-Assisted Death: Where we are, where we are going.
- Canadian Society of Hospital Medicine. Niagara Falls, Ontario, Canada.
- 2016 Jun 29 **Invited Speaker.** End of Life Care Planning. Critical Care Secretariat of Ontario- Critical Care Response Team Conference 2016. Toronto, Ontario, Canada.
- 2016 Jun 15 **Presenter.** DECIDE 2 COMMUNICATE: Patient Data Collection and Feedback Pilot. Canadian Frailty Network. Canada. National Webinar.

- 2016 Jun 8 **Invited Speaker.** End of Life Planning for Residents with Dementia. 2nd Annual Canadian Conference on Dementia Care. Toronto, Ontario, Canada.
- 2016 Jun 23 **Facilitator.** Considerations around physician assisted dying: Implementation and eligibility. 2016 Geriatrics Institute. Presenter(s): Goldman R, Bowman K, Ying I, Mah B. Toronto, Ontario, Canada.
- 2016 Jun 6 **Presenter.** Medical Aid in Dying: Lessons Learned. Trillium Hospital. Toronto, Ontario, Canada.
- 2016 May 30 **Speaker.** Physician Assisted Dying: Updates and Developments. Ontario Hospital Association. Co-Speaker(s): Bowman K. Toronto, Ontario, Canada.
- 2016 May 27 **Invited Speaker.** Physician Assisted Death Speakers Panel. Canadian Bioethics Society National Meeting. Toronto, Ontario, Canada. Co-Speaker(s): Taylor M, Kenny N.
- 2016 May 25 **Invited Speaker.** Physician Assisted Death. Psychonephrology Group. Co-Speaker(s): Gaiind S. Toronto, Ontario, Canada.
- 2016 May 18 **Invited Speaker.** Nonbeneficial Treatment in Canada. Health Professions Appeal and Review Board. Toronto, Ontario, Canada.
- 2016 May 13 **Invited Speaker.** Identification of Frailty for improved advance care planning and end-of-life care. Canadian Frailty Network. Co-Speaker(s): (s): You J. Presentation of white paper to CFN board and national stakeholders. Toronto, Ontario, Canada.
- 2016 May 12 **Invited Speaker.** Advance Care Planning and Frailty. Canadian Frailty Network. Presentation for CFN-funded fellows from across the country. Toronto, Ontario, Canada.
- 2016 Apr 26 **Invited Speaker.** Physician-Assisted Dying: Navigating a New Canadian Right. The Empire Club of Canada. Co-Speaker(s): Gokool S, Chattopadhyay P. Presentation to Patients/Public. Toronto, Ontario, Canada.
- 2016 Feb 25 **Invited Speaker.** Advance Care Planning in Serious Illness. Canadian Hospice and Palliative Care Association. Co-Speaker(s): You J. Toronto, Ontario, Canada.

- 2016 Feb 4 **Invited Speaker.** A Conversation about Assisted Death. University College, University of Toronto. Co-Speaker(s): Toews M, Geist R, Lemmens T. Presentation to Patients/Public. Toronto, Ontario, Canada.
- 2016 Feb 1 **Keynote Speaker.** Physician-Assisted Dying and Impact on the Role of the Pharmacist. Canadian Society of Hospital Pharmacists- Annual Meeting 2016. Co-Speaker(s): Whitty R. Toronto, Ontario, Canada.

Abstracts

- 2016 Nov 1 Hospital-Acquired DNR. Critical Care Canada Forum 2016. Presenter(s): Spring J, **Downar J.** Toronto, Ontario, Canada.
- 2016 Apr 18 A pilot study of a MEducation RAationalization (MERA) Intervention. Presenter(s): Bhatt P, Koo E, Whitty R, Porter S, Battu K, Kalocsai C, Delicaet K, **Downar, J,** Wong G, Wu R, Bogoch I.
- Developing an Intensive Care Unit Clinician-Led BEREAVement Screening and Support Program for ICU Family Members (ICU BEREAVE). Presenter(s): Koo E, Kalocsai C, Sinuff T, Roze des Ordons A, Smith O, Cook D, Golan E, Hales S, Strachan D, MacKinnon C, **Downar, J.**
- Hospice Palliative Care Ontario Annual Meeting. Newmarket, Ontario, Canada.

Media Appearances

- 2016 Dec 1 **Speaker.** Aide Medicale a Mourir. Interviewer: Christian Noel. Le Telejournal, Societe Radio-Canada. Ontario, Canada.
- 2016 Nov 7 **Speaker.** Soins Palliatifs. Interviewer: Marjorie April. Y'a pas deux matins pareils, Societe Radio-Canada. Ontario, Canada. Available from: <http://ici.radio-canada.ca/util/postier/suggerer-go.asp?nID=2383266>.
- 2016 Jun 7 **Presenter.** Medical Aid in Dying. Interviewer: Wendy Mesley. The National, Canadian Broadcasting Corporation. Co-Presenter(s): Sinha S, Martin D, Bowman K. Presentation to Patients/Public. Ontario, Canada.

- 2016 Apr 17 **Speaker.** Bill C-14 and Assisted Death in Canada. Interviewer: Anna-Liza Kozma. Cross-Country Checkup, Canadian Broadcasting Corporation. Ontario, Canada. Available from: <http://www.cbc.ca/radio/checkup/what-do-you-think-of-the-government-s-proposed-law-on-assisted-death-1.3536121>.
- 2016 Mar 17 **Speaker.** Physician Assisted Death. Interviewer: Anna Maria Tremonti. The Current, Canadian Broadcasting Corporation. Ontario, Canada. Available from: <http://www.cbc.ca/radio/thecurrent/the-current-for-april-15-2015-1.3033488/first-human-head-transplant-attempt-faces-harsh-criticism-1.3033519>.
- 2016 Mar 7 **Speaker.** A roundtable on the future of assisted death in Canada. Interviewer: Steve Kupferman. Toronto Life. Co-Presenter(s): Taylor M, Goddard J. Ontario, Canada. Available from: <http://torontolife.com/city/life/physician-assisted-death-maureen-taylor-jan-goddard-james-downar/>.
- 2016 Jan 31 **Speaker.** Palliative and End-of-Life Care in Canada. Interviewer: Diana Swain. Cross-Country Checkup, Canadian Broadcasting Corporation. Ontario, Canada. Available from: <http://www.cbc.ca/radio/checkup/should-more-resources-be-put-into-care-for-the-dying-1.3414118>. Presentation to Patients/Public.

Local

- 2016 Jun 1 **Invited Speaker.** Physician Assisted Death: Where are we, where are we going? Sunnybrook Hospital Medical Grand Rounds. Toronto, Ontario, Canada.
- 2016 Apr 7 **Invited Speaker.** Physician Assisted Death. Inner City Health Associates (Affiliated with St Michael's Hospital). Co-Speaker(s): Chidwick P. Toronto, Ontario, Canada.
- 2016 Mar 7 **Presenter.** Behavioural Sciences and Health Research Rounds: An Automated Trigger Tool for Identifying those at risk of mortality. Department of Psychosocial Oncology, UHN. Toronto, Ontario, Canada.
- 2016 Feb 5 **Lecturer.** Physician Assisted Death in Canada. UHN Psychiatry Grand Rounds. Toronto, Ontario, Canada.
- 2016 Jan 6 **Lecturer.** Palliative Care for Noncancer Illness. UHN/MSH Medical Grand Rounds. Toronto, Ontario, Canada.

Honours and Awards

2016 May

Health Professional Award, World Federation of Right to Die Societies. (Distinction)

Peer Reviewed Publications

Journal Articles

1. Laffey JG, Bellani G, Pham T, **Fan E**, Madotto F, Bajwa EK, Brochard L, Clarkson K, Esteban A, Gattinoni L, van Haren F, Heunks LM, Kurahashi K, Laake JH, Larsson A, McAuley DF, McNamee L, Nin N, Qiu H, Ranieri M, Rubenfeld GD, Thompson BT, Wrigge H, Slutsky AS, Pesenti A, LUNG SAFE Investigators and the ESICM Trials Group. Potentially modifiable factors contributing to outcome from acute respiratory distress syndrome: the LUNG SAFE study. *Intensive Care Med.* 2016 Dec 1;42(12):1865-1876. **Coauthor or Collaborator.**
2. Sklar MC, Sy E, Lequier L, **Fan E**, Kanji HD. Anticoagulation Practices during Venovenous Extracorporeal Membrane Oxygenation for Respiratory Failure. A Systematic Review. *Ann Am Thorac Soc.* 2016 Dec 1;13(12):2242-2250. **Coauthor or Collaborator.**
3. Munshi L, Kobayashi T, DeBacker J, Doobay R, Telesnicki T, Lo V, Cote N, Cypel M, Keshavjee S, Ferguson ND, **Fan E**. Intensive Care Physiotherapy during Extracorporeal Membrane Oxygenation for Acute Respiratory Distress Syndrome. *Ann Am Thorac Soc.* 2016 Nov 29. **Senior Responsible Author.**
4. Cypel M, Waddell T, Singer LG, Sorbo LD, **Fan E**, Binnie M, Ferguson ND, Keshavjee S. Bilateral pneumonectomy to treat uncontrolled sepsis in a patient awaiting lung transplantation. *J Thorac Cardiovasc Surg.* 2016 Nov 23. **Coauthor or Collaborator.**
5. Herridge MS, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, Santos CD, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, **Fan E**, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hebert P, Slutsky AS, Marshall JC, Cook D, Cameron JI, RECOVER Program Investigators (Phase 1: towards RECOVER), Canadian Critical Care Trials Group. The RECOVER Program: Disability Risk Groups and 1-Year Outcome after 7 or More Days of Mechanical Ventilation. *Am J Respir Crit Care Med.* 2016 Oct 1;194(7):831-844. **Coauthor or Collaborator.**

6. Munshi L, **Fan E**. Lung Transplant and Extracorporeal Membrane Oxygenation. More Is Better and Better Together? *Am J Respir Crit Care Med*. 2016 Aug 1;194(3):255-6. **Senior Responsible Author**.
7. Hodgson CL, **Fan E**. Better Measures, Better Trials, Better Outcomes in Survivors of Critical Illness. *Crit Care Med*. 2016 Jun 1;44(6):1254-5. **Senior Responsible Author**.
8. Cameron JI, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, **Fan E**, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hébert P, Slutsky AS, Marshall JC, Cook D, Herridge MS, RECOVER Program Investigators (Phase 1: towards RECOVER), Canadian Critical Care Trials Group. One-Year Outcomes in Caregivers of Critically Ill Patients. *N Engl J Med*. 2016 May 12;374(19):1831-41. **Coauthor or Collaborator**.
9. Peñuelas O, Muriel A, Frutos-Vivar F, **Fan E**, Raymondos K, Rios F, Nin N, Thille AW, González M, Villagomez AJ, Davies AR, Du B, Maggiore SM, Matamis D, Abroug F, Moreno RP, Kuiper MA, Anzueto A, Ferguson ND, Esteban A. Prediction and Outcome of Intensive Care Unit-Acquired Paresis. *J Intensive Care Med*. 2016 Apr 13. **Coauthor or Collaborator**.

Journal Articles, Multicenter Study

1. Bellani G, Laffey JG, Pham T, **Fan E**, Brochard L, Esteban A, Gattinoni L, van Haren F, Larsson A, McAuley DF, Ranieri M, Rubenfeld G, Thompson BT, Wrigge H, Slutsky AS, Pesenti A, LUNG SAFE Investigators, ESICM Trials Group. Epidemiology, Patterns of Care, and Mortality for Patients With Acute Respiratory Distress Syndrome in Intensive Care Units in 50 Countries. *JAMA*. 2016 Feb 23;315(8):788-800. **Coauthor or Collaborator**.

Letters to Editor

1. Del Sorbo L, **Fan E**, Nava S, Ranieri VM. ECCO2R in COPD exacerbation only for the right patients and with the right strategy. *Intensive Care Med*. 2016 Nov 1;42(11):1830-1831. **Coauthor or Collaborator**.
2. Bellani G, Laffey JG, Pham T, **Fan E**, LUNG SAFE Investigators and the ESICM Trials Group. The LUNG SAFE study: a presentation of the prevalence of ARDS according to the Berlin Definition! *Crit Care*. 2016 Sep 9;20:268. **Coauthor or Collaborator**.

Reviews

1. deBacker J, Hart N, **Fan E**. Neuromuscular Blockade in the 21st Century Management of the Critically Ill Patient. *Chest*. 2016 Nov 3. **Senior Responsible Author**.
2. Silversides JA, Major E, Ferguson AJ, Mann EE, McAuley DF, Marshall JC, Blackwood B, **Fan E**. Conservative fluid management or deresuscitation for patients with sepsis or acute respiratory distress syndrome following the resuscitation phase of critical illness: a systematic review and meta-analysis. *Intensive Care Med*. 2016 Oct 12. **Senior Responsible Author**.
3. Kobylanski J, Murray A, Brace D, Goligher E, **Fan E**. Electrical impedance tomography in adult patients undergoing mechanical ventilation: A systematic review. *J Crit Care*. 2016 Oct 1;35:33-50. **Senior Responsible Author**.
4. **Fan E**, Gattinoni L, Combes A, Schmidt M, Peek G, Brodie D, Muller T, Morelli A, Ranieri VM, Pesenti A, Brochard L, Hodgson C, Van Kiersbilck C, Roch A, Quintel M, Papazian L. Venovenous extracorporeal membrane oxygenation for acute respiratory failure : A clinical review from an international group of experts. *Intensive Care Med*. 2016 May 1;42(5):712-24. **Principal Author**.
5. Douflé G, Facchin F, Anwar S, **Fan E**. Severe hypercoagulable state on veno-arterial extracorporeal membrane oxygenation. *Intensive Care Med*. 2016 Mar 1;42(3):443. **Senior Responsible Author**.

Peer-Reviewed Funding

Funded

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|-------------------|---|
| 2017 Jan-2017 Dec | Co-Investigator . Physical Training for Patients Receiving ECMO to Improve Recovery: An International Pilot RCT. Monash University Strategic Grant Scheme. 45,000 AUD. [Grants]. |
| 2015 Jul-2020 Jun | Principal Investigator . Strategies for Optimal Lung Ventilation in ECMO for ARDS: The SOLVE ARDS Study. Canadian Institutes of Health Research (CIHR). New Investigator Award. 300,000 CAD. [Grants]. |
| 2015 Apr-2017 Mar | Principal Investigator . Gas exchange extracorporeal techniques: The XXL Study. MSH-UHN AMO. AFP Innovation Fund. 130,950 CAD. [Grants]. |

- 2015 Jan-2015 Dec **Principal Investigator.** The Impact of Oxygen and Carbon Dioxide Thresholds on Mortality during ECLS. Extracorporeal Life Support Organization (ELSO). Research Grant. 5,000 USD. [Grants].
- 2014 Oct-2016 Sep **Co-Investigator.** Frequency and Screening and SBT Technique Trial: The FAST Trial. Canadian Institutes of Health Research (CIHR). Open Operating Grant. 158,000 CAD. [Grants].

Non-Peer Reviewed Funding

Funded

- 2016 Jun-2017 May **Co-Principal Investigator.** Nitric Oxide in Right Ventricular Dysfunction: Improvements in Congestion and Hemodynamics on VA ECMO (NOVICE) Study. Mallinckrodt Pharmaceuticals. 46,000 CAD. [Grants].
- 2015 May-2016 May **Principal Investigator.** The International ECMONet Registry Project. Hearts of ECMO. 15,000 USD. [Donations].

Invited Lectures and Presentations

International

- 2016 Sep 16 **Invited Speaker.** Mechanical Ventilation in VV ECMO: How I Do it. 29th Annual ELSO Conference. San Diego, USA.
- 2016 Jun 1 **Invited Speaker.** Long-term Outcomes after Extracorporeal Gas Exchange as the Primary Endpoint for Future Trials. Temporary Circulatory Support-ECMO Meeting. Paris, France.
- 2016 Apr 27 **Invited Speaker.** Ventilatory Management of ARDS. Università degli Studi di Padova. Padova, Italy.
- 2016 Feb 17 **Invited Speaker.** International ECMONet Registry and Core Outcomes Set. International ECMONet. Paris, France.

Provincial

- 2016 Sep 21 **Invited Speaker.** Extracorporeal Support for Respiratory Failure. Mazankowski Alberta Heart Institute Grand Rounds. Edmonton, Alberta, Canada.
- 2016 Sep 20 **Invited Speaker.** Ventilatory Management of ARDS: What Have We Learned in 50 Years? Department of Critical Grand Rounds, University of Alberta. Edmonton, Alberta, Canada.

National

- 2016 Nov 4 **Invited Speaker.** Critical Care Quality: The Toronto ICORE Project. Ontario Surgical Quality Conference. Toronto, Ontario, Canada.
- 2016 Nov 3 **Invited Speaker.** Extracorporeal Support for Respiratory Failure. Department of Critical Care Medicine Grand Rounds, Queen's University. Kingston, Ontario, Canada.
- 2016 Nov 1-2 **Invited Speaker.** Registries for Quality and Research; Mechanical Ventilation in VV ECMO. Canada Critical Care Forum. Toronto, Ontario, Canada.

Abstracts

- 2016 Oct Sedation and analgesia practice in extra-corporeal membrane oxygenation (ECMO) - treated patients with acute respiratory distress syndrome (ARDS): a retrospective study. Presenter(s): deBacker JW, Tamberg E, O'Neill L, Munshi L, Burry L, **Fan E**, Mehta S.
- 2016 Oct Electrical impedance tomography (EIT) in adult patients undergoing mechanical ventilation: A systematic review. Presenter(s): **Fan E**.

Peer-Reviewed Publications

Journal Articles

1. Munshi L, Kobayashi T, DeBacker J, Doobay R, Telesnicki T, Lo V, Cote N, Cypel M, Keshavjee S, **Ferguson ND**, Fan E. Intensive Care Physiotherapy during Extracorporeal Membrane Oxygenation for Acute Respiratory Distress Syndrome. *Ann Am Thorac Soc*. 2016 Nov 29. **Coauthor or Collaborator**.
2. Cypel M, Waddell T, Singer LG, Sorbo LD, Fan E, Binnie M, **Ferguson ND**, Keshavjee S. Bilateral pneumonectomy to treat uncontrolled sepsis in a patient awaiting lung transplantation. *J Thorac Cardiovasc Surg*. 2016 Nov 23. **Coauthor or Collaborator**.
3. Tejerina E, Pelosi P, Muriel A, Peñuelas O, Sutherasan Y, Frutos-Vivar F, Nin N, Davies AR, Rios F, Violi DA, Raymondos K, Hurtado J, González M, Du B, Amin P, Maggiore SM, Thille AW, Soares MA, Jibaja M, Villagomez AJ, Kuiper MA, Koh Y, Moreno RP, Zeggwagh AA, Matamis D, Anzueto A, **Ferguson ND**, Esteban A, for VENTILA group. Association between ventilatory settings and development of acute respiratory distress syndrome in mechanically ventilated patients due to brain injury. *J Crit Care*. 2016 Nov 18. **Coauthor or Collaborator**.
4. Jerath A, Panckhurst J, Parotto M, Lightfoot N, Wasowicz M, **Ferguson ND**, Steel A, Beattie WS. Safety and Efficacy of Volatile Anesthetic Agents Compared With Standard Intravenous Midazolam/Propofol Sedation in Ventilated Critical Care Patients: A Meta-analysis and Systematic Review of Prospective Trials. *Anesth Analg*. 2016 Nov 8. **Coauthor or Collaborator**.
5. Herridge MS, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, **Ferguson ND**, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, Santos CD, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hebert P, Slutsky AS, Marshall JC, Cook D, Cameron JI, RECOVER Program Investigators (Phase 1: towards RECOVER), Canadian Critical Care Trials Group. The RECOVER Program: Disability Risk Groups and 1-Year Outcome after 7 or More Days of Mechanical Ventilation. *Am J Respir Crit Care Med*. 2016 Oct 1;194(7):831-844. [Epub ahead of print]. **Coauthor or Collaborator**.

6. Gotlib Conn L, Haas B, Rubenfeld GD, Scales DC, Amaral AC, **Ferguson ND**, Nathens AB. Exclusion of Residents From Surgery-Intensive Care Team Communication: A Qualitative Study. *J Surg Educ.* 2016 Jul 1;73(4):639-47. **Coauthor or Collaborator.**
7. Cameron JI, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, **Ferguson ND**, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hébert P, Slutsky AS, Marshall JC, Cook D, Herridge MS, RECOVER Program Investigators (Phase 1: towards RECOVER), Canadian Critical Care Trials Group. One-Year Outcomes in Caregivers of Critically Ill Patients. *N Engl J Med.* 2016 May 12;374(19):1831-41.

Multicenter Study

1. Wong K, Wasowicz M, Grewal D, Fowler T, Ng M, **Ferguson ND**, Steel A, Jerath A. Efficacy of a simple scavenging system for long-term critical care sedation using volatile agent-based anesthesia. *Can J Anaesth.* 2016 May 1;63(5):630-2. **Coauthor or Collaborator.**
2. Peñuelas O, Muriel A, Frutos-Vivar F, Fan E, Raymondos K, Rios F, Nin N, Thille AW, González M, Villagomez AJ, Davies AR, Du B, Maggiore SM, Matamis D, Abroug F, Moreno RP, Kuiper MA, Anzueto A, **Ferguson ND**, Esteban A. Prediction and Outcome of Intensive Care Unit-Acquired Paresis. *J Intensive Care Med.* 2016 Apr 13. **Coauthor or Collaborator.**
3. Sud S, Sud M, Friedrich JO, Wunsch H, Meade MO, **Ferguson ND**, Adhikari NK. High-frequency oscillatory ventilation versus conventional ventilation for acute respiratory distress syndrome. *Cochrane Database Syst Rev.* 2016 Apr 4;4:CD004085. [Epub ahead of print]. In Press. **Coauthor or Collaborator.**
4. Lamontagne F, Meade MO, Hébert PC, Asfar P, Lauzier F, Seely AJ, Day AG, Mehta S, Muscedere J, Bagshaw SM, **Ferguson ND**, Cook DJ, Kanji S, Turgeon AF, Herridge MS, Subramanian S, Lacroix J, Adhikari NK, Scales DC, Fox-Robichaud A, Skrobik Y, Whitlock RP, Green RS, Koo KK, Tanguay T, Magder S, Heyland DK, Canadian Critical Care Trials Group. Higher versus lower blood pressure targets for vasopressor therapy in shock: a multicentre pilot randomized controlled trial. *Intensive Care Med.* 2016 Apr 1;42(4):542-50. **Coauthor or Collaborator.**

5. Delaney JW, Pinto R, Long J, Lamontagne F, Adhikari NK, Kumar A, Marshall JC, Cook DJ, Jouvett P, **Ferguson ND**, Griesdale D, Burry LD, Burns KE, Hutchison J, Mehta S, Menon K, Fowler RA, Canadian Critical Care Trials Group H1N1 Collaborative. The influence of corticosteroid treatment on the outcome of influenza A(H1N1pdm09)-related critical illness. *Crit Care*. 2016 Mar 30;20(1):75. **Coauthor or Collaborator**.
6. Bellani G, Laffey JG, Pham T, Fan E, Brochard L, Esteban A, Gattinoni L, van Haren F, Larsson A, McAuley DF, Ranieri M, Rubenfeld G, Thompson BT, Wrigge H, Slutsky AS, Pesenti A, LUNG SAFE Investigators, ESICM Trials Group. Epidemiology, Patterns of Care, and Mortality for Patients With Acute Respiratory Distress Syndrome in Intensive Care Units in 50 Countries. *JAMA*. 2016 Feb 23;315(8):788-800. **Coauthor or Collaborator**.
7. Rose L, Burry L, Mallick R, Luk E, Cook D, Fergusson D, Dodek P, Burns K, Granton J, **Ferguson N**, Devlin JW, Steinberg M, Keenan S, Reynolds S, Tanios M, Fowler RA, Jacka M, Olafson K, Skrobik Y, Mehta S. Prevalence, risk factors, and outcomes associated with physical restraint use in mechanically ventilated adults. *J Crit Care*. 2016 Feb 1;31(1):31-5. **Coauthor or Collaborator**.

Editorials

1. Douflé G, **Ferguson ND**. Monitoring during extracorporeal membrane oxygenation. *Curr Opin Crit Care*. 2016 Jun 1;22(3):230-8. [Epub ahead of print]. **Senior Responsible Author**.
2. Del Sorbo L, Ranieri VM, **Ferguson ND**. The Berlin definition met our needs: yes. *Intensive Care Med*. 2016 May 1;42(5):643-7. **Senior Responsible Author**.
3. Goligher EC, **Ferguson ND**, Brochard LB. Clinical Challenges in Mechanical Ventilation. *Lancet*. 2016;387:1856-1866. **Coauthor or Collaborator**.
4. **Ferguson ND**. Oxygen in the ICU: Too Much of a Good Thing? *JAMA*. 2016;316:1553-1554. **Principal Author**.

Reviews

1. Goligher EC, **Ferguson ND**, Brochard LJ. Clinical challenges in mechanical ventilation. *Lancet*. 2016 Apr 30;387(10030):1856-66. **Coauthor or Collaborator**.

Review & Commentary

1. Jerath A, Parotto M, Wasowicz M, **Ferguson ND**. Volatile Anesthetics: Is a New Player Emerging in Critical Care Sedation? *American Journal of Respiratory & Critical Care Medicine*. 2016;193:1202-1212. **Senior Responsible Author**.

Peer-Reviewed Funding

Funded

- 2015 Jul-2020 Jun **Principal Investigator.** The NEUROlogically-impaired extubation Timing Trial (NEURO-ETT). Canadian Institutes of Health Research (CIHR). Collaborator(s): Adhikari N, Singh JM, Wilcox ME, Baker A, Mainprize T, Turgeon A, McCredie V, Zygun D, Seely AJ, Brochard L, Griesdale D, Bosma K, Charbonney E, Meade M, Nathens A, Rubenfeld GD, Fowler RA, Alai A, Chapman M, Cuthbertson BH. 880,405 CAD. [Grants]
- 2015 Jul-2017 Jun **Principal Investigator.** Diaphragm Activity and Function During Mechanical Ventilation. Ontario Thoracic Society. Collaborator(s): Brochard L, Rubenfeld GD, Kavanagh BP. 100,000 CAD. [Grants]
- 2014 Oct-2016 Oct **Co-Investigator.** The Importance of Spontaneous Breathing Efforts In Mechanically Ventilated Patients with ARDS. Physicians Services Incorporated Foundation (The) (PSI). PI: Fan E. Collaborator(s): GD Rubenfeld, DC Scales, AS Slutsky. 170,000 CAD. [Grants]

Invited Lectures and Presentations

International

- 2016 Dec 12-13 **Invited Speaker.** ECMO - How it Works; How to set the Ventilator on ECMO; Clinical Trials in ARDS - What Progress Have We Made?; Patient-Ventilator Asynchrony - How to Recognize and How to Fix It; Still a Place for HFO?; Selecting PEEP Based on Physiological Response. Erasme University Hospital. Rome, Italy.
- 2016 Oct 4-5 **Invited Speaker.** Preventing Ventilation-Induced Lung Injury; Monitoring the Spontaneously Breathing Patient with Ultrasound; Tracheostomy in the ICU - Timing Matters; How to Manage a Patient with ARDS. European Society of Intensive Care Medicine 29th Annual Congress. Milan, Italy.
- 2016 Sep 23-24 **Invited Speaker.** Physiological Approaches to Ventilatory Support: From NAVA to ECLS; Measuring and Optimising Diaphragm Function During Mechanical Ventilation; Basic Concepts and History of ECMO. Setting the Right PEEP Using a Physiological Approach. Chinese Critical Care Congress 2016. Dalian, China.

- 2016 Jul 15-16 **Invited Speaker.** How to be a Leader in the Intensive Care Unit; What is the Role for High-Frequency Oscillation in Adults with ARDS?; Using Ultrasound to Monitor Diaphragm Function During Mechanical Ventilation. XIX International Critical Care Medicine Forum. Mexico City, Mexico.
- 2016 May 2-4 **Invited Speaker.** How Much Fluid to Give? How Much Centralization of Critical Care Services?; The Future of Mechanical Ventilation: The End of endotracheal Intubation?; What Bedside Monitoring is Optimal? Brainstorming: Controversial Questions for The Experts. Erasme Hospital. Nice, France.
- 2016 Apr 28 **Invited Speaker.** Definition and Epidemiology of ARDS - Exploring the Berlin Definition; Monitoring and Improving Diaphragm Function During Mechanical Ventilation; The Role of HFOV in Adults with ARDS. 13th Annual Critical Care Symposium. Manchester, United Kingdom.
- 2016 Mar 17 **Invited Speaker.** ECMO - Basic Concepts; ECLS - How the Ventilator and the Circuit Interact; How I Set the Ventilator. 36th International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium.

National

- 2016 Oct 30-Nov 1 **Invited Speaker.** ECMO for Refractory Hypoxemia; Extracorporeal CO₂ Removal-Ultra-protective ventilation and beyond. Critical Care Canada Forum 2016. Toronto, Ontario, Canada.
- 2016 Jun 3 **Invited Speaker.** Respiratory Dysfunction. Canadian Critical Care Review. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. Kahn SR, Hirsch AM, Akaberi A, Hernandez P, Anderson DR, Wells PS, Rodger M, Solymoss S, Kovacs MJ, Rudski L, Shimony A, Dennie C, Rush C, Geerts WH, Aaron SD, **Granton JT**.
2. Functional and Exercise Limitations After a First Episode of Pulmonary Embolism: Results of the ELOPE prospective cohort study. *Chest*. 2016 Dec 5. pii: S0012-3692(16)62555-2. doi: 10.1016/j.chest.2016.11.030. **Senior Responsible Author**.
3. Koifman J, **Granton JT**, Thenganatt J. A case of pulmonary arterial hypertension associated with adult hemophagocytic lymphohistiocytosis. *Pulm Circ*. 2016 Dec; 6(4):614-615. doi: 10.1086/688490. **Coauthor or Collaborator**.
4. Soowamber ML, **Granton JT**, Bavaghar-Zaeimi F and Johnson SR. Online obituaries are a reliable and valid source of mortality data. *J Clin Epidemiol*. 2016 Nov;79:167-168. doi: 10.1016/j.jclinepi.2016.05.012. **Coauthor or Collaborator**.
5. Li G, Cook DJ, Thabane L, Friedrich JO, Crozier TM, Muscedere J, **Granton JT**, Mehta S, Reynolds SC, Lopes RD, Lauzier F, Freitag AP, Levine MA. Erratum to: Risk factors for mortality in patients admitted to intensive care units with pneumonia. *Respir Res*. 2016 Oct 7;17(1):128. **Coauthor or Collaborator**.
6. Li G, Cook DJ, Thabane L, Friedrich JO, Crozier TM, Muscedere J, **Granton JT**, Mehta S, Reynolds SC, Lopes RD, Francois L, Freitag AP, Levine MA. Risk factors for mortality in patients admitted to intensive care units with pneumonia. *Respir Res*. 2016 Jul 11. 2016 Jul 11;17(1):80. doi: 10.1186/s12931-016-0397-5. **Coauthor or Collaborator**.
7. Donahoe L, **Granton JT**, McRae K, Thenganatt J, Moric J, Keshavjee S, de Perrot M. Role of extracorporeal life support after pulmonary endarterectomy: a single-centre experience. *Interact Cardiovasc Thorac Surg*. 2016 Jul. 2016 Jul;23(1):74-8. doi: 10.1093/icvts/ivw075. **Coauthor or Collaborator**.

8. Wijeysondera DN, Pearse RM, Shulman MA, Abbott TE, Torres E, Croal BL, **Granton JT**, Thorpe KE, Grocott MP, Farrington C, Myles PS, Cuthbertson BH. Measurement of Exercise Tolerance before Surgery (METS) study: a protocol for an international multicenter prospective cohort study of cardiopulmonary exercise testing prior to major non-cardiac surgery. *BMJ Open*. 2016 Mar 11. 2016 Mar 11;6(3):e010359. doi: 10.1136/bmjopen-2015-010359. **Coauthor or Collaborator**.
9. Wright SP, **Granton JT**, Esfandiari S, Goodman JM, Mak S. The relationship of pulmonary vascular resistance and compliance to pulmonary artery wedge pressure during submaximal exercise in healthy older adults. *J Physiol*. 2016 Feb 16. doi: 10.1113/JP271788. **Coauthor or Collaborator**.
10. Rose L, Burry L, Mallick R, Luk E, Cook D, Fergusson D, Dodek P, Burns K, **Granton JT**, Ferguson N, Devlin JW, Steinberg M, Keenan S, Reynolds S, Tanios M, Fowler RA, Jacka M, Olafson K, Skrobik Y, Mehta S. Prevalence, risk factors, and outcomes associated with physical restraint use in mechanically ventilated adults. *J Crit Care*. 2016 Feb;31(1):31-5. doi: 10.1016/j.jcrc.2015.09.011. Epub 2015 Sep 25. **Coauthor or Collaborator**.
11. Pasarikovski CR, **Granton JT**, Roos AM, Sadeghi S, Kron AT, Thenganatt J, Moric J, Chau C, SR. Sex disparities in systemic sclerosis-associated pulmonary arterial hypertension: a cohort study. *Arthritis Res Ther*. 2016 Jan 27. 2016 Jan 27;18(1):30. doi: 10.1186/s13075-016-0933-1. **Coauthor or Collaborator**.
12. Wright SP, Esfandiari S, Gray T, Fuchs FC, Chelvanathan A, Chan W, Sasson Z, **Granton JT**, Goodman JM and Mak S. The pulmonary artery wedge pressure response to sustained exercise is time-variant in healthy adults. *Heart*. 2016 Jan 13. 2016 Jan 13. pii: heartjnl-2015-308592. doi: 10.1136/heartjnl-2015-308592. **Coauthor or Collaborator**.
13. Galie N, Humbert M, Vachiery JL, Gibbs S, Lang I, Torbicki A, Simonneau G, Peacock A, Vonk Noordegraaf A, Beghetti M, Ghofrani A, Gomez Sanchez MA, Hansmann G, Klepetko W, Lancellotti P, Matucci M, McDonagh T, Pierard LA, Trindade PT, Zompatori M, Hoeper M, Aboyans V, Vaz Carneiro A, Achenbach S, Agewall S, Allanore Y, Asteggiano R, Paolo Badano L, Albert Barbera J, Bouvaist H, Bueno H, Byrne RA, Carerj S, Castro G, Erol C, Falk V, Funck-Brentano C, Gorenflo M, **Granton JT**, lung B, Kiely DG, Kirchhof P, Kjellstrom B, Landmesser U, Lekakis J, Lionis C, Lip GY, Orfanos SE, Park MH, Piepoli MF, Ponikowski P, Revel MP, Rigau D, Rosenkranz S, Voller H, Luis Zamorano J. 2015 ESC/ERS Guidelines for the diagnosis and treatment of pulmonary hypertension: The Joint Task Force for the Diagnosis and Treatment of Pulmonary Hypertension of the European Society of Cardiology (ESC) and the European Respiratory Society (ERS): Endorsed by: Association for European Paediatric and Congenital Cardiology (AEPC), International Society for Heart and Lung Transplantation (ISHLT). *Eur Heart J*. 2016 Jan 1. 2016 Jan 1;37(1):67-119. doi: 10.1093/eurheartj/ehv317. **Coauthor or Collaborator**.

14. Vaid HM, Camacho X, **Granton JT**, Mamdani MM, Yao Z, Singh S, Juurlink DN and Gomes T. The Characteristics of Treated Pulmonary Arterial Hypertension Patients in Ontario. Can Respir J. 2016. 2016;2016:6279250. doi: 10.1155/2016/6279250.
Coauthor or Collaborator.

Peer-Reviewed Grants

Funded

- 2014 Nov-2016 Oct **Co-Investigator.** Fluid Shifts in Pulmonary Hypertension with and without Sleep Disordered Breathing. Ontario Lung Association, Grant-in-aid of research competition. PI: Ryan C. 99,761.62 CAD. [Grants].
- 2013 Jul-2016 Jun **Co-Investigator.** Measurement of exercise tolerance before surgery. Heart and Stroke Foundation of Canada (HSFC). PI: Wijesundera D. Collaborator(s): Cuthbertson BC, McCartney C, Mazer D, Wijesundera H, Thorpe K, Mamdani M, Brull R, Beattie S. 144,000 CAD. [Grants].
- 2012 Sep-2016 Dec **Principal Applicant.** RePo1. Randomized, controlled trial of sildenafil in patients with portal pulmonary hypertension. Canadian Institutes of Health Research (CIHR). Collaborator(s): Mehta S, Provencher S, Swiston J, Langleben D, Renner E, Tomlinson G, Johnson S, Lien D, Bishouty Z. 300,000 CAD. [Grants].
- 2012 Mar-2016 Feb **Co-Investigator.** Measuring Exercise Tolerance for Surgery (METS). Canadian Institutes of Health Research (CIHR), Cardiovascular. PI: Wijesundera D. 987,066 CAD.[Grants].

Non-Peer Reviewed Grants

Funded

- 2015 Apr-2019 Mar **Principal Applicant.** Bayer Pulmonary Hypertension Grant. Bayer Canada Inc. Bayer Candada. Collaborator(s): de Perrot M. 1,000,000 CAD. [Industrial Grants].

Invited Lectures and Presentations

International

2016 Nov 13 **Invited Speaker.** Mechanical support for the failing RV. American Heart Association, New Orleans, Louisiana, USA.

2016 Apr 26-27 **Chair.** Inflammation and Altered Metabolism in PH.

Invited Speaker. Group III PH. International Society for Heart Lung Transplant International Society for Heart Lung Transplant.

Washington, District of Columbia, USA.

2016 Mar 19 **Invited Speaker.** Assessing the RV - Where do we go?”. 15th International Pulmonary Hypertension Forum. Barcelona, Spain.

Provincial

2016 Sep 23 **Invited Speaker.** Pulmonary Arterial Hypertension. Memorial University MGR, St John's, Newfoundland and Labrador, Canada.

National

2016 Nov 24 **Invited Speaker.** Update in the treatment of pulmonary hypertension. University of Toronto, Toronto, Ontario, Canada.

2016 Oct 31-Nov 2 **Invited Speaker.** Medical Error. Missing the elephant in the room; Management of RV failure; Measurement of Extravascular lung water. Canadian Critical Care Forum, Toronto, Ontario, Canada.

2016 May 23-24 **Invited Speaker.** Review of approach to the diagnosis and management of pulmonary hypertension; Pulmonary Arterial Hypertension. Trillium Hospital MGR, Toronto, Ontario, Canada.

2016 May 10 **Invited Speaker.** After the Clot Settles - CTEPH and Post PE Syndrome. Cardiology Research Rounds Sunnybrook Schulich Heart Centre. Toronto, Ontario, Canada.

2016 Jan 23 **Invited Speaker.** Lessons From the Trenches: Introducing Smoking Cessation in Obvious Clinical Settings. Ottawa Heart Institute, Ottawa, Ontario, Canada.

Local

2016 Aug 17

Invited Speaker. After the Clot Settles - CTEPH and Post PE Syndrome. UHN/MSH MGR, Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. Cook DJ, Johnstone J, Marshall JC, Lauzier F, Thabane L, Mehta S, Dodek PM, McIntyre L, Pagliarello J, Henderson W, Taylor RW, Cartin-Ceba R, Golan E, **Herridge MS**, Wood G, Ovakim D, Karachi T, Surette MG, Bowdish DM, Lamarche D, Verschoor CP, Duan EH, Heels-Ansdell D, Arabi Y, Meade M; PROSPECT Investigators and the Canadian Critical Care Trials Group. Probiotics: Prevention of Severe Pneumonia and Endotracheal Colonization Trial-PROSPECT: a pilot trial. *Trials*. 2016 Aug;17:377. **Coauthor or Collaborator**.
2. Koo KK, Choong K, Cook DJ, **Herridge MS**, Newman A, Lo V, Guyatt G, Priestap F, Campbell E, Burns KE, Lamontagne F, Meade MO; Canadian Critical Care Trials Group. Early mobilization of critically ill adults: a survey of knowledge, perceptions and practices of Canadian physicians and physiotherapists. *CMAJ Open*. 2016 Aug;4(3):E448-E454. **Coauthor or Collaborator**.
3. Walsh CJ, Batt J, **Herridge MS**, Mathur S, Bader GD, Hu P, Dos Santos CC. Transcriptomic analysis reveals abnormal muscle repair and remodeling in survivors of critical illness with sustained weakness. *Sci Rep*. 2016 Jul;6:29334. **Coauthor or Collaborator**.
4. Papazian L, **Herridge MS**, Combes A. Focus on veno-venous ECMO in adults with severe ARDS. *Intensive Care Med*. 2016 Jun 7. **Coauthor or Collaborator**.
5. **Herridge MS**, Moss M, Hough CL, Hopkins RO, Rice TW, Bienvenu OJ, Azoulay E. Recovery and outcomes after the acute respiratory distress syndrome (ARDS) in patients and their family caregivers. *Intensive Care Med*. 2016 May; 42(5):725-38. 2016 May. **Principal Author**.

6. Cameron JI, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Lvasseur M, Ferguson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hébert P, Slutsky AS, Marshall JC, Cook D, **Herridge MS**; RECOVER Program Investigators (Phase 1: towards RECOVER); Canadian Critical Care Trials Group. One-Year Outcomes in Caregivers of Critically Ill Patients. *N Engl J Med*. 2016 May 12;374(19):1831-41. 2016 May. **Coauthor or Collaborator**.
7. dos Santos C, Hussain SNA, Mathur S, Picard M, **Herridge MS**, Correa J, Bain A, Guo Y, Tomlinson G, Advani A, Cameron J, Schols A, Gosker H, Katzberg H, J Batt for the MEND ICU group, the RECOVER Program investigators and the Canadian Critical Care Translational Biology Group. MEND ICU: Muscle Injury and Repair in Critical Illness Survivors Mechanically Ventilated >7 Days. *Am J Respir Crit Care Med*. 2016 Apr 8. **Coauthor or Collaborator**.
8. Kho ME, Molloy AJ, Clarke F, **Herridge MS**, Koo KK, Rudkowski J, Seely AJ, Pellizzari JR, Tarride JE, Mourtzakis M, Karachi T, Cook DJ; Canadian Critical Care Trials Group. CYCLE pilot: a protocol for a pilot randomised study of early cycle ergometry versus routine physiotherapy in mechanically ventilated patients. *BMJ Open*. 2016 Apr 8;6(4):e011659. doi: 10.1136/bmjopen-2016-011659. 2016 Apr. **Coauthor or Collaborator**.
9. Lamontagne F, Meade MO, Hébert PC, Asfar P, Lauzier F, Seely AJ, Day AG, Mehta S, Muscedere J, Bagshaw SM, Ferguson ND, Cook DJ, Kanji S, Turgeon AF, **Herridge MS**, Subramanian S, Lacroix J, Adhikari NK, Scales DC, Fox-Robichaud A, Skrobik Y, Whitlock RP, Green RS, Koo KK, Tanguay T, Magder S, Heyland DK; Canadian Critical Care Trials Group. Higher versus lower blood pressure targets for vasopressor therapy in shock: a multicentre pilot randomized controlled trial. *Intensive Care Med*. 2016 Apr;42(4):542-50. **Coauthor or Collaborator**.
10. Mehta S, Meade M, Burry L, Mallick R, Katsios C, Fergusson D, Dodek P, Burns K, **Herridge MS**, Devlin JW, Tanios M, Fowler R, Jacka M, Skrobik Y, Olafson K, Cook D; SLEAP Investigators and the Canadian Critical Care Trials Group. Variation in diurnal sedation in mechanically ventilated patients who are managed with a sedation protocol alone or a sedation protocol and daily interruption. *Crit Care*. 2016 Mar 31;20(1):76. 2016 Aug;20(1):233. **Coauthor or Collaborator**.

11. **Herridge MS**, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NK, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, Dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, Lee CM, Wilcox ME, Ayas N, Choong K, Fowler R, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hebert P, Slutsky AS, Marshall JC, Cook D, Cameron JI; RECOVER Program Investigators (Phase 1: towards RECOVER) and the Canadian Critical Care Trials Group. The RECOVER Program: Disability Risk Groups & One Year Outcome after ≥ 7 Days of Mechanical Ventilation. *Am J Respir Crit Care Med*. 2016 Mar 14. **Principal Author**.
12. Hill AD, Fowler RA, Pinto R, **Herridge MS**, Cuthbertson BH, Scales DC. Long-term outcomes and healthcare utilization following critical illness - a population-based study. *Crit Care*. 2016 Mar 31;20(1):76. 2016 Mar. **Coauthor or Collaborator**.

Peer-Reviewed Funding

Funded

- | | |
|-------------------|--|
| 2015 Jul-2018 Jul | Principal Investigator . The RECOVER Program: An International Model of Post-ICU care for patients and caregivers. Department of Medicine Challenge Grant. 200,000 CAD. [Grants] |
| 2015 Mar-2016 Feb | Co-Investigator . E--CYCLE Pilot: A Pilot Randomized Study of Early Cycle Ergometry versus Routine Physiotherapy in Elderly Mechanically Ventilated Patients. TVN. 99,988 CAD. [Grants] |
| 2014 Oct-2018 Sep | Co-Investigator . Mechanisms of Impaired Skeletal Muscle Growth in Intensive Care Unit Acquired Weakness (ICUAW). Canadian Institutes of Health Research (CIHR). 325365. PI: Batt J. Collaborator(s): dos Santos C, Mathur S. 409,200 CAD. [Grants] |
| 2014 Sep-2019 Aug | Co-Investigator . The Canadian Critical Care Trials Group. Canadian Institutes of Health Research (CIHR). The Canadian Critical Care Trials Group. CD1 138094. PI: Herbert P. Collaborator(s): Burns K, Turgeon A, Sinuff T, Seeley AJ. 1,500,000 CAD. [Grants] |

2014 Sep-2016 Sep **Collaborator.** Functional Recovery in Critically ill Children: the “Wee-cover” Multicentre Study. Canadian Institutes of Health Research (CIHR). PI: Choong K. Collaborator(s): Al-Harbi S, Cameron J, Fayed N, Fraser D, Gorter J, Hutchinson J, Khetan M, Kusum M, Tamopolsky M, Thabane L. 170,502 CAD. [Grants]

Invited Lectures and Presentations

International

- 2016 Sep **Keynote Speaker.** Keynote: The Health and Wellbeing of Caregivers of Sepsis Patients. 1st World Sepsis Conference. Australia.
- 2016 May **Invited Speaker.** How I do it: Strategies of successful woman in critical care. American Thoracic Society. San Francisco, USA.
- 2016 Mar **Invited Speaker.** Programmatic Approach to the Design of ICU Outcomes Work; Targeting Improved Patient Outcomes. Round Table of the International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium.
- 2016 Mar **Invited Speaker.** Family Caregivers in Critical Illness; We need risk stratification in critical illness. How should we capture Post-ICU disability?; Mood Disorders in Critical Illness.
- Keynote Speaker.** Report of the Round Table on Recovery after Critical Illness: Putting the Puzzle Together.
- International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium.

Provincial

- 2016 Feb **Invited Speaker.** Optimizing Outcomes for Patients and Families after critical illness: The RECOVER Program. University of British Columbia-Interhealth Kelowna. Kelowna, British Columbia, Canada.

DR. ANDREW STEEL

UNIVERSITY HEALTH NETWORK – TORONTO GENERAL HOSPITAL

Peer-Reviewed Publications

Journal Articles

1. Jerath A, Panckhurst J, Parotto M, Lightfoot N, Wasowicz M, Ferguson ND, **Steel AC**, Beattie WS. Safety and Efficacy of Volatile Anesthetic Agents Compared With Standard Intravenous Midazolam/Propofol Sedation in Ventilated Critical Care Patients: A Meta-analysis and Systematic Review of Prospective Trials. *Anesth Analg*. 2016 Nov 8. **Coauthor or Collaborator**.
2. Galvin IM, **Steel AC**, Singh JM, Lapinsky SE, Ferguson ND. Critical Care Acquired ARDS in High Risk Patients: A Prospective Observational Study. *Critical Care*. 2016 Mar 1. **Coauthor or Collaborator**.

Multicenter Study

1. Wong K, Wasowicz M, Grewal D, Fowler T, Ng M, Ferguson ND, **Steel AC**, Jerath A. Efficacy of a simple scavenging system for long-term critical care sedation using volatile agent-based anesthesia. *Can J Anaesth*. 2016 May 1;63(5):630-2. **Coauthor or Collaborator**.

Invited Lectures and Presentations

International

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|-------------|--|
| 2016 Oct 25 | Invited Lecturer. Human Factors and Patient Safety. CHEST Annual Meeting, American Society of Chest Physicians, Los Angeles, California, United States. |
| 2016 May 21 | Invited Speaker. Heart failure in the perioperative period. International Anaesthesia Research Society. California, USA. |
| 2016 May 20 | Chair. 29th Annual Meeting and Critical Care Update. Society of Critical Care Anaesthesiologists. San Francisco, California, USA. |
| 2016 Apr | Invited Lecturer. Lung Ultrasound Workshop. Society of Cardiovascular Anesthesiologists. Thoracic Anaesthesia Symposium. San Diego, California, USA. |

National

- 2016 Apr 12 **Invited Lecturer.** Remote anesthesia practice. Michener Institute for Applied Health Sciences. Anesthesia Assistant Program. Toronto, Ontario, Canada.
- 2016 Apr 9 **Invited Lecturer.** Critical Care Cases. Case-based problem based learning. University of Toronto, Toronto Anaesthesia Symposium. Presenter(s): Steel A; Randall I. Toronto, Ontario, Canada.
- 2016 Apr 9 **Invited Speaker.** What's new in the ICU - translation to the OR. University of Toronto. Toronto Anaesthesia Symposium. Toronto, Ontario, Canada.

Local

- 2016 Dec 13 **Invited Lecturer.** Intraoperative ventilation strategy. University of Toronto Anesthesiology Fellows Rounds, Toronto General Hospital. Toronto, Ontario, Canada.
- 2016 Oct 4 **Invited Lecturer.** Lung transplantation and ICU. University of Toronto Critical Care Rounds, Toronto General Hospital. Toronto, Ontario, Canada.
- 2016 Aug 23 **Invited Lecturer.** Rapid response systems. University of Toronto Critical Care Rounds, Toronto General Hospital. Toronto, Ontario, Canada.
- 2016 Jun 21 **Invited Lecturer.** Communications Workshop. University of Toronto Critical Care Rounds, Toronto General Hospital. Toronto, Ontario, Canada.
- 2016 April 19 **Invited Lecturer.** Managing a trainee in difficulty. University of Toronto Anesthesiology Fellows Rounds, Toronto General Hospital. Toronto, Ontario, Canada.
- 2016 Jan 26 **Invited Lecturer.** Managing a trainee in difficulty. University of Toronto Critical Care Rounds, Toronto General Hospital. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. de Oliveira Manoel, A. L., **Goffi, A.**, Zampieri, F. G., Turkel-Parrella, D., Duggal, A., Marotta, T. R., et al. The critical care management of spontaneous intracranial hemorrhage: a contemporary review. *Critical Care*. 2016 Sep:1-29. **Coauthor or Collaborator**.
2. Airton Leonardo de Oliveira Manoel, **Alberto Goffi**, Tom R. Marotta, Tom A. Schweizer, Simon Abrahamson and R. Loch Macdonald. The critical care management of poor-grade subarachnoid haemorrhage. *Critical Care*. 2016 Jan 23. **Coauthor or Collaborator**.
3. Nuttapol Rittayamai, Elizabeth Wilcox, Xavier Drouot, Sangeeta Mehta, **Alberto Goffi**, Laurent Brochard. Positive and negative effects of mechanical ventilation in the ICU: a review with clinical recommendations. *Intensive Care Medicine*. 2016 Jan 13. **Coauthor or Collaborator**.
4. Shrestha G., **Goffi A.**, Aryal D. Delivering neurocritical care in resource-challenged environments. *Current Opinion in Critical Care Medicine*. 2016 Jan. In Press. **Coauthor or Collaborator**.
5. Doufle, Ghislaine and Niall D. Ferguson. Monitoring during extracorporeal membrane oxygenation. *Critical Care*. 2016. In Press. **Acknowledged in Publication (Not Author)**.

Letters to Editor

1. El-Boghdadly K, **Goffi A**, Chan V. Point of care diaphragmatic ultrasonography made easy. *Can J Anaesth*. 2016 Oct 28. **Coauthor or Collaborator**.

Peer-Reviewed Grants

Funded

2015 Feb-2016 Jan **Co-Investigator.** Situating education in patient care: exploring how residents navigate learning opportunities for central venous catheter insertion skills. Department of Medicine, Faculty of Medicine, University of Toronto. Department of Medicine Education Research & Scholarship Grant. PI: Brydges R. Collaborator(s): Mylopoulos M, Goffi A. 11,250 CAD. [Grants]

Invited Lectures and Presentations

International

- 2016 Nov 5 **Invited Lecturer.** Portland Point of Care Ultrasound Course. Portland, Oregon, USA.
- 2016 Oct 2-3 **Invited Lecturer.** Lessons from a Fellowship; Insane in the brain - TBI & Disaster Medicine. European Society of Intensive Care Medicine. Torino, Italy.
- 2016 Sep 30 **Invited Lecturer.** Emergency Neurological Life Support. Torino, Italy.
- 2016 Jul 16-18 **Invited Lecturer.** Advanced LV assessment hands-on; Diastology hands-on assessment; Clinical Cases; Intravascular Volume Assessment; Subcostal view hands-on session; Vascular Ultrasound hands-on session; Ask the expert hands-on session; Volume assessment session. Advanced Critical Care Ultrasound Course. Society of Critical Care Medicine (SCCM). Chicago, Illinois, United States.
- 2016 May **Invited Lecturer.** Introductory Perioperative Point of Care Ultrasound. IARS 2016 Annual Meeting and International Science Symposium. San Francisco, California, USA.
- 2016 Apr 21 **Invited Lecturer.** Point of Care Ultrasound, - The concept; TTE - Basic views and the eyeballing concept; Ultrasound for the evaluation of the patient in shock; Workshop Case analysis - The patient with dyspnea. Ultrasound for specialists in anesthesiology, emergency medicine, critical care medicine and peri-operative medicine. Anesthesiology Service of Clínica Davila Santiago, Chile. Santiago, Chile.

National

2016 Nov 2 **Invited Lecturer.** Lung Ultrasound in ARDS; Role of Ultrasound in Liberation from Mechanical Ventilation.

Moderator. Scientific Session on ICU Rehab and Recovery.

Critical Care Canada Forum (CCCF). Toronto, Ontario, Canada.

2016 Jun 13 **Lecturer.** Focused Ultrasound for Neurocritical Care; Focused Cardiac Ultrasound Guidelines - Goals, Limitations & Training; Hypoxemia in the ICU; Moderation of the Afternoon Lecture Series (Preoperative Program); Instructor Focused Transthoracic Echocardiography Workshop. ISURA 2016. International Symposium of Ultrasound for Regional Anesthesia, Pain Medicine & Preoperative Applications. Toronto, Ontario, Canada.

Honours and Awards

2015 Jul-2016 Jun The John Granton Award for outstanding contribution to Critical Care Education, University of Toronto. (Distinction)

2015 Jun-2016 Jul Award for Individual Teaching Excellence - Toronto Western Hospital, Critical Care Medicine, Dept of Medicine, Faculty of Medicine, University of Toronto. (Postgraduate MD)

Peer-Reviewed Fundings

2016 Apr-2019 Mar **Co-Investigator.** PROSPECT: Probiotics: Prevention of Severe Pneumonia and Endotracheal Colonization Trial. Physician Services Incorporated (PSI). Co-PI: Cook D. \$250,000.00 CAD. [Operating]

Invited Lectures and Presentation

National

Abstracts

2016 Oct 20-21 Canadian Critical Care Society Guidelines for the Withdrawal of Life Support; Developing an Intensive Care Unit Clinician-Led BEREAVement Screening and Support Program for ICU Family Members (ICU BEREAVE). Presenter(s): Koo E, Kalocsai C, Sinuff T, Roze des Ordons A, Smith O, Cook D, **Golan E**, Hales S, Strachan D, MacKinnon C.

Intensive Care Unit Clinicians' Experiences and Needs in Supporting Bereaving Family Members. Presenter(s): Presenter(s): Koo E, Kalocsai C, Sinuff T, Roze des Ordons A, Smith O, Cook D, **Golan E**, Hales S, Strachan D, MacKinnon C.

21st International Congress on Palliative Care. Montreal, Quebec, Canada.

2016 Apr 18 Developing an Intensive Care Unit Clinician-Led BEREAVement Screening and Support Program for ICU Family Members (ICU BEREAVE). Presenter(s): Koo E, Kalocsai C, Sinuff T, Roze des Ordons A, Smith O, Cook D, **Golan E**, Hales S, Strachan D, MacKinnon C.

Hospice Palliative Care Ontario Annual Meeting 2016. Newmarket, Ontario, Canada.

Peer Reviewed Publications

Journal Articles

1. Downar J, **Hawryluck L**, Wood A, Brown S, Richards J, Sibbald R, Gibson J, Kalocsai J. Balancing the interests of patients, substitute decision-makers, family and health care providers in decision-making over the withdrawal and withholding of life-sustaining treatment an 86 page report for to the Law Reform Commission of Ontario. December 2016. **Coauthor or Collaborator.**
2. **Hawryluck L**, Oczkowski S, Handelman M, "Must do CPR?": strategies to cope with the new College of Physicians and Surgeons of Ontario policy on end-of-life care. Can J Anaesth. 2016 Aug;63(8):973-80. doi: 10.1007/s12630-016-0665-3.
3. Downar J, Delaney J, **Hawryluck L**, Kenny L., Neither guidelines nor symptom-targeted opioids are harmful when withdrawing life-sustaining measures. Intensive Care Med. 2016 Aug;42(8):1303-4. doi: 10.1007/s00134-016-4390-8. **Coauthor or Collaborator.**
4. **Hawryluck L**. Planning for and Providing Quality End of Life Care: the Post Approval Amendments and their implications for Critical Care, IDCCM Newsletter. July/ August 2016. **Principal Author.**
5. Downar J, Delaney J, **Hawryluck L**, Kenny L, Guidelines for the withdrawal of life-sustaining measures. Intensive Care Med. 2016 Jun;42(6):1003-17. doi: 10.1007/s00134-016-4330-7. **Coauthor or Collaborator.**
6. **Hawryluck L**. Issues of Vulnerability and Equality: the emerging need for court evaluations of the fiduciary in high stakes EOL decisions, accepted to Health Law in Canada. 2016. **Principal Author.**
7. **Hawryluck L**. Estate Planning: Ten practical steps to improve written advance directives in powers of attorney for healthcare, Accepted in McGill Journal of Health Law. **Principal Author.**
8. Crostin J, Devine L, Christian M, **Hawryluck L**. EOL Simulation: Standardized families and resuscitation, accepted Simulation in Healthcare. 2016. **Senior Responsible Author.**

Policy

1. **Hawryluck L.** Consent to Resuscitation Policy, UHN 2015-2017. Principal Author.
2. Alexander C, Janisse R, **Hawryluck L.** Code Blue policy, UHN 2015-2016. **Senior Responsible Author.**
3. Chappgain S, Parjula R, Deo S, **Hawryluck L.** Nepal Medical Council. Draft Code of Ethics and Professional Conduct, 2014-2017. **Senior Responsible Author.**

Educational Videos

1. **Hawryluck L,** Davies D, Rapid Patient Discharge tool for use in Mass Casualty events. UHN June 2016
2. **Hawryluck L,** Ma P, Lam P. CCRT New Staff training 2 days education program with training modules, materials and standardized colleague and families simulation scenarios. May 2016.
3. Sataryana R, Staynor K, Meredith K, Partridge K, **Hawryluck L,** Staff Survey and Clinical tools development to Improve recognition and initial management of deteriorating patients. 2016-present
4. Chappgain S, Parjula R, Deo S, **Hawryluck L.** Nepal Medical Council Draft Code of Ethics and Professional Conduct. Sept 2014-2017 (NMC International Expert Consultant)
5. **Hawryluck L,** Aggrawal P. Communication Skills, Ethics and Law, A 5 day Faculty Development/ Train and Trainer course using Simulation/ Role play/Case discussions, Institute of Medicine, Tribhuvan University Kathmandu Nepal. Sept 2014-present
6. **Hawryluck L,** Acharya S, DM in Critical Care Medicine, Tribhuvan Teaching Hospital, Institute of Medicine Tribhuvan University, Kathmandu Nepal, 2012-present. (Development of teaching materials, daily teaching on site and weekly via Cisco Webex from Toronto for 3 years Doctorate of Medicine)

Invited Lectures and Presentations

National

- 2016 Jan 29 **Invited Speaker.** Consent from Legislation to Practice. St. Michael's Hospital, Dept of Critical Care. Toronto, Ontario, Canada.
- 2016 Mar **Invited Speaker.** GIM half day: critical incidents, negligence and statements of claim: all you need to know. Toronto, Ontario, Canada.
- 2016-2017 **Invited Speaker.** Portfolio course Year3 U of T medical students teaching. Toronto, Ontario, Canada.

Local

- 2016-present **Invited Speaker.** UHN-CCRT at GIM rounds monthly - ICU fellow / resident teaching sessions on ABG, sepsis, EOL care, ARDS /respiratory failure, ethical issues. Toronto, Ontario, Canada.
- 2016-present **Invited Speaker.** UHN-GIM resident teaching ABGS/respiratory failure. Toronto, Ontario, Canada.
- 2016 July **Invited Speaker.** MAiD – understanding legislation and implications for ICU practice: ICU fellows teaching TWH. Toronto, Ontario, Canada.
- 2016 June **Participant.** UHN - Code Orange: mock mass casualty preparedness simulation. Toronto, Ontario, Canada.
- 2016 May **Invited Speaker and Chair.** CCRT New staff Training and Simulation Day 2-day course. Toronto, Ontario, Canada.
- 2016 **Invited Speaker.** Consent to Resuscitation Policy: presentations at UHN Clinical Policy Committee, MAC, ICU rounds, GIM resident orientations, PAC, Surgical IP rounds. Toronto, Ontario, Canada.

Honours and Awards

- 2016 Humanitarian work: an ICU perspective. Medecins Du Monde Annual General Meeting.

Peer Reviewed Publications

Journal Articles

1. **Leligdowicz A**, Fischer WA, 2nd, Uyeki TM, Fletcher TE, Adhikari NK, Portella G, Lamontagne F, Clement C, Jacob ST, Rubinson L et al: Ebola virus disease and critical illness. Crit Care 2016, 20(1):217. **Principal Author.**
2. Bartz RR, Gantner D, Gordon AC, **Leligdowicz A**, McNamee JJ, Murthy S, Nichol A, Webb S, International Forum for Acute Care T: Who Says There Is No "I" in Team? Achieving Individual Success in Collaborative Clinical Research in Critical Care. American journal of respiratory and critical care medicine 2016, 194(7):911-912. **Coauthor or Collaborator.**
3. **Leligdowicz A**, Bhagwanjee S, Diaz JV, Xiong W, Marshall JC, Fowler RA, Adhikari NK: Development of an ICU Resource Assessment Survey for the Care of Critically Ill Patients in Resource-Limited Settings. J Crit Care 2016. **Principal Author.**
4. **Leligdowicz A**, Conroy A, Hawkes M, Shiboski S, Zhong K, Namasopo S, Liles C, Kain K: Markers of endothelial injury and immune activation effectively risk stratify acute febrile syndromes in African children. 2016. **Principal Author.**
5. **Leligdowicz A**, Conroy A, Hawkes M, Lebovic G, Zhong K, Matthay M, Kain K: Validation of two multiplex platforms to quantify biomarkers of inflammation and endothelial injury in severe infection. PLoSOne 2016. **Principal Author.**
6. Rojek A, **Leligdowicz A**, Dunning J, Horby P: Conducting clinical trials during an Ebola epidemic: perspectives from the RAPIDE field team. 2016. **Coauthor or Collaborator.**

Invited Lectures and Presentations

International

Posters

- 2016 Nov University of San Francisco, California Pulmonary Research Day. San Francisco, California, USA.
- 2016 May American Thoracic Society (ATS) International Conference. San Francisco, California, USA.

Provincial

- 2016 Feb **Invited Participant.** InFACT meeting. Whistler, British Columbia, Canada.
- 2016 Jan **Invited Participant.** Canadian Critical Care Trials Translational Biology Group Meeting. Lake Louise, Alberta, Canada.

National

- 2016 Nov **Invited Speaker.** University of Toronto Clinician Investigator Program Symposium. Toronto, Ontario, Canada.
- 2016 Jun **Invited Participant.** University of Toronto Interdepartmental Division of Critical Care Medicine Annual Research Day. Toronto, Ontario, Canada.

Posters

- 2016 Jun University of Toronto Infectious Disease Microbiology Annual Research Day
- 2016 May University of Toronto Department of Medicine Annual Research Day

Honours and Awards

- 2016 U of Toronto Department of Medicine research day (best poster presentation)
- 2015-17 CIHR Banting Postdoctoral Fellowship (ranked 11 out of 228 applications)
- 2015-17 Clinician Scientist Training Program, Department of Medicine, University of Toronto

DR. JEFFREY MAN

UNIVERSITY HEALTH NETWORK – TORONTO GENERAL HOSPITAL

Peer-Reviewed Publications

Journal Articles

1. **Man HS**, Yan MS, Lee JJ, Marsden PA. Epigenetic Determinants of Cardiovascular Gene Expression: Vascular Endothelium. *Epigenomics*. 2016 Jul;8(7):959-79. **Principal Author.**

Invited Lectures and Presentations

Local

- 2016 Apr **Invited Participant.** Epigenetic Gene Regulation: Role of long non-coding RNAs. Respiratory Research-In-Progress Rounds. Toronto General Hospital. Toronto, Ontario, Canada.

Honours and Awards

- 2016 Research Award. University of Toronto Renal Trainee Research Day

Peer-Reviewed Publications

Journal Articles

1. **Singh JM**, Gunz AC, Dhanani S, Aghari M, MacDonald RD. Frequency, Composition, and Predictors of In-Transit Critical Events During Pediatric Critical Care Transport. *Pediatr Crit Care Med*. 2016 Aug 8. **Principal Author**.
2. Gomez D, Haas B, Larsen K, Alali AS, MacDonald RD, **Singh JM**, Tien H, Iwashyna TJ, Rubenfeld G, Nathens AB. A novel methodology to characterize inter-facility transfer strategies in a trauma transfer network. *J Trauma Acute Care Surg*. 2016 Aug 3. **Coauthor or Collaborator**.
3. Gazendam AM, Cape JD, Lewis SJ, **Singh JM**. Perioperative and Intraoperative Predictors of ICU Length of Stay in Patients Undergoing Long Fusion Spinal Surgery. *Spine*. 2016 Jul. **Senior Responsible Author**.
4. Fried HI, Nathan BR, Rowe AS, Zabramski JM, Andaluz N, Bhimraj A, Guanci MM, Seder DB, **Singh JM**. The Insertion and Management of External Ventricular Drains: An Evidence-Based Consensus Statement : A Statement for Healthcare Professionals from the Neurocritical Care Society. *Neurocrit Care*. 2016 Jan 6. **Senior Responsible Author**.

Book Chapters

1. **Singh JM**, Scales D, Guidet B, Valentin A, Flaatten H. Chapter 17: Implementation of evidence based practice. In: *Quality Management in Intensive Care*. Cambridge University Press; 2016. **Principal Author**.

Non-Peer Reviewed Publications

Journal Articles

1. Delaney JW, Pinto R, Long J, Lamontagne F, Adhikari NK, Kumar A, Marshall JC, Cook DJ, Jouviet P, Ferguson ND, Griesdale D, Burry LD, Burns KE, Hutchison J, Mehta S, Menon K, Fowler RA, Bandrauk N, Leonard S, Moores E, Barter J, Fiander J, Hall R, Green R, Heinzler D, Julien L, Wright D, Soder C, Earle R, King S, Lauzier F, Turgeon A, Roy C, Gagne C, Lellouche F, Ferland MC, Dussault P, Poirier G, Lamontagne F, Neas I, Masse V, Yale P, Albert M, Arsenault I, Deroy P, Laporta D, Hornstein D, Verhoef B, Khwaja K, Banici L, Ahern SP, Skrobic Y, Harvey J, Santschi M, Ducharme-Crevier L, Jouviet P, Lacroix J, Withington D, Al Otaibi T, Dugas M, St-Pierre L, Cassista J, Gosselin L, McIntyre L, Gaudet C, Saginur R, Pagliarello J, Watpool I, McArdle T, Foxall J, Murphy E, Bergeron C, Lewis MJ, Muscedere J, Godfrey N, Fleury M, Hollinger G, Malus E, Williams N, Hrytsyk M, Meade M, Spoto C, Freitag A, Choong K, Irwin N, Karachi T, Lapinsky S. The influence of corticosteroid treatment on the outcome of influenza A(H1N1pdm09)-related critical illness. *Crit Care*. 2016 Mar 30;20:75.

Peer-Reviewed Grants

Funded

- | | |
|-------------------|--|
| 2015 Jul-2020 Jun | Co-Investigator. The NEUROlogically-impaired Extubation Timing Trial (NEURO-ETT). Canadian Institutes of Health Research (CIHR). Transitional Operating Grant 2014-2015. PI: Scales D, Ferguson N. Collaborator(s): Adhikari N, Alali A, Baker A, Bosma K, Brochard L, Chapman M, Charbonney E, Cuthbertson B, Fowler R, Griesdale D, Mainprize T, McCredie V, Meade M, Nathens A, Rubenfeld G, Seely A, Turgeon A, Wilcox ME, Zygun D. 880,405 CAD. [Grants] |
| 2015 Mar-2017 Mar | Principal Investigator. Predictors of Apnea and Their Relationship to Time to Death Following Withdrawal of Life Sustaining Therapy for Donation after Cardiac Death Candidates. Physician Services Incorporated Foundation. Health Research Grant. Co-PI: Laveena M. Collaborator(s): Dhanani S, Payne C. 37,025 CAD. [Grants] |

Invited Lectures and Presentations

International

Abstracts

2016 Jun 8 **Presenter.** Incidence, Composition and Predictors of In-Transit Critical Events During Pediatric & Critical Care Societies. Co-Presenter(s): Gunz J, Dhanani S, Aghari M, MacDonald R. 8th World Congress of the World Federation of Pediatric Intensive & Critical Care Societies.

Posters

2016 May 17 **Presenter.** Feasibility and Tolerability of Neurally Adjusted Ventilatory Assist in Cervical Spinal Cord Injury. Co-Presenter(s): Matte A, Comtois N, Chen D, Spahija JA. ATS. San Francisco, California, USA.

National

2016 Dec 7 **Facilitator.** Whole Brain vs. Brain Stem Death; ABGs and Apnea Testing. Trillium Gift of Life Network. Joint Organ and Tissue Donation Coordinator Day. Toronto, Ontario, Canada.

2016 Nov 2 **Moderator.** CCCF Deceased Donation Symposium. Critical Care Canada Forum. Toronto, Ontario, Canada.

2016 Oct 29 **Course Director.** Emergency Neurological Life Support. Critical Care Canada Forum Pre-conference Course. Toronto, Ontario, Canada.

2016 Jun 27 **Invited Lecturer.** Ventilation and the Brain. University of Toronto IDCCM. Toronto, Ontario, Canada.

2016 Jun 3 **Invited Speaker.** Neurological Critical Care. 2016 Canadian Critical Care Review. Toronto, Ontario, Canada.

Peer-Reviewed Publications

Journal Articles

1. Charbonney E, **Wilcox ME**, Shan Y, Perez d'Empaire P, Duggal A, Rubenfeld GD, Liles WC, Dos Santos CC. Systemic angiotensin-1/2 dysregulation, a marker of endothelial activation/dysfunction following cardiopulmonary bypass in adults. *Future Science OA*. 2016 Nov. **Co-Principal Author**.
2. Kerlin MP, Adhikari NKJ, Rose L, **Wilcox ME**, Bellamy CJ, Costa DK, Gershengorn H, Halpern SD, Kahn JM, Lane-Fall MB, Wallace DJ, Weiss CH, Wunsch H, Cooke CR, on behalf of the ATS ad hoc committee on ICU Organization. An Official American Thoracic Society Systematic Review: The Effect of Nighttime Intensivist Staffing on Mortality and Length of Stay Among ICU Patients. *Am J Respir Crit Care Med*. 2016 Aug. **Coauthor or Collaborator**.
3. JI Cameron, LM Chu, A Matte, G Tomlinson, L Chan, C Thomas, JO Friedrich, D Phil, S Mehta, F Lamontagne, M Levasseur, ND Ferguson, NKJ Adhikari, JC Rudkowski, H Meggison, Y Skrobik, J Flannery, M Bayley, J Batt, C dos Santos, SE Abbey, A Tan, V Lo, S Mathur, M Parotto, D Morris, L Flockhart, E Fan, CM Lee, **ME Wilcox**, N Ayas, K Choong, R Fowler, GD Rubenfeld, DC Scales, T Sinuff, BH Cuthbertson, L Rose, P Robles, S Burns, M Cypel, L Singer, C Chaparro, C-W Chow, S Keshavjee, L Brochard, P Hebert, AS Slutsky, JC Marshall, D Cook, MS Herridge. The RECOVER Program: One-Year Outcomes in Caregivers of Critically Ill Patients Mechanically Ventilated for 7 Days. *New England Journal of Medicine*. 2016 May 12;374(19):1831-41. **Coauthor or Collaborator**.
4. Rittayamai N, **Wilcox ME**, Drouot X, Mehta S, Goffi A, Brochard L. Positive and negative effects of mechanical ventilation on sleep in the ICU. A review with clinical recommendations. *Intensive Care Medicine*. 2016 Apr;42(4):531-41. **Coauthor or Collaborator**.
5. Herridge MS, Chu LM, Matte A, Tomlinson G, Chan L, Thomas C, Friedrich JO, Mehta S, Lamontagne F, Levasseur M, Ferguson ND, Adhikari NKJ, Rudkowski JC, Meggison H, Skrobik Y, Flannery J, Bayley M, Batt J, Dos Santos C, Abbey SE, Tan A, Lo V, Mathur S, Parotto M, Morris D, Flockhart L, Fan E, CM Lee, **Wilcox ME**, Ayas N, Choong K, Fowler R, Scales DC, Sinuff T, Cuthbertson BH, Rose L, Robles P, Burns S, Cypel M, Singer L, Chaparro C, Chow CW, Keshavjee S, Brochard L, Hebert P,

Slutsky AS, Marshall JC, Cook D, Cameron JI; RECOVER Program Investigators (Phase 1: towards RECOVER) and the Canadian Critical Care Trials Group. The RECOVER Program: Disability Risk Groups & One Year Outcome after ≥ 7 Days of Mechanical Ventilation. Am J Respir Crit Care Med. 2016 Mar 14. **Coauthor or Collaborator.**

Peer-Reviewed Grants

Funded

- 2016 Apr-2017 Apr **Co-Investigator.** Managing Pain In Collaboration in the Intensive Care Unit (MPIC-ICU): A Stepped Wedge Cluster Randomized Trial. Sir Mortimer B. Davis - Jewish General Hospital. PJT Project Grant Competition. PI: Gelinac C, Laporta D. 100,000 CAD. [Grants]
- 2015 Aug-2016 Aug **Co-Investigator.** Efficacy and safety of melatonin for prevention of delirium in critically ill patients: A multi-centre, randomized, triple-blind, placebo-controlled feasibility study. Centre for Collaborative Drug Research (CCDR). PI: Burry L. 50,000 CAD. [Grants]
- 2015 Jul-2020 Jun **Co-Investigator.** The NEUROlogically-impaired extubation Timing Trial (NEURO-ETT). Canadian Institutes of Health Research (CIHR). PI: Ferguson N, Scales D. 880,000 CAD. [Grants]
- 2014 Dec-2018 Jun **Co-Investigator.** STARRT-AKI: STandard versus Accelerated initiation of Renal Replacement Therapy in Acute Kidney Injury. Canadian Institutes of Health Research (CIHR). Operating Grant: Industry-partnered Collaborative Research. 334912. PI: Wald R, Bagshaw S.. 220,996 CAD. [Clinical Trials]
- 2014 Jan-2016 Dec **Co-Principal Investigator.** COGWELL: Cognitive outcomes and wellness in survivors of critical illness. Physicians Services Incorporated Foundation (The) (PSI). Collaborator(s): Rubinfeld G. 139,000 CAD. [Grants]

Invited Lectures and Presentations

International

- 2016 Oct 14 **Invited Lecturer.** Effects of ARDS on the brain. 6th Hedenstierna Master Class Symposium. Uppsala, Sweden.
- 2016 Jun 9 **Invited Speaker.** Risk factors for brain injury post-ICU. Vanderbilt University Medical Centre. Nashville, Tennessee, USA.
- 2016 May 17 **Invited Speaker.** Do It Ourselves: with a Post-ICU Clinic. American Thoracic Society. San Francisco, California, USA.