

**University of Toronto  
Interdepartmental Division of Critical Care**

**Annual Report**

*January 1, 2011 – December 31, 2011*



**St. Michael's**  
Inspired Care.  
Inspiring Science.



**Message from Arthur S. Slutsky, MD**  
**Director, Interdepartmental Division of Critical Care Medicine**

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Dear Members of the Interdepartmental Division of Critical Care Medicine,

I am very pleased to present the annual report for January 1 – December 31, 2011, showcasing the outstanding work and effort on the part of our Division's members.

Our Residency Training Program had another great year. The program continues to offer novel educational opportunities to our trainees, thanks in large part to the innovation and dedication of the Program's Education Director, Dr. Simon Abrahamson, and our Program Director, Dr. Damon Scales. The 2011-2012 academic year marked several important successes, including an Annual Residents' Day that featured a record 50 abstracts from our residents. I offer my congratulations to this year's graduating class, who successfully completed their critical care training. We remain very fortunate in being able to attract some of the brightest candidates to our program and I welcome the class of 2013 as they begin their residency training.

This year's Canadian Critical Care Forum conference was held on November 13-16<sup>th</sup>, 2011. This year's conference was attended by over 1000 participants and featured 175 presentations covering many diverse topics including mechanical ventilation, sedation and analgesia strategies, and systems for improving quality and safety. The conference proper was preceded by several pre-congress courses, including the popular Residents' Day (co-sponsored by the Canadian Critical Care Society) and workshops on ultrasound in the ICU. I would like to applaud the organizing committee (Brian P. Kavanagh (Chair, Organizing Committee); Niall D. Ferguson (Chair, Scientific Programme); Robert A. Fowler; Stephen E. Lapinsky; John C. Marshall; Damon C. Scales) ) for the ongoing success of this conference.

The members of our Division had another very successful year in research. This year, the total number of unique peer-reviewed publications exceeded 200. I would like to thank Drs. Andrew Baker (St. Michael's Hospital), Niall Ferguson (Mt. Sinai and UHN) and Brian Cuthbertson (Sunnybrook) for their leadership. This past year, Dr. Desmond Bohn stepped down after two 5-year terms as Chief of the Critical Care Department at the Hospital for Sick Children. After a protracted search, Dr. Peter Laussen, currently at Boston Children's Hospital, has been appointed as the new Chief and will take up this position in the Fall of 2012. I would like to welcome him to this new role.

This report provides a summary of the key academic and professional achievements of the Division's members. The publication impact factor analysis outlines publication productivity, as an introduction to the individual achievements of our members. Individual achievements are organized by publications (peer reviewed and non-peer reviewed), book chapters, abstracts, presentations, funding and creative professional achievements, including program development, teaching awards, educational development opportunities, and other major accomplishments. I congratulate all of you for your tremendous individual achievements and a collective commitment to excellence in Critical Care Medicine.

As you are aware, I will be stepping down as the Director of the Interdepartmental Division in the upcoming year. A search committee has been struck and a process for identifying a new Director is well underway. I look forward to continued success under the leadership of the next Division Director.

Sincerely,



Arthur S. Slutsky, MD  
Director, Interdepartmental Division of Critical Care Medicine, University of Toronto

**University of Toronto Residency Training Program  
(Damon C. Scales, MD PhD)**

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The University of Toronto Adult Critical Care Medicine Residency Training Program continues to lead the country in producing the highest quality intensivists and leaders in Critical Care Medicine. The 2011-2012 academic year marked several important successes, including an Annual Residents' Day that featured a record 50 abstracts from our residents.

We congratulate last year's graduating class: Dr. Mujahid Al-Busaidi, Dr. Allie Binnie, Dr. Michael Detsky, Dr. Shannon Goddard, Dr. Ewan Goligher, Dr. Laveena Munshi, and Dr. Allan Schaffer. This truly was an outstanding cohort of residents, and without exceptions each has embarked on paths for continued academic and scholarly development. We are very proud of these impressive individuals, and look forward to following their continued career growth and success.

We would also like to welcome those that joined our program in July 2012. We remain very fortunate in being able to attract some of the brightest candidates to our program, and we welcome Dr. Kali Barrett, Dr. Mohammed Bawazeer, Dr. Preeti Dhar, Dr. Brooks Fallis, Dr. Keren Mandelzweig, Dr. Elliott Owen, Dr. Ian Randall, and Dr. Shankar Sivananthan.

The residency program continues to offer novel educational opportunities to our trainees, thanks in large part to the innovation and dedication of the Program's Education Director, Dr. Simon Abrahamson. This past year we once again had a simulation series (Dr. Simon Abrahamson), National ACES course (Dr. Simon Abrahamson), bronchoscopy course (Dr. Simon Abrahamson), leadership course (Drs. Ewan Goligher and Andrew Beckett), ethics series (Drs. Neil Lazar, Shannon Goddard, Kit Stanley), and a summer physiology series (Drs. Shannon Goddard, Mike Detsky, Laveena Munshi, Ewan Goligher, Simon Abrahamson). Drs. Simon Abrahamson and Edgar Hockmann continued to provide an ultrasound and echocardiography course, and this was enhanced by weekly case based reviews (Drs. Simon Abrahamson, Allan Schaffer, and Laveena Munshi). Dr. Natalie Wong and Shelly Dev organized the annual in-training exam to help us assess the progress of our residents. Dr. Eddy Fan organized the monthly journal club to teach critical appraisal skills, and he also organized a workshop on extracorporeal life support. Two unique aspects of our training program received media attention, as both the mass casualty simulation (Drs. Maude St. Onge and Simon Abrahamson) and the communication course (Dr. James Downar) were featured in national newspapers.

The recipients of the annual teaching awards were selected by the critical care residents to acknowledge outstanding faculty from across the 5 core academic ICUs in our system. Dr. Simon Abrahamson once again received the John T. Granton Award for Outstanding Contributions to Teaching and Education (city-wide). The site winners for excellence in teaching were Dr. Stephen Lapinsky (Mount Sinai), Dr. Simon Abrahamson (St. Michael's), Dr. Andre Amaral (Sunnybrook), Dr. John Granton (Toronto General), and Dr. Eyal Golan (Toronto Western).

We continue to improve the calibre of the overall training program with several exciting initiatives in preparation for the external review of our program by the Royal College in April 2013. We are implementing new evaluation tools to better track development of our residents across each of the CANMEDS domains, including 360-degree appraisals and Portfolios. The Visiting Professor series, organized by Dr. Gordon Rubinfeld, has been a tremendous success by exposing our trainees to international leaders in critical care. The Clinical Research in Progress sessions continue to be highly attended, and have been providing our residents with support and feedback for improving their scholarly projects. Over the next few years, we will continue to work with our academic hospital partners to further enhance the University of Toronto Clinical Fellowship Program. With these and other initiatives, we will build on our strong reputation for training leaders in Critical Care Medicine.

## **Critical Care Canada Forum 2010 (Niall D. Ferguson, MD)**

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Formerly known as the Toronto Critical Care Medicine Symposium, the Critical Care Canada Forum (CCCF) is a 3-day conference organized by the Interdepartmental Division of Critical Care Medicine, which focuses on topics that are relevant to the individuals involved in the care of critically ill patients, wherever the patients are located. Internationally recognized, the Critical Care Canada Forum focuses on leading-edge science through informative and interactive sessions, dynamic speakers and numerous exhibitions. The CCCF is a place where doctors, nurses and respiratory therapists can collaborate on shared knowledge across disciplines, departments and institutions.

This year's Critical Care Canada Forum (CCCF) was held November 13-16 at the Sheraton Centre Hotel & Convention Centre. The conference proper was preceded by several pre-congress courses, including the popular Residents' Day (co-sponsored by the Canadian Critical Care Society) and workshops on ultrasound in the ICU.

This year's conference was attended by over 1000 participants and featured 175 presentations covering many diverse topics including mechanical ventilation, sedation and analgesia strategies, and systems for improving quality and safety. One of the main highlights of the scientific programme this year included a whole day dedicated to Safety in the ICU – Settling Only for Best, which was opened by an address from the Ontario Minister for Health and Long-Term Care. As usual we had presentations of a number of important randomized trials – including studies on sedation strategies and new treatments for septic shock.

In addition to the strong scientific programme, social aspects of the conference are also highly rated, including the Reception at the Top of the Sheraton. Indeed, the new venue continues to be very well received by attendees, speakers, and sponsors alike. CCCF also has a number of affiliated meetings before and during conference period, including the Canadian Critical Care Society, the Canadian Critical Care Trials Group, and the Canadian Intensive Care Foundation.

The organizing committee for Critical Care Canada Forum consists of:

Brian P. Kavanagh (Chair, Organizing Committee); Niall D. Ferguson (Chair, Scientific Programme); Robert A. Fowler; Stephen E. Lapinsky; John C. Marshall; Damon C. Scales; and Arthur S. Slutsky

The conference in 2011 was a huge success, and planning is already underway for the upcoming year – October 28-30, 2012. More details are available at [www.criticalcarecanada.com](http://www.criticalcarecanada.com).

*The Critical Care Canada Forum is where Canada's intensivists put the latest science into practice.*

## **An Update from the Department of Critical Care, St. Michael's Hospital (Andrew J. Baker, MD)**

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The Department of Critical Care at St. Michael's Hospital has continued to strive for excellence in the realms of education, research, and clinical activities in the past year. The department's hard work has been recognized through the numerous accolades received by its physicians.

We welcome Dr. Mark Kataoka as the Medical Director for CVICU and we would also thank Dr. David Mazer for his strong leadership for more than 20 years in the CVICU.

In education, Dr. Simon Abrahamson continues to lead the Fellowship Program, and Dr. Natalie Wong the residency program, for the Department of Critical Care at St. Michael's Hospital. Dr. Simon Abrahamson received the Frank Rutledge Award of Excellence for Critical Care Teaching in Canada. Dr. Natalie Wong received the SMH DOM Postgraduate Teaching Award from the Department of Medicine at St. Michael's Hospital. Furthermore, Dr. David Hall was awarded the Sheldon Mintz Undergraduate Teaching award from the Faculty of Medicine at the University of Toronto for his excellence in teaching and educational leadership.

Other major honours received by Critical Care physicians include:

The National 3M Healthcare Quality Team Award was presented to Dr. Richard Bowry. Dr. Claudia dos Santos received the Gairdner King Research Award for the best student research project in Critical Care Medicine, as well as a Masters Research Training Award from the School of Graduate Studies at the University of Toronto. Dr. Sarah Gray was awarded the Research Engagement Award from the St. Michael's Hospital MSICU. Dr. David Klein received the Specialized Complex Care Award from St. Michael's Hospital. Dr. Warren Lee was recognized with the Breathe New Life Award from the Ontario Thoracic Society. Dr. Avery Nathens received the Arthur Award for media recognition for his studies on trauma centre performance. Dr. Andrea Rigamonti received the Department of Anesthesia Merit Award from the University of Toronto. Dr. Arthur Slutsky was awarded the 2011 Anne & Neil McArthur Research Award from St. Joseph's Healthcare.

The Department of Critical Care has maintained its strong interest in research, as evidenced by the 103 refereed publications put forth by its staff in the past year. The ability to participate in this amount of research has been greatly aided by the grants and research awards presented to members of the Department of Critical Care. A total of 23 research grants were awarded to physicians in the Department of Critical Care to aid them in their research endeavours. Peer-reviewed grants were received by – Drs. Andrew Baker, Karen Burns, Claudia dos Santos, David Klein, Warren Lee, John Marshall, David Mazer, Avery Nathens, Natalie Wong, and Haibo Zhang. Non-peer-reviewed grants were received by – Drs. Karen Burns, David Hall, David Klein, David Mazer, and Natalie Wong.

The Department of Critical Care's staff also aims to expand the outreach of the department through participation in international, national, and regional scientific presentations. The Department's physicians attended a total of 108 of such presentations in the past year.

**An Update from the Department of Critical Care Medicine, The Hospital for Sick Children  
(Desmond J. Bohn, MD)**

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2011 was a year of change for Critical Care at the Hospital for Sick Children. Dr Desmond Bohn stepped down as Chief and has subsequently retired after more than 30 years on staff. As many would know, the focus and passion of Des' career was Congenital Diaphragmatic Hernia (CDH). So, in his honour, a very successful gathering of international CDH experts met for an excellent academic day which culminated in a gala send off for Dr Bohn.

After a protracted search, a new Chief has been appointed. Dr Peter Laussen, currently at Boston Children's Hospital, will take up this position in the fall of 2012.

The Department's educational and academic mission continues to flourish. Trainees are attracted from all corners of the globe, with the most recent year having 18 fellows from 13 different countries. Afrothite Kotsakis, with help from Briseida Mema and Hadi Mohseni-Bod, has developed an extended and advanced curriculum, including simulation to enhance an already excellent training program.

Permanent funding of the Critical Care Response Team has allowed us to support more individuals and, with the expansion of the extramural arm of CCRT, and under the guidance of the Paediatric Critical Care Network, we now provide a Provincial, 'one number to call' access to Critical Care services for Children. This is largely driven by SickKids!

Both clinical and basic science research continue to be departmental strengths. We remain very productive with details of the many research accomplishments found throughout this report.

We look forward to ongoing success under the leadership of Dr Laussen.

**An Update from the Departments of Critical Care Medicine,  
University Health Network/Mount Sinai Hospital  
(Niall D. Ferguson, MD)**

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**Personnel:**

The leadership team for Critical Care at UHN/MSH remained unchanged in 2011. Dr. Niall Ferguson is Director of Critical Care for UHN/MSH, with Drs. Neil Lazar, Jeff Singh, and Stephen Lapinsky serving as Site Directors for Toronto General, Toronto Western, and Mount Sinai, respectively. Our research leads are Drs. Margaret Herridge (UHN) and Geeta Mehta (MSH). Drs. Lisa Kenny and Andrew Steel lead the education programme, with Andrew also serving as the Director of our International Fellowship Programme. We welcome Eddy Fan who joined us as faculty in July 2011.

**Research:**

This was another excellent year for our research group. Our grant and publications records were strong (see individual reports). We participated in numerous studies – some investigator-led from within our group OSCILLATE; Towards RECOVER, SLEAP), some investigator-initiated from other CCCTG collaborators (ABLE), and others industry trials (PROWESS-Shock; CONSCIOUS II).

**Education/Innovation:**

The International Fellowship Programme at UHN/MSH, under Dr. Andrew Steel's direction, continues to flourish, despite positions for 7 fellows per year we are fortunate to receive many more strong applications than we can accommodate. Under the leadership of Drs. Lisa Kenny and Andrew Steel we continued our revamped resident education programme at UHN/MSH in 2011. The addition of Intensive Care University continues to flourish – a whole day primer on essentials of critical care for new residents beginning their rotation. We also updated and revised the noon seminar series for ICU residents across sites, and added twice-monthly Meet the Professor rounds, broadcast by video-conference among all 3 sites. Other areas of quality improvement include a focus on reducing CLI and VAP, led by the Site Directors. The Antibiotic Stewardship Programme, has been successfully implemented in all 3 sites, with impressive results to date.

## **An Update from the Department of Critical Care Medicine, Sunnybrook Health Sciences Centre (Dr. Brian Cuthbertson MB ChB, MD, FRCA)**

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The leadership team for Critical Care Medicine at Sunnybrook Health Sciences Centre remained unchanged in 2011. Dr. Brian Cuthbertson is the Chief of Critical Care Medicine, while Dr. Gordon Rubinfeld continues to serve as Chief of the Trauma, Emergency and Critical Care Program. Dr. Shelly Dev is the lead of the education programme, with Dr. Damon Scales serving as the Program Director of the University of Toronto Adult Critical Medicine Training Program and Dr. Cameron Guest as our International Fellowship Director.

Since May 2011, an exciting change has occurred at Sunnybrook: patients with neurological critical illness have been managed with a different model of care. After extensive assessment with the ICU team and our collaborators, we created a Neurocritical Care (NCC) Service with the purpose of providing more consistent quality care and facilitating a more collaborative approach with our clinical partners. Firstly, modelling suggested that just under half of our admissions into the Level III ICU could be classified with a neurocritical illness. Consequently, one of the two existing clinical ICU teams was rebranded as the NCC Team and all such patients were admitted to this team. We also reviewed our protocol for traumatic brain injury, formed a consensus between ICU and Neurosurgery for a common management plan and implemented this with regular review of our performance. Our goal is to extend this process to other common neurological critical illnesses, such as intracerebral hemorrhage and ischemic stroke.

In Quality Improvement, the Department began collecting data on key quality indicators reflecting our performance. A Process of Care Database was developed and validated – which monitors the quality of care provided in the ICU based these select quality indicators. The results are published internally on-line on a quarterly basis. There are ongoing efforts to solicit and identify additional indicators through surveys of interdisciplinary teams, which will be added as new initiatives to sustain a path of continuous improvement in the ICU.

In Research, Rob Fowler received a CIHR grant as Principal Investigator with Gordon Rubinfeld and Damon Scales to study: A National Comparison of Intensity of End-of-Life Care in Canada: Defining Changing Patterns, Risk Factors and Targets for Intervention. Dominique Piquette was the recipient of a CIHR Fellowship, as well as a Royal College of Physicians and Surgeons CanMEDS research and development grant: Problem-Based Learning for Postgraduate Critical Care Training: Implementation and Dissemination of a New Curriculum to Promote CanMEDS Roles. Damon Scales received a substantial CIHR grant for a randomized controlled trial – Initiation of Cooling by Emergency medical services to Promote the Adoption of in-hospital therapeutic hypothermia in Cardiac arrest Survivors: the ICE-PACS study. Brian Cuthbertson received CIHR funding as co-Principal Investigator for the METS study (Measurement of Exercise Tolerance before Surgery).

In Education, the Visiting Professorship Program continues to be tremendously successful in bringing ten international experts in Critical Care to Sunnybrook and the city-wide Interdepartmental Division of Critical Care. Since these visiting professors are undertaking educational sessions whilst visiting, this also enhances the teaching and training opportunities for our trainees and staff. The Clinical Research in Progress sessions continue to provide a supportive environment where investigators can bring research projects for critical evaluation and discussion. This past year we had eighteen presenters which included an assortment of both city-wide staff and fellows.

We have worked hard to evolve the postgraduate education program; we have implemented educational activities specifically designed for our fellows such as renewed weekly Journal Clubs, new weekly problembased learning sessions and bimonthly simulation sessions.

Various other rounds that are held on a regular basis include:



- Quality of Life Rounds (for long-term ventilated patients) – lead by nursing staff; more patient-centered approach for patients who have been vented in the ICU for 21 days or more, they are asked: “What is important to them? What are their goals?”
- Last Rights Rounds – multi-disciplinary rounds to debrief on all deaths from the previous month to review improvements in end-of-life communication, palliative care, and moral distress.
- Quality Improvement Walkabout Rounds – help initiate conversations regarding quality improvement with staff
- Ask the Ethicist – a monthly newsletter where staff questions are answered.

Critical Challenge Conference is an annual 1-day workshop hosted by Sunnybrook that is led by Critical Care Educators. It is open to staff at the other Toronto area hospitals. It provides a forum to discuss and share ideas surrounding current “challenges” facing Critical Care departments across the city.

## Publication Analysis for the Year 2011

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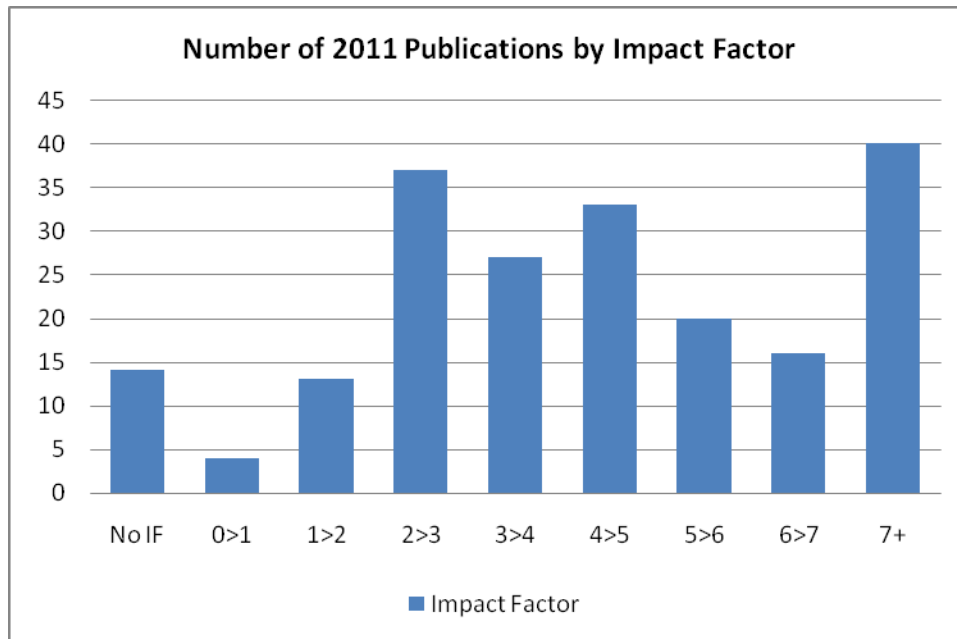
Number of unique publications: 204

Number of unique publications with impact factor greater than zero: 190

Mean impact factor (of those with an impact factor greater than zero): 6.65

Median impact factor (of those with an impact factor greater than zero): 4.53

Percentage of publications with impact factor greater than 7.00: 19.6%.



**Peer Reviewed Publications:**

1. Duffett M, Burns KE, **Adhikari NKJ**, Arnold DM, Lauzier F, Kho ME, Meade MO, Hayani O, Koo K, Choong K, Lamontagne F, Zhou Q, Cook DJ. Quality of reporting of surveys in critical care journals: A methodologic review. *Crit Care Med* 2011 Feb;40(2):441-449. **Coauthor or Collaborator**.
2. **Adhikari NK**, Tansey CM, McAndrews MP, Matte A, Pinto R, Cheung AM, Diaz-Grandos N, Herridge MS. Self-reported depression symptoms and memory complaints in survivors five years after acute respiratory distress syndrome. *Chest* 2011 Dec;140(6):1484-93. **Principal Author**.
3. **Adhikari NKJ**, Bashir A, Lamontagne F, Mehta S, Ferguson ND, Zhou Q, Hand L, Czarnecka K, Cook DJ, Granton JT, Friedrich JO, Freitag A, Watpool I, Meade MO. High frequency oscillation in adults: A utilization review. *Crit Care Med* 2011 Dec;39(12):2631-44. **Principal Author**.
4. Yamashita S, Ng E, Brommecker F, Silverberg J, **Adhikari NK**. Validation of the Glucommander method for insulin infusion adjustment in critically ill patients. *Can J Hosp Pharm* 2011; 64: 333-39. **Senior Responsible Author**.
5. Etchells E, **Adhikari NK**, Wu R, Cheung M, Quan S, Mraz R, Wong B, Pinto R, Mehta R, Morra D, Fowler R, Sibbald W, Abrams H, Rossos PG. Real-time automated paging and decision support for critical laboratory abnormalities. *BMJ Qual Saf* 2011 Nov;20(11):924-30. **Coauthor or Collaborator**.
6. Duffett M, Burns KE, Kho ME, Lauzier F, Meade MO, Arnold DM, **Adhikari NK**, Lamontagne F, Cook DJ; Academy of Critical Care: Development, Evaluation, and Methodology (ACCADEMY); Canadian Critical Care Trials group. Consent in critical care trials: a survey of Canadian research ethics boards and critical care researchers. *J Crit Care* 2011 Oct;26(5):533.e11-22. **Coauthor or Collaborator**.
7. Friedrich JO, **Adhikari NKJ**, Beyene J. Ratio of means for analyzing continuous outcomes in meta-analysis performed as well as mean difference methods. *J Clin Epidemiol* 2011 May;64(5):556-64. **Coauthor or Collaborator**.
8. Lamontagne F, Cook DJ, **Adhikari NK**, Briel M, Duffett M, Kho ME, Burns KE, Guyatt G, Turgeon AF, Zhou Q, Meade MO. Vasopressor administration and sepsis: a survey of Canadian intensivists. *J Crit Care*. 2011 Oct;26(5):532.e1-7. **Coauthor or Collaborator**.
9. Dainty KN, **Adhikari NK**, Kiss A, Quan S, Zwarenstein M. Electronic prescribing in an ambulatory care setting: a cluster randomized trial. *J Eval Clin Pract* 2011 Mar 18. doi: 10.1111/j.1365-2753.2011.01657.x. **Coauthor or Collaborator**.
10. Terblanche MJ, Pinto R, Whitely C, Brett S, Beale R, **Adhikari NKJ**. Statins do not prevent acute organ failure in ventilated ICU patients: single-centre retrospective cohort study. *Critical Care* 2011 Feb 28;15(1):R74. **Senior Responsible Author**.
11. Keenan SP, Sinuff T, Burns KE, Muscedere J, Kutsogiannis J, Mehta S, Cook DJ, Ayas N, **Adhikari NK**, Hand L, Scales DC, Pagnotta R, Lazosky L, Rucker G, Dial S, Laupland K, Sanders K, Dodek P. Clinical practice guidelines for the use of noninvasive positive-pressure ventilation and noninvasive continuous positive airway pressure in the acute care setting. *CMAJ* 2011 Feb 22;183(3):E195-214. **Coauthor or Collaborator**.
12. Goligher EC, Leis JA, Fowler RA, Pinto R, **Adhikari NK**, Ferguson ND. Utility and safety of draining pleural effusions in mechanically ventilated patients: a systematic review and meta-analysis. *Crit Care* 2011;15(1):R46. **Coauthor or Collaborator**.

13. Burns KE, **Adhikari NK**, Slutsky AS, Guyatt GH, Villar J, Zhang H, Zhou Q, Cook DJ, Stewart TE, Meade MO. Pressure and volume limited ventilation for the ventilatory management of patients with acute lung injury: a systematic review and meta-analysis. PLoS One 2011 Jan 28;6(1):e14623. **Coauthor or Collaborator**.
14. Scales DC, Dainty KN, Hales B, Pinto R, Fowler RA, **Adhikari NK**, Zwarenstein M. A multifaceted intervention for quality improvement in a network of intensive care units: a cluster randomized trial. JAMA 2011;305: 363-372. **Coauthor or Collaborator**.

***Non Peer Reviewed Publications:***

1. **Adhikari NK**, Rubenfeld GD. Worldwide demand for critical care. Curr Opin Crit Care 2011 Dec;17(6):620-5. **Principal Author**.

***In Press:***

1. Ganapathy A, **Adhikari NK**, Spiegelman J, Scales SC. Routine chest x-rays in intensive care units: a systematic review and meta-analysis. Crit Care. In Press (Trainee publication, Ganapathy A, Spiegelman J). **Senior Responsible Author**.
2. Sinuff T, Muscedere J, **Adhikari N**, Stelfox T, Rubenfeld G, Dodek PM, Pinto R, Heyland D, Cook D, Amaral A, Piquette D, Cahill N, Lawless B, Scales DC, Garland A. The Quality Of Knowledge Translation Studies In Critical Care. Am J Respir Crit Care Med 2012. In Press. **Coauthor or Collaborator**.
3. Goligher EC, Rubenfeld G, **Adhikari N**, Pinto R, Kavanagh BP, Cook D, Guyatt G, Jones GK, Granton J, Stewart T, Meade M, Ferguson ND. Oxygenation Response To Increased PEEP Predicts Mortality In Acute Lung Injury: A Secondary Analysis Of The Lung Open Ventilation Study (LOVS) Trial. Am J Respir Crit Care Med 2012. In Press. **Coauthor or Collaborator**.
4. Sinuff T, Garland A, **Adhikari N**, Stelfox T, Rubenfeld G, Dodek PM, Heyland D, Pinto R, Cook D, Amaral A, Piquette D, Cahill N, Lawless B, Scales DC, Muscedere J. Knowledge Translation Interventions For Critically Ill Patients: A Systematic Review. Am J Respir Crit Care Med 2012. In Press. **Coauthor or Collaborator**.
5. Wilcox ME, **Adhikari NK**. Effect Of Telemedicine On Mortality In Critically Ill Patients: Systematic Review And Meta-Analysis. Am J Respir Crit Care Med 2012. In Press. **Senior Responsible Author**.
6. Lamontagne F, **Adhikari N**, Cook D, Koo K, Lauzier F, Burns KEA, Matte A, Douglas I, Turgeon AF, Quiroz H, Poulin Y, Choong K, Ferguson N, Kho M, Duffet M, Chant C, Lesur O, Meade M. Corticosteroids for critically ill patients: an international survey of intensivists. Crit Care. In Press. **Coauthor or Collaborator**.

***Review Articles, Letters, and Editorials:***

1. Scales DC, Dainty K, **Adhikari NKJ**. Quality Improvement Interventions in Intensive Care Units--Reply. JAMA 2011; 305: 1764-1765. **Senior Responsible Author**.

***Abstracts:***

1. Sud S, Friedrich JO, Sud M, **Adhikari NKJ**. Meta-analysis, Meta-regression, and Patient- and Trial-level Data Subgroup Analysis: An Example of Ecological Bias in a Meta-analysis of Prone Ventilation in patients with severe hypoxemic respiratory failure due to ALI/ARDS (oral presentation). Am J Respir Crit Care Med 2011 May 1; 183 (meeting abstracts): A3738. **Senior Responsible Author**.

2. Herridge MS, Chu LM, Matte AL, Chan L, Tomlinson GA, Ferguson ND, Mehta S, Friedrich J, **Adhikari N**, Fowler R, Cook DJ, Rudkowski J, Meggison H, Abbey S, Batt J, dos Santos C, Flannery J, Leung G, Marshall J, Moody A, Rubenfeld G, Scales DC, Sinuff T, Slutsky AS, Cameron JI. Long-term patient outcomes after prolonged mechanical ventilation: the Towards RECOVER study. *Am J Respir Crit Care Med* 2011 May 1; 183 (meeting abstracts): A2380. **Coauthor or Collaborator.**
3. Cameron JI, Chan L, Czerwonka A, Chu LM, Matte AL, Ferguson ND, Mehta S, Friedrich J, **Adhikari N**, Rudkowski J, Meggison H, Abbey S, Batt J, dos Santos C, Flannery J, Leung G, Marshall J, Moody A, Rubenfeld G, Scales DC, Fowler R, Sinuff T, Slutsky AS, Tomlinson G, Herridge MS. Long-Term Outcomes after Prolonged Mechanical Ventilation: Family Caregiver Outcomes from the Towards RECOVER Study. *Am J Respir Crit Care Med* 2011 May 1; 183 (meeting abstracts): A3168. **Coauthor or Collaborator.**
4. Lamontagne F, Ferguson ND, **Adhikari N**, Cook DJ, Hand L, Henzler D, Zhou Q, Meade MO. Corticosteroid use in ARDS patients enrolled in the Oscillation for ARDS Treated Early (OSCILLATE) Trial. *Am J Respir Crit Care Med* 2011 May 1; 183 (meeting abstracts): A1169. **Coauthor or Collaborator.**
5. Mase V, Yale P, Meade M, Fowler R, **Adhikari N**, Henzler D, Christian M, Herridge MS, Lamontagne F. Corticosteroid Use In a Cohort Of ICU Patients Infected With Influenza. *Am J Respir Crit Care Med* 2011 May 1; 183 (meeting abstracts): A1657. **Coauthor or Collaborator.**
6. Hand L, **Adhikari N**, Cook DJ, Mehta S, Matte AL, McArdle T, Clarke F, Lamontagne F, Meade M, Ferguson ND. Initial ventilatory parameters for high frequency oscillation in a pilot RCT compared with recent historical controls. *Am J Respir Crit Care Med* 2011 May 1; 183 (meeting abstracts): A1685. **Coauthor or Collaborator.**
7. Duffett M, Burns K, **Adhikari N**, Arnold D, Lauzier F, Kho ME, Meade M, Hayani O, Koo K, Choong K, Cupido C, Lamontagne F, Cook D. Quality Of Reporting Of surveys In Critical Care Journals: A Methodologic Review. *Am J Respir Crit Care Med* 2011 May 1; 183 (meeting abstracts): A2390. **Coauthor or Collaborator.**

***Presentations/Lectures:***

1. 2011 Jun 27 **Chair**. Vulnerable populations working group. International Forum for Acute Care Trialists/Li Ka Shing Knowledge Institute/ISARIC Colloquium: Creating Capacity for Global Pandemic Research. Toronto, Ontario, Canada.
2. 2011 May 17 **Chair**. Preventing and treating 'the dwindles' of critical illness. American Thoracic Society International Conference. Denver, Colorado, United States.
3. 2011 Feb 21 **Invited Speaker**. High frequency oscillation for adults. The 27th Annual CNMC Symposium: ECMO & the Advanced Therapies for Respiratory Failure. Keystone, Colorado, United States.
4. 2011 Nov 16 **Invited Speaker**. Current utilization of HFO in adults. Critical Care Canada Forum. Toronto, Ontario, Canada. Presented in session "ARDS Therapeutics".
5. 2011 Nov 15 **Chair**. Session: "Disparities in ICU Care". Critical Care Canada Forum. Toronto, Ontario, Canada.
6. 2011 Nov 15 **Invited Speaker**. Resource differences and sepsis care. Critical Care Canada Forum. Toronto, Ontario, Canada. Presented in session "Disparities in ICU Care".

**Research Funding:**

1. 2011 Jul - 2013 Jun **Co-Investigator**. STandard versus Accelerated initiation of Renal Replacement Therapy in Acute Kidney Injury (STARRT-AKI). Canadian Institutes of Health Research (CIHR). PI: Wald, Ron; Bagshaw, Sean. 276,360 CAD. [Grants].
2. 2010 Jul - 2011 Jun **Principal Investigator**. Expanding the scope of Critical Care Rapid Response Teams: a cost-effective approach to identify preventable adverse events that cause harm. Sunnybrook and Women's College Health Sciences Centre. AFP Innovation Fund. 63,800 CAD. [Grants].
3. 2009 Sep - 2013 Sep **Co-Investigator**. The RECOVER Program: Phase I Towards RECOVER - Outcomes and Needs Assessment in Survivors of Prolonged Mechanical Ventilation and Their Caregivers. Canadian Institutes of Health Research (CIHR). PI: Herridge, Margaret. 704,367 CAD. [Grants].
4. 2009 Jul - 2014 Jun **Co-Investigator**. OSCILLation for ARDS Treated Early (OSCILLATE) Trial. Canadian Institutes of Health Research (CIHR). PI: Meade, Maureen; Ferguson, Niall. 3,791,391 CAD. [Grants].

***Peer Reviewed Publications:***

1. Haas B, Gomez D, Xiong W, **Ahmed N**, Nathens AB: External benchmarking of trauma centre performance: Have we forgotten our elders? *Annals of Surgery*: 2011: 253: pp 144-150.
2. Haas B, Gomez D, Hoeft C, **Ahmed N**, Nathens AB: Good Neighbours? the effect of a level 1 Trauma Centre on the performance of Level 2 Centers. *Annals of Surgery*: 2011: 253: pp 992-5.

***In Press:***

1. Gomez D, Haas B, Tien H, **Ahmed N**, Nathens AB: Disaster preparedness of Canadian Trauma Centres: the perspective of trauma medical directors. *Canadian Journal of Surgery*: 2011: 54: pp 9-16.

***Presentations/Lectures:***

1. SAVIR - Society for advancement of violence and injury prevention research, Iowa City, Indianan, Apr 6, 2011 - Apr 8, 2011. Risk Factor & Characteristics of Childhood Filicide in Ontario.
2. Trauma Association of Canada, Banff, AB, Apr 7, 2011 - Apr 9, 2011. ***Effective crisis resource management and team training for post-graduate trainees: An update, literature review and evidence-based best practice guideline***  
Doumouras AG, Keshet I, Nathens AB, Ahmed N, Hicks CM. Accepted for presentation at the Trauma Association of Canada Annual Scientific Meeting, Banff AB, April 7-9, 2011.
3. The Royal College Simulation Summit, Montreal, Quebec, Nov 3, 2011. Team in Training in Trauma (3T): A model for evidence based interdisciplinary crisis management training curricula.

***Research Funding:***

1. Team in Training for Trauma: Developing an interdisciplinary, simulation-based human factors training curriculum for general surgery residents. **N. Ahmed**, Hicks M: Education Development Fund, University of Toronto. (\$6,825 2010 - 2011.)

**Andre Amaral** (Sunnybrook)

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***Presentations/Lectures:***

1. 2011 Jul 13 **Invited Speaker**. Lost in translation: challenges in handing over critically ill patients. University Health Network. Toronto, Ontario, Canada. Presenter(s): **Amaral, Andre**.
2. 2011 Apr 28 **Visiting Professor**. Lost in translation: challenges in handing over critical care patients. Hospital for Sick Children - Critical Care Medicine. Toronto, Ontario, Canada.

***Research Funding:***

1. 2010 - 2011 **Co-Investigator**. Expanding the scope of Critical Care Rapid Response Teams: a cost-effective approach to identify preventable adverse events that cause harm. Association of Fundraising Professionals (AFP). PI: Adhikari, Neill. 63,800 CAD. [Grants].



**Peer Reviewed Publications:**

1. Topolovec-Vranic J., Pollmann-Mudryj M.A., Ouchterlony D., Klein D., Spence J., Romaschin A., Rhind S., Tien H.C., **Baker A.J.** The value of serum biomarkers in prediction models of outcome following mild traumatic brain injury. *Journal of Trauma-Injury Infection & Critical Care*. 71(5) (Supplement 1, Canadian Forces Operational Medicine Supplement):S478-S486, November 2011.
2. **Baker A.J.**, Topolovec-Vranic J., Michalak A., Pollmann-Mudryj M.A., Ouchterlony D., Cheung B., Tien H.C., (2011). Controlled blast exposure during forced explosive entry training and mild traumatic brain injury. *Journal of Trauma-Injury Infection & Critical Care*. 71(5) (Supplement 1, Canadian Forces Operational Medicine Supplement):S472-S477, November 2011.
3. Hemandez-Alejandro R, Wall W, Jevnikar A, Luke P, Sharpe M, Russell D, Gangji Azeem, Cole E, Kim SJ, Selzner M, Keshavjee S, Hebert D, Prasad GVR, **Baker AJ**, Knoll Gerg, Winterbottom R, Pagliarello G, Payne C, Zaltzman J. Organ donation after cardiac death: donor and recipient outcomes after the first three years of the Ontario experience. **Canadian Journal of Anaesthesia**. 58:599-605, 2011
4. Park E, Gottlieb JJ, Cheung B, Shek PN, **Baker AJ**. A model of low-level primary blast brain trauma results in cytoskeletal proteolysis and chronic functional impairment in the absence of lung barotrauma. **Journal of Neurotrauma**. 28(3): 343-357, 2011

**Presentations/Lectures:**

1. "Update on Donation after Cardiac Death (DCD)" Critical Care Canada Forum, Toronto, Ontario, November 13 – 16, 2011.
2. "Understanding Cerebral Perfusion" Critical Care Canada Forum, Toronto, Ontario, November 13 – 16, 2011.
3. "Long-term Effects of Low-level Trauma" Critical Care Canada Forum, Toronto, Ontario, November 13 – 16, 2011.
4. Instructor "Transcranial Doppler (TCD): Overview and Hands-on" CAS Annual Meeting, Toronto, Jun 24-28, 2011
5. "Update on the Management of Stroke" CAS Annual Meeting, Toronto, Jun 24-28, 2011
6. "Perioperative Sodium Homeostasis" CAS Annual Meeting, Toronto, Jun 24-28, 2011

**Research Funding:**

1. 2010-2016 Heart and Stroke Foundation of Canada  
*From bench to bedside to curbside*  
Baker AJ: Co-investigator  
\$1,500,000
2. 2010-2016 National Institutes of Health  
*From bench to bedside to curbside*  
Baker AJ: Co-investigator  
\$USD 648,000
3. 2009-2016 Canadian Institutes of Health Research  
*From bench to bedside to curbside*

Baker AJ: Co-investigator  
\$1,057,000

4. 2011-2016 National Institutes of Health  
Resuscitation Outcomes Consortium- Core Training Grant  
Baker AJ: Co-investigator  
\$335,000

5. 2009-2011 Merit Award  
Modeling neurological blast injury  
Department of Anesthesia,  
University of Toronto  
\$40,000/yr for 2 years

**Abstracts:**

1. **Mustard M, Bowry R, Lewis E, Glen J.** A Checklist for dynamic, real-time change management, *Canadian Cardiovascular Congress, 2011*
2. **Lewis E, Meleca N, Bowry R, Mustard M.** Go with the flow, *Canadian Cardiovascular Congress, 2011*

**Presentations/Lectures:**

1. 2011 Nov      **“The Role of QIP’s to support Physician QI”** – *Presentation*  
HealthAchieve – Quality Improvement Plans – Toronto
2. 2011 Sep      **“Improving Flow:From a Project to Transformation”**–*Presentation*  
Emergency Department Quality Collaborative, Central LHIN
3. 2011 Jun      **“Use of Echocardiography for Aortic Surgery”** - *Presentation*  
CAS Annual Meeting - Toronto

**Peer Reviewed Publications:**

1. Turgeon A, Lauzier F, Simard JF, Scales DC, **Burns K**, Moore L, Zygun D, Bernard F, Meade MO, Dung TC, Ratnapalan M, Todd S, Harlock J, Fergusson DA. Mortality Associated with Withdrawal of Life-Sustaining Therapy in Patients with Severe Traumatic Brain Injury: A Canadian Multicentre Cohort Study. *CMAJ*. 183(14):1581-1588. **Coauthor or Collaborator**.
2. Bagshaw SM, Wald R, Pannu N, Friedrich J, **Burns K**, Stollery DE, Levin A, Moist L, Barton J, Walsh MW, James MT, House AA. Clinical Factors Associated With Initiation of Renal Replacement Therapy in Critically Ill Patients with Acute Kidney Injury – A Prospective Multicentre Observational Study: The (CANAKI) Investigators. *Journal of Critical Care*. **Coauthor or Collaborator**.
3. Bagshaw SM, Wald R, Pannu N, Friedrich J, **Burns K**, Stollery DE, Levin A, Moist L, Barton J, Walsh MW, James MT, House AA. Initiation of renal replacement therapy in critically ill patients with acute kidney injury: A Canadian Propsective Multicentre Observational Study. *J Crit Care*. 2011;July 26. **Coauthor or Collaborator**.
4. **Burns KEA**, Chant C, Smith O, Cuthbertson B, Fowler R, Cook DJ, Kruger P, Webb S, Alhashemi J, Dominguez Cherit G, Zala C, Rubinfeld G, Marshall JC. A Canadian Critical Care Trials Group Project in Collaboration with the Internaitonal Forum for Acute Care Trialsists - Collaborative H1N1 Adjuvant Treatment (CHAT): study protocol and design of a randomized controlled trial. *Trials*. 2011;12(1):70. **Principal Author**.
5. **Burns KEA**, Adhikari N, Slutsky A, Guyatt G, Villar J, Zhang H, Zhou Q, Cook DJ, Stewart TE, Meade MO. A Meta-analysis of Pressure and Volume-Limited Ventilation in Acute Lung Injury and the Acute Respiratory Distress Syndrome. *PLoS One*. 2011.jan 28;6(1):314623. **Principal Author**.
6. Lamontagne F, Cook DJ, Adhikari N, Briel M, Duffett M, Kho M, **Burns KEA**, Guyatt G, Turgeon A, Zhou Q, Meade MO. Vasopressor administration: A Survey of Canadian Intensivists. *Journal of Critical Care*. 2011; Mar 29 [Epub ahead of print]. **Coauthor or Collaborator**.
7. Bagshaw SM, Wald R, Pannu N, Friedrich J, **Burns K**, Stollery DE, Levin A, Moist L, Barton J, Walsh MW, James MT, House AA. Initiation of renal replacement therapy in critically ill patients with acute kidney injury: A Canadian Prospective Multicentre Observational Study. *J Crit Care*. 2011: July 26. **Coauthor or Collaborator**.
8. Turgeon A, Cote N, Lauzier F, Moore L, Simard JF, Scales D, Bernard F, **Burns K**, Meade MO, Zygun D, Boutin A, Brochu J, Fergusson D. Factors associated with decisions to withdraw life-sustaining therapies in critically ill patients with severe traumatic brain injury: A Canadian multicentre cohort study. *CMAJ*. 2011 Oct 4;183(14):1581-1588. Epub 2011 Aug 29. **Coauthor or Collaborator**.

**In Press:**

1. Smith OM, McDonald E, Zytaruk N, Foster D, Matte A, Clarke F, Meade L, Godfrey N, Vallance S, Galt P, Rajbhandari D, Rocha M, Mehta S, Ferguson N, Hall R, Fowler R, **Burns K**, Qushmaq I, Ostermann M, Heels-Ansdell D, Cook D. Rates and determinants of Informed Consent: A Case Study of an International Thromboprophylaxis Trial. *Crit Care Med*. In Press. **Coauthor or Collaborator**.
2. Wald R, Quinn R, Adhikari N, **Burns K**, Friedrich JO, Garg ZX, Harel Z, Hladunewich M, Luo J, Mamdani M, Perl J, Ray JG for the University of Toronto Acute Kidney Injury Research Group. The Risk of Chronic Dialysis Among Acute Kidney Injury Survivors. *Am J Med*. In Press. **Coauthor or Collaborator**.

3. Rose L, Gray S, **Burns KEA**, Atzema C, Kiss A, Worster A, Scales D, Rubenfeld G, Lee J. Emergency Department Length of Stay for Patients Requiring Mechanical Ventilation: A Prospective Observational Study. *Academic Emergency Medicine*. In Press. **Coauthor or Collaborator**.
4. McMullen SM, Meade M, Rose L, **Burns KEA**, Mehta S, Doyle R, Henzler D. Partial Ventilatory Support Modalities in Acute Respiratory Failure: A Systematic Review. *PLoS One*. In Press. **Coauthor or Collaborator**.

**Abstracts:**

1. Kommaraju K, Kwong W, Marshall J, **Burns K**. A Systematic Review of Industry-led vs. Investigator-led Randomized Controlled Trials (RCTs). *Crit Care Med*. 2011;15 (Suppl 1):P536. **Coauthor or Collaborator**.
2. Côte N, Turgeon A, Lauzier F, Moore L, Simard JF, Scales D, **Burns KEA**, Meade M, Bernard F, Zygun D, Fergusson D. Factors Associated With Withdrawal of Life-Sustaining Therapy in Severe TBI Patients. *Crit Care Med*. 2011;15 (Suppl 1):P520. **Coauthor or Collaborator**.

**Non-Peer Reviewed Abstracts:**

1. Turgeon A, Lauzier F, **Burns K**, Bernard F, Zygun D, Meade MO, Fergusson D, Reddy K, Scales D, Rigamonti A, Savard M, et al. Enrollment in a Multicentre Prospective Randomized Pilot Study of Severe Traumatic Brain Injury. *Neurocritical Care*. 2011; 15 (Suppl 1):S62. **Coauthor or Collaborator**.

**Presentations/Lectures:**

1. 2011 May 16 **Invited Speaker**. Funding and Source of Publication Impact of Large Randomized Controlled Trials in Critical Care. American Thoracic Society Meeting. Denver, Colorado, United States.
2. 2011 Nov 24 **Invited Speaker**. Results of the Consent Study. Critical Care Rounds. The Hospital for Sick Children. Toronto, Ontario, Canada.
3. 2011 Nov 21 Evidence Based Mechanical Ventilation Discontinuation – A Review of Seminal Papers. *Critiical Care Journal Club*. Hamilton, Ontario, Canada.
4. 2011 Nov 17 Practice Pattern Variation in Weaning Critically Ill Adults from Invasive Mechanical Ventilation: An International Observational Study. Canadian Critical Care Trials Group - Research Coordinators Meeting. Toronto, Ontario, Canada.
5. 2011 Nov 16 Results of the Survey of the Canadian Critical Care Trials Group Grants and Manuscripts Process. Canadian Critical Care Trials Group Meeting. Toronto, Ontario, Canada.
6. 2011 Nov 16 Results of the Consent Study. Canadian Critical Care Trials Group - Research Coordinators Meeting. Toronto, Ontario, Canada.
7. 2011 Jun 14 Results of the WEAN Study. Canadian Critical Care Trials Group Meeting. St Alexis des Monts, Quebec, Canada.
8. 2011 Jan 27 The Canadian Pandemic Research Preparedness Proposal and an The Collaborative H1N1 Adjuvant Treatment (CHAT) Trial. Canadian Critical Care Trials Group Meeting. Lake Louise, Alberta, Canada.
9. 2011 Jan 25 The Approach Study. Canadian Critical Care Trials Group Meeting. Lake Louise, Alberta, Canada.

### **Research Funding:**

1. 2011 Sep - 2013 Aug **Co-Investigator.** Mechanical Ventilator Weaning: A Knowledge Synthesis To Guide Practice and Improve Outcomes. CIHR. Knowledge Synthesis. 92,219.00. PI: Rose, Louise. Collaborators: Blackwood B, **Burns K**, Clarke S, Dainty K, Fraser I, Jouvet P, McAuley D, Noyes J, Schultz M. 92,219 CAD. [Grants].
- 2011 Aug - 2013 Jul **Co-Investigator.** Mechanical ventilator weaning: a knowledge synthesis to guide practice and improve outcome. Canadian Institutes of Health Research (CIHR). Knowledge Synthesis Grant. PI: Rose, Louise. 92,219. [Grants].
- 2011 Jul - 2014 Jul **Principal Applicant.** Practice Pattern Variation in Liberating Critically Ill Adults from Invasive Mechanical Ventilation: An International Study. CIHR. Industry Partnered Operating Grant. PI: **Burns, Karen.** 90,000 CAD. [Grants].
- 2011 Jul - 2014 Jul **Principal Applicant.** Practice Pattern Variation in Liberating Critically Ill Adults from Invasive Mechanical Ventilation: An International Study. GE Healthcare. Industry Partnered Operating Grant. PI: **Burns, Karen.** 15,000 CAD. [Grants].
- 2011 Jul - 2014 Jul **Principal Applicant.** Practice Pattern Variation in Liberating Critically Ill Adults from Invasive Mechanical Ventilation: An International Study. Covidien Inc. Industry Partnered Operating Grant. PI: **Burns, Karen.** 50,000 CAD. [Grants].
- 2011 Jul - 2014 Jul **Principal Applicant.** Practice Pattern Variation in Liberating Critically Ill Adults from Invasive Mechanical Ventilation: An International Study. Fisher & Paykel Inc. Industry Partnered Operating Grant. PI: **Burns, Karen.** 25,000 CAD. [Grants].
- 2011 Jan - 2013 Jun **Co-Investigator.** Standard versus Accelerated initiation of Renal Replacement Therapy in Acute Kidney Injury. CIHR. Operating Grant. PI: Wald, Ron and Bagshaw, Shawn. Collaborators: **Karen Burns**, Neill K J Adhikari, Jan Friedrich, Robert Robertson, David Klein, Michelle Hladunewich. 151,058 CAD. [Grants]  
*A Multicentre Randomized Trial of Early vs Late Renal Replacement Therapy Initiation. A Timing Trial..*
- 2010 Jul - 2011 Jun **Co-Investigator.** The Efficacy, Cost Effectiveness and Ecological impact of Selective Decontamination of the Digestive Tract in Critically Ill Patients Treated in the Intensive Care Unit (the SuDDICU Study). CIHR. Operating Grant. PI: Cuthbertson, Brian. 198,322.5 CAD. [Grants].

***Peer Reviewed Publications:***

1. Beaulieu Y, Bowry R, **Chen R**, Chapter 6 : Goal-Oriented Transthoracic and Epicardial Echocardiography : Transesophageal Echocardiography, Multimedia Manual, A Perioperative Transdisciplinary Approach. (2<sup>nd</sup> Edition), Denault Y, Couture P, Vegas A, Buitieu J, Tardif JC (Eds.) Informa Healthcare 2011

***Presentations/Lectures:***

1. November 6, 2011. 9th Annual Toronto Perioperative Transesophageal Echocardiography Symposium. Toronto ON. Workshop: FOCUS TTE. Clinical Application and Basic views. (Lecturer and demonstrator).
2. June 28, 2011, Canadian Anesthesiologists' Annual Meeting. Toronto ON. Workshop Demonstrator: Transcranial Doppler: Hands-on.
3. June 27, 2011, Canadian Anesthesiologists' Annual Meeting. Toronto ON. Chair: Interesting TEE cases
4. June 26, 2011, Canadian Anesthesiologists' Annual Meeting. Toronto ON. Lecture: LV Function Assessment  
Workshop Demonstrator: FOCUS ultrasound  
Lecture and Workshop Demonstrator: Portable ultrasound, not just for blocks and lines.  
Chair: Perioperative Echo interest Group meeting
5. May 21, 2011, McGill Anesthesia Update. Montreal QC  
Lecture: The anaesthetists' role in trauma
6. May 7, 2011, Hemodynamics Symposium 2011, Scarborough General Hospital, Scarborough ON. (CME accreditation through McGill University, Montreal QC)  
Lecture: Diastology and Obesity  
Demonstrator: Hands-on bedside echo

**Peer Reviewed Publications:**

1. Bandayrel K, Lapinsky S, **Christian MD**. Information Technology systems for Critical Care Triage and Medical Response During an Influenza Pandemic: A Review of Current Systems. *Disaster Medicine and Public Health Preparedness*. 2011; E1-E5. **Senior Responsible Author**.
2. Burkle, Frederick M. Jr; Argent, Andrew C.; Kissoon, Niranjana; for the Task Force for Pediatric Emergency Mass Critical Care. The reality of pediatric emergency mass critical care in the developing world . *Pediatric Critical Care Medicine*. 12(6):S169-S179, November 2011. doi: 10.1097/PCC.0b013e318234a906. **Coauthor or Collaborator**.
3. Matheny Antommara, Armand H.; Powell, Tia; Miller, Jennifer E.; **Christian, Michael D.**; for the Task Force for Pediatric Emergency Mass Critical Care. Ethical issues in pediatric emergency mass critical care. *Pediatric Critical Care Medicine*. 12(6):S163-S168, November 2011. doi: 10.1097/PCC.0b013e318234a88b. **Senior Responsible Author**.
4. Mason, Katherine E.; Urbansky, Holly; Crocker, Liz; Connor, Maureen; Anderson, Michael R.; Kissoon, Niranjana; for the Task Force for Pediatric Emergency Mass Critical Care. Pediatric emergency mass critical care: Focus on family-centered care *Pediatric Critical Care Medicine*. 12(6):S157-S162, November 2011. doi: 10.1097/PCC.0b013e318234a812. **Coauthor or Collaborator**.
5. Courtney, Brooke; Hodge, James G. Jr; for the Task Force for Pediatric Emergency Mass Critical Care. Legal considerations during pediatric emergency mass critical care events. *Pediatric Critical Care Medicine*. 12(6):S152-S156, November 2011. doi: 10.1097/PCC.0b013e318234a7e1. **Coauthor or Collaborator**.
6. Burkle, Frederick M. Jr; Williams, Alcia; Kissoon, Niranjana; for the Task Force for Pediatric Emergency Mass Critical Care. Pediatric emergency mass critical care: The role of community preparedness in conserving critical care resources . *Pediatric Critical Care Medicine*. 12(6):S141-S151, November 2011. doi: 10.1097/PCC.0b013e318234a786. **Coauthor or Collaborator**.
7. Tegtmeier, Ken; Conway, Edward E. Jr; Upperman, Jeffrey S.; Kissoon, Niranjana; for the Task Force for Pediatric Emergency Mass Critical Care. Education in a pediatric emergency mass critical care setting . *Pediatric Critical Care Medicine*. 12(6):S135-S140, November 2011. doi: 10.1097/PCC.0b013e318234a764. **Coauthor or Collaborator**.
8. Barfield, Wanda D.; Krug, Steven E.; Kanter, Robert K.; Gausche-Hill, Marianne; Brantley, Mary D.; Chung, Sarita; Kissoon, Niranjana; for the Task Force for Pediatric Emergency Mass Critical Care. Neonatal and pediatric regionalized systems in pediatric emergency mass critical care . *Pediatric Critical Care Medicine*. 12(6):S128-S134, November 2011. doi: 10.1097/PCC.0b013e318234a723. **Coauthor or Collaborator**.
9. Bohn, Desmond; Kanter, Robert K.; Burns, Jeffrey; Barfield, Wanda D.; Kissoon, Niranjana; for the Task Force for Pediatric Emergency Mass Critical Care. Supplies and equipment for pediatric emergency mass critical care . *Pediatric Critical Care Medicine*. 12(6):S120-S127, November 2011. doi: 10.1097/PCC.0b013e318234a6b9. **Coauthor or Collaborator**.
10. **Christian, Michael D.**; Toltzis, Philip; Kanter, Robert K.; Burkle, Frederick M. Jr; Vernon, Donald D.; Kissoon, Niranjana; for the Task Force for Pediatric Emergency Mass Critical Care. Treatment and Triage Recommendations for Pediatric Emergency Mass Critical Care. *Pediatric Critical Care Medicine*. 12(6):S109-S119, November 2011. doi: 10.1097/PCC.0b013e318234a656. **Co-Principal Author**.
11. Bunce PE, High SM, Nadjafi N, Stanley K, Liles C, **Christian MD**. Pandemic H1N1 Influenza Infection and Vascular Thrombosis. *Clinical Infectious Diseases* 2011;52(2):e14–e17.



### ***In Press:***

1. M Kho, E McDonald, N Zytaruk, A Tkaczyk, R Fowler, **M Christian**, A Kumar, K Burns, J Marshall, D Cook. Costs of Clinical Research Preparation for the H1N1 Pandemic in Canada: A Single Center, Multi-Site Analysis. American Journal of Respiratory & Critical Care Medicine 2011. In Press. **Coauthor or Collaborator**.
2. Talbot M, Meunier B, Trottier V, **Christian M**, Hillier T, Berger CW, Taylor JES. 1 Canadian Field Hospital in Haiti: Surgical experience in earthquake relief. Canadian Journal of Surgery. In Press. **Coauthor or Collaborator**.
3. Murthy S, Henry B, **Christian MD**. Infectious Diseases Following Disasters. In Disaster Management. Kollek, D [Ed]. In Press. **Co-Principal Author**

### ***Abstracts:***

1. **Michael Christian**. Analysis of policy options for the implementation of ICU triage in a public health care system during a mass casualty event. ESICM 2011. **Principal Author**.
2. Carbell G, **Christian MC**. Critical Care Providers' Perceptions of Pandemic Preparedness Following the H1N1 Pandemic. Chest. 2011. **Senior Responsible Author**.
3. Carbell G, **Christian MC**. An Audit of AED Use in a Tertiary Care Teaching Hospital. Chest. 2011. **Senior Responsible Author**.
4. 2011 Jun **Presenter**. Time to Antibiotic Administration Among Inpatients with Severe Sepsis or Septic Shock. University of Toronto, Critical Care Medicine Residents Day. Toronto, Ontario, Canada. Presenter(s): Mok K, Burry L, Nelson S, McIntyre M, **Christian MD**.
5. 2011 Dec 1 **Presenter**. Mock Code Blue. Ontario Simulation Exposition 2011. Toronto, Ontario, Canada. Presenter(s): Sev Perelman.
6. 2011 Oct **Presenter**. Critical Care Provider's Perceptions of Pandemic Preparedness Following the H1N1 Pandemic. CHEST. Honolulu, Hawaii, United States. Presenter(s): **Christian MD**.
7. 2011 Oct **Presenter**. An Audit of AED Use in a Tertiary Care Teaching Hospital. CHEST. Honolulu, Hawaii, United States. Presenter(s): **Christian MD**.
8. 2011 Sep **Presenter**. Analysis of Policy Options For The Implementation of ICU Triage In A Public Health Care System During A Mass Casualty Event. European Society of Intensive Care Medicine. Berlin, Germany. Presenter(s): **Christian MD**.

### ***Presentations/Lectures:***

1. 2011 Jan 19 **Invited Speaker**. Interface of Ethics & Reality in Pandemic Planning and Surge Management. Society of Critical Care Medicine 40th Critical Care Congress. San Diego, California, United States. Presenter(s): **Christian MD**.
2. 2011 Jan 19 **Invited Speaker**. Military Critical Care Response on the Ground in Haiti. Society of Critical Care Medicine 40th Critical Care Congress. San Diego, California, United States. Presenter(s): **Christian MD**.
3. 2011 Jan 14 **Facilitator**. Hands-On Training Triage Exercise. Society of Critical Care Medicine 40th Critical Care Congress. San Diego, California, United States. Presenter(s): **Christian MD**.
4. 2011 Jan 14 **Invited Speaker**. Disaster Triage and Allocation of Scarce Critical Care Resources. Society of Critical Care Medicine 40th Critical Care Congress. San Diego, California, United States. Presenter(s): **Christian MD**.

5. 2011 Jan 14 **Invited Speaker**. Critical Care During Epidemics. Society of Critical Care Medicine 40th Critical Care Congress. San Diego, California, United States. Presenter(s): **Christian MD**.
6. 2011 Oct **Lecturer**. Tropical & Travel Medicine - Basic Medical Officer Course. Canadian Forces Health Services Training Centre. Canada.
7. 2011 Jun **Facilitator**. Hypothermia and Trauma Care (Simulation) Physician Assistant Course. Canadian Forces, National Defence. Canada. Presenter(s): **Christian, MD**.
8. 2011 Jun 17 **Invited Speaker**. Considerations for Surge Management in Critical Care. London Health Sciences Centre - Department of Critical Care. London, Ontario, Canada. Presenter(s): Dr. **Michael Christian**. Citywide Critical Care Grand Rounds.
9. 2011 Aug 29 **Facilitator**. Simulation Training. Intensive Care University (ICU). Toronto. Presenter(s): Dr. **Michael Christian**.

***Research Funding:***

1. 2011 Oct - 2012 Mar **Principal Investigator**. Planning Meeting for the PREEDICCT Study. Canadian Institute for Health Research. Planning Grants. MPI-117659. Collaborators: R Fowler, D Fisman, D Zygun, J Marshall. 23,842 CAD. [Grants].
2. 2008 Mar - 2011 Mar **Principal Investigator**. Prognostic Scoring for Patients with Severe Disease due to Influenza Catalyst Grant: Pandemic Preparedness (Mobilization of the Research Community for Outbreak Responses). Canadian Institute of Health Research. CIHR. 99,455 CAD. [Grants].

**Submitted:**

1. Drake M., **COX, PN**: **End of Life Decision Making in a Pediatric Patient with SMA Type 2: The Influence of the Media**, Neurology, 2012
2. Al Shallan H, Valini R, Benseler S, Weitzman SW, Tyrrell P, **Cox PN**, Friedman J, Schneider R, Abdelhaleem M, Manson D. **Thoracic, abdominal and pelvic CT & US imaging features in children with Hemophagocytic Lymphohistiocytosis**". Pediatric Radiology. 2011-01-31

**Presentations/Lectures:**

1. **Name:** IX Panamerican & Iberic Congress

City: Colombia

Date: November 2011

**Topics:** Quality of Care in a PICU, Communication at the interface

2. **Name:** 13<sup>th</sup> National Conference of Pediatric Critical Care

City: India

Date: November 2011

**Topics:** Hypoxia, Communication barriers & Ventilation

3. **Name:** PICU Conference

City: VIII National Congress of Paediatric Intensive Care, Puerto Varas, Chile

Date: October 2011

**Topics:** Disasters, are we prepared?  
Breaking barriers to communication  
Training and Education of Intensivists of the future

4. **Name:** **Biannual Controversies in Perioperative Medicine** (*Sponsored by North York General Hospital*)  
**(Invited Speaker)**

City: Alsace, France

Date: May 2011

**Topics:** Adaptation to abnormal environments  
Evolution and oxygen  
Silence kills  
Communication at Interfaces  
Protocols, the good the bad and the ugly

5. **Name:** **Annual Canadian Critical Care Conference** (*Organizing Committee // Invited Speaker*)

City: Whistler, BC

Date: February 23-25, 2011

**Topics:** Leadership strategies

**Peer Reviewed Publications:**

1. **Cuthbertson BH**, Campbell MK, Stott SA, Elders A, Hernandez R, Boyers D, et al. A pragmatic multi-centre randomised controlled trial of fluid loading in high-risk surgical patients undergoing major elective surgery - the FOCCUS study. *Crit Care*. 2011 Dec. 16;15(6):R296.
2. Reader TW, **Cuthbertson BH**. Teamwork and team training in the ICU: Where do the similarities with aviation end? *Crit Care*. 2011 Nov. 30;15(6):313.
3. Biccari BM, Lurati Buse GA, Burkhart C, **Cuthbertson BH**, Filipovic M, Gibson SC, et al. The influence of clinical risk factors on pre-operative B-type natriuretic peptide risk stratification of vascular surgical patients. *Anaesthesia*. 2011 Nov. 8;67(1):55–59.
4. Moreno R, Sprung CL, Annane D, Chevret S, Briegel J, Keh D, et al. Time course of organ failure in patients with septic shock treated with hydrocortisone: results of the Corticus study. *Intensive Care Med*. 2011 Nov.;37(11):1765–1772.
5. Sud S, **Cuthbertson BH**. Understanding health economic analysis in critical care: insights from recent randomized controlled trials. *Curr Opin Crit Care*. 2011 Oct.;17(5):504–509.
6. Sadique MZ, Grieve R, Harrison DA, **Cuthbertson BH**, Rowan KM. Is Drotrecogin alfa (activated) for adults with severe sepsis, cost-effective in routine clinical practice? *Crit Care*. 2011 Sep. 26;15(5):R228.
7. Rodseth RN, Buse GAL, Bolliger D, Burkhart CS, **Cuthbertson BH**, Gibson SC, et al. The Predictive Ability of Pre-Operative B-Type Natriuretic Peptide in Vascular Patients for Major Adverse Cardiac Events. *JAC*. 2011 Jul. 26;58(5):522–529.
8. Reader TW, Flin R, **Cuthbertson BH**. Team leadership in the intensive care unit: The perspective of specialists. *Crit. Care Med*. 2011 Jul.;39(7):1683–1691.
9. Reader TW, Flin R, Mearns K, **Cuthbertson BH**. Team situation awareness and the anticipation of patient progress during ICU rounds. *BMJ Quality & Safety*. 2011 Jun. 23;
10. Robotham J, **Cuthbertson BH**. Screening, isolation, and decolonisation strategies in the control of methicillin resistant *Staphylococcus aureus* in intensive care units: cost effectiveness evaluation. 2011;343:d5694.
11. Burns KEA, Chant C, Smith O, **Cuthbertson BH**, Fowler R, Cook DJ, et al. A Canadian Critical Care Trials Group project in collaboration with the international forum for acute care trialists - Collaborative H1N1 Adjuvant Treatment pilot trial (CHAT): study protocol and design of a randomized controlled trial. *Trials*. 2011;12:70.

- Campbell MK, Entwistle VA, **Cuthbertson BH**, Skea ZC, Sutherland AG, McDonald AM, et al. Developing a placebo-controlled trial in surgery: issues of design, acceptability and feasibility. *Trials*. 2011;12:50.

***In Press:***

- Reader TW, **Cuthbertson BH**. Teamwork in the ICU: Comparisons with the aviation industry. Accepted for publication *Critical Care*, June 2011.
- Reader T, Flin R, **Cuthbertson BH**. Factors affecting team communication in the intensive care unit. In Nemeth, C. *Improving healthcare team communication: lessons from aviation*. Ashgate, in press.

***Submitted:***

- Cuthbertson BH**, Campbell MK, Stott SA, Vale L, Norrie J, Kinsella J, Cook J, Brittenden J, Grant A for the FOCCUS Study Group. A pragmatic multi-centre randomised controlled trial of fluid loading and level of dependency in high-risk surgical patients undergoing major elective surgery. Under review at the journal *Critical Care*.

***Presentations/Lectures:***

- Cuthbertson BH**. Team leadership in Critical Care. McMaster Critical Care Rounds. Hamilton December 2011
- Cuthbertson BH**. Team leadership in Critical Care. Critical Care Canada Forum. Toronto November 2011

***Research Funding:***

- 2007 Jun - 2011 Jun **Co-Investigator**. OSCAR study- A multicentre trial of high frequency oscillation ventilation in ARDS. Scottish Funding Councils for Further and Higher Education. \$2,800,000
- 2010 Jan – 2012 Jan **Principal Investigator**. Selective Decontamination of the Digestive Tract in Intensive Care Medicine (SuDDICU) (Clinical Trials and evaluations). Health Technology Assessment. \$480,000
- 2012 Nov – 2012 May **Principal Investigator**. SuDDICU study of Selective Decontamination of the Digestive Tract. (HSR). Canadian Institutes of Health Research (CIHR). \$190,000
- 2011 Jan – 2012 Jun **Co-Investigator**. SuDDICU study of Selective Decontamination of the Digestive Tract. Australian and New Zealand Intensive Care Foundation. \$80,000
- 2011 Oct – 2012 Oct **Principal Investigator**. Suddicu Study of Selective Decontamination of the digestive tract in ICU. Australian and New Zealand Intensive Care Foundation. \$40,000

***In Press:***

1. **SP Dev**, A Stefan, S Lee. Videos in Clinical Medicine: Intraosseous Needle Insertion in the Adult. N Engl J Med. Submitted for publication. **Principal Author**.

***Multimedia:***

1. **SP Dev**, MD Hillmer and M Ferri. Videos in Clinical Medicine: Arterial Puncture for Blood Gas Analysis. N Engl J Med. 2011 Feb 3; 364(5): e7. **Principal Author**.

***Research Funding:***

1. 2008 Mar - present **Consultant**. Lung Injury Knowledge Network, Educational Website Development. National Heart, Lung, and Blood Institute (NHLBI) (USA). PI: Rubinfeld, Gordon D. 1,500,000 USD. [Grants]  
*My role: Production of 6 videos focusing on ventilation strategies for patients with ARDS, including scripting, storyboarding, filming, editing, voice and sound recording and editing, video design template..*
2. 2011 Mar - 2012 Mar **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. Collaborators: Chow, Chi-Ming and Bandiera, Glenn. 4,993 CAD. [Grants]  
*My role: Conceived study idea, developed study methods, developed analytical approach, wrote grant manuscript..*
3. 2010 Nov - 2011 Nov **Co-Investigator**. Multimedia Teaching Tools: A Video Series on Splinting Techniques. Sunnybrook Health Sciences Centre. ACMS Fund. 10,000 CAD. [Grants]  
*My role: Co-conceived study idea and co-wrote grant manuscript. Future role in project will include video production, scripting, storyboarding, filming, editing and sound recording..*

**Peer Reviewed Publications:**

1. D.R. Ricciuto, MD, **C.C. dos Santos**, MD, M. Hawkes, MD, L.J. Toltl, BSc, A.L. Conroy, BSc, N. Rajwans, MSc, E.I. Lafferty BSc, D.J. Cook, MD, A. Fox-Robichaud, MD, K. Kahn moui, MD, MSc, K.C. Kain, MD, P.C. Liaw, PhD, W. C. Liles, MD, PhD. Angiopoietin-1 and -2 are Clinically Informative Prognostic Biomarkers of Morbidity and Mortality in Severe Sepsis. Crit Care Med. 2011 Jan 14. Impact Factor 6.373. **Coauthor or Collaborator**.
2. **Dos Santos CC**, Shan Y, Akram A, Slutsky AS, Haitsma JJ. Neuroimmune Regulation of Ventilator-Induced Lung Injury. Am J Respir Crit Care Med. 2011 Feb 15;183(4):471-82. Impact Factor 10.689. **Senior Responsible Author**.

**In Press:**

1. **Claudia C. dos Santos**, The role of the Inflammasome in VILI. Invited Editorial for The American Journal of respiratory and Critical Care Medicine (*in press*). **Senior Responsible Author**
2. Lonneke Smeding, H. Leong Poi, P. Hu, J. J. Haitsma, J. W. Kuiper, J. Tsoporis, A. S. Slutsky, T. Parker, F. B. Plötz, **C. C. dos Santos**. Resveratrol prevents sepsis induced myocardial depression in mice. Critical Care Medicine. Submitted to Critical Care Medicine. In Press Crit Care Med. Impact Factor 6.373. **Senior Responsible Author**.

**Abstracts:**

1. Cameron JI, Chan L, Czerwonka A, Chu LM, Matte A, Ferguson ND, Mehta S, Friedrich J, Adhikari N, Fowler R, Cook D, Rudkowski J, Meggison H, Abbey SE, Batt JA, **dos Santos CC**, Flannery JF, Leung G, Marshall JC, Moody A, Rubenfeld G, Scales DC, Sinuff T, Slutsky AS, Tomlinson G, Herridge MS for the CCCTG. Long-Term Outcomes after Prolonged Mechanical Ventilation: Family Caregiver Outcomes from the Towards RECOVER Study. Am J Resp Crit Care Med. Am J Resp Crit Care Med 2011. Submitted. **Coauthor or Collaborator**.
2. Herridge MS, Chu LM, Matte AL, Chan L, Tomlinson G, Ferguson ND, Mehta S, Friedrich J, Adhikari N, Fowler R, Cook D, Rudkowski J, Meggison H, Abbey SE, Batt JA, **dos Santos CC**, Flannery JF, Leung G, Marshall JC, Moody A, Rubenfeld G, Scales DC, Sinuff T, Slutsky AS, Tomlinson G, Cameron JI for the CCCTG. Long-Term Patient Outcomes after Prolonged Mechanical Ventilation. The TOWARDS RECOVER Study. Am J Resp Crit Care Med 2011 (submitted). In Press. **Coauthor or Collaborator**.

**Presentations/Lectures:**

1. 2011 May **Invited Speaker:** "ARDS vs. TRALI: Pathogenesis" The Canadian Society For Transfusion Medicine Annual Conference 2011. Toronto, ON. . Presenter(s): **Claudia C dos Santos**
2. 2011 Jan **Invited Speaker.** "The role of DJ-1 in Polymicrobial Sepsis-induced Cardiomyopathy". Cardiology Rounds. St. Michael's Hospital.

**Research Funding:**

1. 2011 Jul - 2016 Jun **Principal Applicant.** Informed Discovery of Novel Molecular Targets for Therapy in Acute Lung Injury. Canadian Institutes of Health Research (CIHR). 300,000 CAD.

2. 2011 Jul - 2013 Jun **Principal Investigator.** Mechanisms of Protection and Informed target discovery for gene and stem cell therapy in Acute Lung Injury. Ministry of Research and Innovation. Early Research Award. 150,000 CAD. [Grants].
  
3. 2010 Oct - 2013 Apr **Principal Investigator.** Molecular Mechanisms of Lung Protection from Ventilator Induced Lung Injury (VILI). Canadian Institute of Health Sciences (CIHR). Grant in Aid. 384,897 CAD. [Grants].
  
4. 2010 Jul - 2011 Jun **Principal Investigator.** ATF3-dependent Molecular Pathways of Injury and Repair in Lung Injury. Ontario Thoracic Society/Canadian Lung Association. Grant-in-Aid. 50,000 CAD. [Grants].
  
5. 2010 Jan - 2011 Dec **Co-Principal Investigator.** Molecular Mechanisms Underlying ICU-Acquired Skeletal Muscle Dysfunction. Physician Services Incorporate. Grant in Aid. PI: Jane Batt, Margaret Herridge and Claudia dos Santo. 169,633 CAD. [Grants].
  
6. 2009 Sep - 2011 Aug **Principal Investigator.** Identification of cyclic-stretch sensitive transcription factors in pulmonary epithelial cells that play a role in ventilator induced lung injury (VILI). Physician Services Incorporate (PSI). Grant in Aid. 158,000 CAD. [Grants].
  
7. 2009 Jul - 2013 Jun **Co-Applicant.** The RECOVER Program: Phase I - Towards RECOVER - Long Term Outcomes and Needs Assessment in Survivors of Prolonged Mechanical Ventilation and their Caregivers. Canadian Institute of Health Research (CIHR). Operating Grant. PI: Margaret Herridge and Jill Cameron. 704,000 CAD. [Clinical Trials].
  
8. 2009 Jul - 2013 Jun **Co-Applicant.** The RECOVER Program: Phase I - Towards RECOVER - Long Term Outcomes and Needs Assessment in Survivors of Prolonged Mechanical Ventilation and their Caregivers. Canadian Institute of Health Research (CIHR). Operating Grant. PI: Margaret Herridge and Jill Cameron. 704,000 CAD. [Clinical Trials].
  
9. 2009 Jul - 2012 Jun **Principal Applicant.** Phase 1 Clinician Scientist Award -The role of PGC1a in Sepsis-Induced Myocardial Depression. Heart and Stroke Foundation. Phase I Clinician Scientist. 180,000 CAD. [Salary Support].
  
10. 2009 Jul - 2011 Jun **Co-Applicant.** The RECOVER Program: Phase I - Towards RECOVER - Long Term Critical Care Outcomes and Needs Assessment in Survivors of Prolonged Mechanical Ventilation and their Caregivers. Canadian Institute of Health research (CIHR). Alternate Funding Plan.
  
11. 2008 Dec - present Government of Ontario, Heart and Stroke Foundation of Ontario Graduate Scholarship in Science and Technology. Trainee Name: Andrew Ramadeen. Government of Ontario, Heart and Stroke Foundation of Ontario Graduate Scholarship in Science and Technology. 15,000. Ontario, Canada.



**Peer Reviewed Publications:**

1. **Downar J**, Luk T, Sibbald RW, Santini T, Mikhael J, Berman H and Hawryluck L. Why do patients agree to a "Do not resuscitate" or "Full code" order? Perspectives of medical inpatients. *J Gen Intern Med*. 2011 Jun;26(6):582-7. Epub 2011 Jan 11. **Principal Author**.

**In Press:**

1. Knickle K., McNaughton N., **Downar J**. Beyond Winning: Mediation, Conflict Resolution and Non-Rational Sources of Conflict in the ICU. *Critical Care*. In Press. **Senior Responsible Author**.
2. **Downar J.**, Chou Y., Ouellet D., La Delfa I., Blacker S., Bennett M., Petch C., Cheng SM. Survival Duration among Patients with a Non-Cancer Diagnosis admitted to a Palliative Care Unit: A Retrospective Study. *Journal of Palliative Medicine*. In Press. **Principal Author**.
3. **James Downar**, K. Knickle, J. T. Granton and L. Hawryluck. Using actors as standardized patients to teach communication skills and ethical/legal principles to critical care trainees. *Critical Care*. Awarded PSI Resident Research Award 2008. Contribution: Concept, design, data collection, analysis manuscript preparation and revision. In Press. **Principal Author**.

**Review Articles, Letters, and Editorials:**

1. **Downar J.**, Shultz V., Granton J. Recommendations from Canadian Critical Care Society to Canadian Parliamentary Committee on Palliative and Compassionate Care. Excerpts published in "Not to be Forgotten: Care of Vulnerable Canadians." Accessed on November 17th, 2011 at <http://pcpcc-cpspsc.com/report>. **Principal Author**.

**Presentations/Lectures:**

1. 2011 Nov Critical Care Response Teams play little role in end-of-life care despite abundant opportunity. Critical Care Canada Forum. Toronto, Ontario, Canada. Presenter(s): R. Barua, D. Rodin, A. Steel, **James Downar**. (Trainee Presentation. Continuing Education).
2. 2011 Nov The impact of critical care response teams on end-of-life care. Critical Care Canada Forum. Toronto, Ontario, Canada. Presenter(s): D. Rodin, R. Barua, B. Lejniaks, R. Gudimella, V. McCredie, A. Steel, **James Downar**. (Trainee Presentation).
3. 2011 Oct **Speaker**. How should we approach end of life in heart failure? [Workshop]. Canadian Cardiovascular Congress. Vancouver, British Columbia, Canada. Presenter(s): H. Ross, **James Downar**, S. Smith, J. Howlett.
4. 2011 Sep **Presenter**. Multi-site Examination of Patient Flow Within PCUs & Hospices for Cancer and Non-Malignant Patient Groups. Canadian Hospice and Palliative Care Association Annual Meeting. St. John's, Newfoundland and Labrador, Canada. Presenter(s): **James Downar**.
5. 2011 Jan 27 **Presenter**. A Survey of Physician and Nurse opinions about Nonbeneficial Treatment. Canadian Critical Care Trials Group Winter Meeting 2011. Lake Louise, Alberta, Canada. (Continuing Education).
6. 2011 Nov **Presenter**. Deliberate Practice: Simulated families help meet communications outcomes. Royal College of Physicians and Surgeons of Canada - Simulation Summit. Montreal, Quebec, Canada. Presenter(s): **James Downar** and Patti O'Brien. (Continuing Education).

7. 2011 May 18 **Invited Lecturer.** Why is DNR a bad word? The use of Critical Care in patients with cancer. Grand Medical Rounds, Kuwait Cancer Control Centre. Kuwait City. Kuwait. (Continuing Education).
8. 2011 May 17 **Invited Lecturer.** Critical Care Outreach Teams. Grand Medical Rounds, Kuwait Cancer Control Centre. Kuwait City. Kuwait. (Continuing Education).
9. 2011 Dec 3 **Speaker.** Medical, Legal and Ethical Considerations in Physician-Assisted Suicide. CTV News Channel. Toronto, Ontario, Canada. I gave an interview to answer questions about a legal case in British Columbia.
10. 2011 Oct 4 **Invited Lecturer.** Why is DNR a four-letter word? Grand Rounds, Institute for Clinical Evaluative Sciences. Toronto, Ontario, Canada. (Continuing Education).
11. 2011 Apr 18 **Invited Lecturer.** Palliative Care and the ICU. Evolutions in Critical Care 2011. Ontario Critical Care Nurses. Toronto, Ontario, Canada. (Continuing Education).
12. 2011 Apr 12 **Invited Lecturer.** Palliative Care in the Critical Care Setting. Ontario Hospice Palliative Care Conference 2011. Richmond Hill, Ontario, Canada. (Continuing Education).
13. 2011 Jan 21 **Invited Lecturer.** Why is DNR a four-letter word? Oncology Continuing Education Rounds, University of Toronto. Toronto, Ontario, Canada. Teleconferenced to all Cancer Care Ontario Sites. (Continuing Education).
14. 2011 Jun 15 **Presenter.** Design and implementation of a Palliative Care Ethics Curriculum. University of Toronto, Division of Palliative Care Annual Congress. Toronto, Ontario, Canada.
15. 2011 May 30 **Presenter.** Using standardized family members to teach communication skills and ethical principles to critical care trainees. University of Toronto, Department of Medicine, 3rd Annual Education Scholarship Event. Toronto, Ontario, Canada.
16. 2011 Dec 14 **Invited Lecturer.** Goals of Care Decisions in Critical Illness: A look at the evidence. Critical Care Grand Rounds, Sunnybrook Health Sciences Centre. Toronto, Ontario, Canada.
17. 2011 Oct 13 **Speaker.** Book Release: "Assisted Death" by Wayne Sumner. University of Toronto Centre for Ethics. Toronto, Ontario, Canada. Presenter(s): **J. Downar**, B. Dickens, D. Ainslie, W. Sumner. (Continuing Education).
18. 2011 Sep 27 **Visiting Professor.** The ethics of euthanasia and assisted suicide. McGill University, Otorhinolaryngology Residency Training Program, Ethics Educational Half-Day. Montreal, Quebec, Canada.
19. 2011 Sep 23 **Speaker.** Medical, Legal and Ethical Considerations in Providing Critical Care – A Case Presentation and Panel Discussion. Critical Care Grand Rounds, St. Michael's Hospital. Toronto, Ontario, Canada. Presenter(s): **J. Downar**, B. Cuthbertson, D. Klein, G. Sharpe. (Continuing Education).
20. 2011 Aug 25 **Presenter.** Interprofessional Collaboration and Palliative Care. Interprofessional Care Rounds, Toronto General Hospital. Toronto, Ontario, Canada. Presenter(s): **J. Downar**, S. Reynolds. (Continuing Education).
21. 2011 Jul 14 **Lecturer.** Why is DNR a four-letter word? ACCESS Team Rounds, Mount Sinai Hospital. Toronto, Ontario, Canada. (Continuing Education).

22. 2011 Jul 8 **Lecturer.** Why is DNR a four-letter word? Meet the Professor Rounds, Division of Critical Care, University Health Network/Mount Sinai Hospital. Toronto, Ontario, Canada.
23. 2011 Jun 24 **Invited Speaker.** Palliative Care - When to call? University Health Network, Lung Transplantation Annual Retreat. Cambridge, Ontario, Canada. (Continuing Education).
24. 2011 Jun 21 **Speaker.** Should physicians or family members ultimately decide whether to start or continue life-sustaining measures? A debate. University of Toronto, Division of Critical Care, Annual Residents' Day. Toronto, Ontario, Canada. Presenter(s): **J. Downar**, G. Rubinfeld.
25. 2011 Jun 3 **Presenter.** What can the Hospice and Palliative Care Community do to improve care in the inpatient setting? Toronto Central Palliative Care Network, State of the Union. Toronto, Ontario, Canada. (Continuing Education).
26. 2011 May 6 **Invited Lecturer.** Palliative Care in the Transplant Population: When do you stop living and start dying? Barrie Rose Educational Conference- Palliative Care for the Nonspecialist, University Health Network. Toronto, Ontario, Canada. (Continuing Education).
27. 2011 Mar 31 **Speaker.** Why do patients request "Full Code" and "DNR" orders? Acute Resuscitation Committee Symposium, University Health Network. Toronto, Ontario, Canada. (Continuing Education).
28. 2011 Jan 19 **Chair.** SME Roundtable on Heart Disease. Toronto Central Palliative Care Network. Toronto, Ontario, Canada. Presenter(s): **J. Downar**, S.M. Cheng. (Continuing Education).

**Peer Reviewed Publications:**

1. Ciesla N, Dinglas V, **Fan E**, Kho M, Kuramoto J, Needham D. Manual muscle testing: a method of measuring extremity muscle strength applied to critically ill patients. *Journal of Visualized Experiments*. 2011;doi:10.3791/2632.
2. Chen K, Colantuoni E, Siddiqi F, Dinglas VD, Sepulveda KA, **Fan E**, Pronovost P, Needham DM. Repeated attempts using different strategies are important for timely contact with study participants. *Journal of Clinical Epidemiology*. 2011;64:1144-1151.
3. Damluji A, Colantuoni E, Mendez-Tellez PA, Sevransky JE, **Fan E**, Shanholtz C, Wojnar M, Pronovost PJ, Needham DM. Short-term mortality prediction for acute lung injury patients: external validation of the ARDSNet prediction model. *Critical Care Medicine*. 2011;39:1023-1028.
4. Dasenbrook EC, Brower RG, Needham DM, **Fan E**. Higher positive end-expiratory pressure in patients with acute lung injury: a systematic review and meta-analysis. *Respiratory Care*. 2011;56:568-575.

**Non Peer Reviewed Publications:**

1. Koo KKY, Choong K, **Fan E**. Prioritizing rehabilitation strategies in the care of the critically ill. *Critical Care Rounds*. 2011; 8:1-7.

**Review Articles, Letters, and Editorials:**

1. Golan E, **Fan E**. Choosing brains over lungs: who wins? *Critical Care Medicine*. 2011;39:1595-1596.
2. **Fan E**. Hydrocortisone and treatment of multiple trauma. *Journal of the American Medical Association*. 2011;306:40-41.

**Presentations/Lectures:**

1. 2011 Nov 16 **Invited Speaker**. Wake Up, Get Up, and Get Out Early: ICU-Acquired Weakness and Early Mobility in the ICU. Canada Critical Care Forum. Toronto, Ontario, Canada.
2. 2011 Nov 15 **Invited Speaker**. Networks for Clinicians: A Clinical Laboratory. Canada Critical Care Forum. Toronto, Ontario, Canada.
3. 2011 Nov 14 **Invited Speaker**. ECLS for Respiratory Failure: Everything Old is New Again. Canada Critical Care Forum. Toronto, Ontario, Canada.
4. 2011 Oct 7 **Invited Speaker**. Beyond Mechanical Ventilation: Extracorporeal Gas Exchange for Acute Respiratory Failure. Judah Skolnick and Douglas David Pulmonary Symposium. University of Louisville. Louisville, Kentucky.
5. 2011 Sep **Rountable Participant**. ESICM Task Force on ARDS Definitions. European Society of Intensive Care Medicine (ESICM). Berlin, Germany. September 30-October 2, 2011.
6. 2011 Jun 10 **Invited Speaker**. Lung Protective Ventilation in ALI/ARDS – HFOV in ARDS – Update. 33rd Annual Meeting of the Japan Society of Respiratory Care Medicine. Yokohama, Japan.
7. 2011 Jun 10 **Invited Speaker**. The Role for HFOV in Severe ARDS. 33rd Annual Meeting of the Japan Society of Respiratory Care Medicine. Yokohama, Japan.

8. 2011 Jun 10 **Facilitator and Commentator.** HFOV in Adults – Roundtable and Forum. 33rd Annual Meeting of the Japan Society of Respiratory Care Medicine. Yokohama, Japan.
9. 2011 May 18 **Mini-Symposium Chair.** Epidemiology of ALI. American Thoracic Society International Meeting. Denver, Colorado.
10. 2011 May 16 **Scientific Symposium Organizer and Chair.** Extracorporeal Gas Exchange: Beyond Mechanical Ventilation for ALI. American Thoracic Society International Meeting. Denver, Colorado.
11. 2011 May 16 **Poster Discussion Chair/Facilitator.** Process of Care, Quality of Life, and Long-Term Follow Up. American Thoracic Society International Meeting. Denver, Colorado.
12. 2011 May 16 **Invited Speaker.** Introduction to Extracorporeal Gas Exchange for ALI/ARDS. American Thoracic Society International Meeting. Denver, Colorado.
13. 2011 May 14 **Invited Speaker.** What to Do When Conventional Mechanical Ventilation Fails? Refractory Hypoxemia in Severe ARDS. American Thoracic Society International Meeting. Denver, Colorado.
14. 2011 May 14 **Postgraduate Course Organizer and Chair.** Mechanical Ventilation: State of the Art. American Thoracic Society International Meeting. Denver, Colorado.
15. 2011 May 27 **Invited Speaker.** ABCDE Approach to Early Liberation from Mechanical Ventilation. University of British Columbia - Okanagan CME Meeting. Kelowna, British Columbia. (Continuing Education).
16. 2011 May 27 **Invited Speaker.** Ventilatory Management of ARDS. University of British Columbia - Okanagan CME Meeting. Kelowna, British Columbia. (Continuing Education).
17. 2011 Aug 23 **Invited Speaker.** Wake Up, Get Up, and Get Out Early: Physical Medicine and Rehabilitation in the ICU. William Osler Health Centre. Toronto, Ontario.
18. 2011 Jun 16 **Invited Speaker.** Wake Up, Get Up, and Get Out Early: Physical Medicine and Rehabilitation in the ICU. Ontario Respiratory Care Society Annual General Meeting. Toronto, Ontario.
19. 2011 Nov 1 **Invited Speaker.** Wake Up, Get Up, and Get Out Early: ICU-Acquired Weakness and Early Mobility in the ICU. Michener Institute. Toronto, Ontario, Canada. Respiratory Therapy Seminar Day.
20. 2011 Oct 26 **Invited Speaker.** Wake Up, Get Up, and Get Out Early: ICU-Acquired Weakness and Early Mobility in the ICU. 8th Annual Krembil Neurosciences Symposium. Toronto, Ontario, Canada.

***Research Funding:***

1. 2011 Sep - 2012 Aug **Co-Investigator.** A Prospective Evaluation of the Association Between Psychoactive Medications and Delirium In Critically Ill Adults. University of Toronto. Leslie Dan Faculty of Pharmacy. PI: Burry, Lisa. 25,000 CAD. [Grants].
2. 2011 Jul - 2014 Jun **Co-Investigator.** Understanding Long-Term Mechanical Ventilation in Canada: A Programmatic Approach. Canadian Institutes of Health Research (CIHR). Partnerships for Health Systems Improvement (PHSI). PI: Rose, L. 349,863 CAD. [Grants].

3. 2008 Jul - 2012 Jun **Co-Investigator.** Improving Long-Term Physical and Mental Health Outcomes After Acute Lung Injury. National Heart, Lung, and Blood Institute (NHLBI) (USA). R01 HL088045-01. PI: Pronovost PJ and Needham DM. 1,911,194 USD. [Grants].
4. 2007 Jul - 2012 Jun **Principal Investigator.** Corticosteroids and Long-Term Weakness After Acute Lung Injury. Canadian Institutes of Health Research (CIHR). Fellowship Award #MFE-81972. 300,000 CAD. [Grants]  
*Supervisor: Pronovost PJ, Johns Hopkins University.*

**Peer Reviewed Publications:**

1. Lombardi R, Nin N, Lorente JA, Frutos-Vivar F, **Ferguson ND**, Hurtado J, Apezteguia C, Desmery P, Raymondos K, Tomicic V, Cakar N, González M, Elizalde J, Nightingale P, Abroug F, Jibaja M, Arabi Y, Moreno R, Matamis D, Anzueto A, Esteban A; for the VENTILA Group. An Assessment of the Acute Kidney Injury Network Creatinine-Based Criteria in Patients Submitted to Mechanical Ventilation. Clinical Journal of the American Society of Nephrology. 2011; 6:1547-1555.  
Role: Co-principal author (acquisition of the data; data analysis and interpretation; drafting the manuscript; critical revisions to the manuscript for important intellectual content)
2. Peñuelas O, Frutos-Vivar F, Fernandez C, Anzueto A, Epstein SK, Apezteguía C, González M, Nin N, Raymondos K, Tomicic V, Desmery P, Arabi Y, Jibaja M, Matamis D, Pelosi P, **Ferguson ND**, Esteban A, for the Ventila Group. Characteristics and Outcomes of Ventilated Patients According to Time to Liberation from Mechanical Ventilation. American Journal of Respiratory & Critical Care Medicine 2011; 184:430-437.  
Role: Co-principal author (acquisition of the data; data analysis and interpretation; drafting the manuscript; critical revisions to the manuscript for important intellectual content)
3. Adhikari NK, Bashir A, Lamontagne F, Mehta S, **Ferguson ND**, Zhou Q, Hand L, Czarnecka K, Cook DJ, Granton JT, Friedrich JO, Freitag A, Watpool I, Meade MO. High frequency oscillation in adults: A utilization review. Critical Care Medicine 2011, 39:2631-2644.  
Role: Co-principal author (acquisition of the data; data analysis and interpretation; drafting the manuscript; critical revisions to the manuscript for important intellectual content)
4. Pelosi P, **Ferguson ND**, Frutos-Vivar F, Anzueto A, Putensen C, Raymondos K, Apezteguia C, Desmery P, Hurtado J, Abroug F, Elizalde J, Tomicic V, Cakar N, Gonzalez M, Arabi Y, Moreno R, Esteban A, for Ventila Study Group. Management and Outcome of Mechanically Ventilated Neurological Patients. Critical Care Medicine 2011, 39:1482-1492.  
Role: Principal author
5. Burry L, Rose L, McCullagh I, Ferguson ND, Ferguson D, Mehta S. Daily sedation interruption versus no daily sedation interruption for critically ill adult patients requiring invasive mechanical ventilation. Cochrane Database of Systematic Reviews 2011, Issue 6. Art. No.: CD009176. DOI: 10.1002/14651858.CD009176.  
Role: Co-author
6. Goligher EC, Leis J, Fowler RA, Pinto R, Adhikari NK, **Ferguson ND**. Systematic Review of the Utility and Safety of Draining Pleural Effusions in Mechanically Ventilated Patients. Critical Care 2011; 15:R46.  
Role: Senior responsible author; supervised EC Goligher, postgraduate trainee
7. Dainty KN, Scales DC, Brooks SC, Needham DM, Dorian P, **Ferguson ND**, Rubenfeld G, Wax R, Zwarenstein M, Thorpe K, Morrison LJ. A Knowledge Translation Collaborative to Improve the Use of Therapeutic Hypothermia in Post-Cardiac Arrest Patients: Study Protocol for a Stepped Wedge Cluster Randomized Trial. Implementation Science 2011, 6:4.  
Role: Co-author
8. Anzueto A, Frutos-Vivar F, Esteban A, Bensalami N, Marks D, Raymondos K, Apezteguía C, Arabi Y, Hurtado J, González M, Tomicic V, Abroug F, Elizalde J, Cakar N, Pelosi P, **Ferguson ND**. Influence of body mass index on outcome of the mechanically ventilated patients. Thorax 2011; 66:66-73.  
Role: Senior responsible author

9. Sud S, Sud M, Friedrich JO, Meade MO, **Ferguson ND**, Wunsch H, Adhikari NK. High frequency oscillation in acute lung injury and acute respiratory distress syndrome: systematic review and meta-analysis. BMJ 2010 340:c2327.  
Role: Co-author (data analysis and interpretation; critical revisions to the manuscript for important intellectual content)

**Review Articles, Letters, and Editorials:**

1. Ali S, **Ferguson ND**. High-Frequency Oscillatory Ventilation in ALI/ARDS. Critical Care Clinics 2011; 27:487-99.  
Narrative Review; Role: Senior responsible author

**Book Chapters:**

1. Galvin I, **Ferguson ND**. Acute Lung Injury in the ICU: Focus on Prevention. In: Vincent JL (Ed) 2011 Yearbook of Intensive Care and Emergency Medicine. Springer Verlag. Berlin, pp 167-173, 2011.  
Role: Senior responsible author; supervised I Galvin, postgraduate trainee
2. Mah CL, **Ferguson ND**, Stewart TE, Mehta S. High-Frequency Ventilation. In: Abraham E, Fink M, Kochanek P, Vincent JL (Eds) Textbook of Critical Care, 6th Edition. Elsevier, New York, pp 52-1 – 52-6, 2011.  
Role: Co-Principal author; supervised CL Mah, postgraduate trainee
3. Soliman O, **Ferguson ND**. High-Frequency Ventilation. In: Vincent JL, Hall J (Eds) The Encyclopedia of Intensive Care Medicine. Springer Verlag, Berlin, 2011, In Press.  
Role: Senior responsible author; supervised O Soliman, postgraduate trainee

**Non-Peer Reviewed Abstracts:**

1. Hand L, Adhikari N, Cook DJ, Mehta S, Matte AL, McArdle T, Clarke F, Lamontagne F, Meade MO, **Ferguson ND**. Initial Ventilatory Parameters For High Frequency Oscillation In A Pilot RCT Compared With Recent Historical Controls. American Journal of Respiratory & Critical Care Medicine 2011; 183:A1685.
2. Lamontagne F, **Ferguson ND**, Adhikari NK, Cook DJ, Hand L, Henzler D, Zhou Q, Meade MO. Corticosteroid Use In ARDS Patients Enrolled In The Oscillation For ARDS Treated Early (OSCILLATE) Trial. American Journal of Respiratory & Critical Care Medicine 2011; 183:A1169.
3. Goligher EC, **Ferguson ND**, Kenny LP. Mechanical Ventilation Learning Objectives For Residents in The ICU: Results Of An Expert Panel Consensus Process/ American Journal of Respiratory & Critical Care Medicine 2011; 183:A1687
4. Chu LM, Matte AL, Chan L, Tomlinson GA, **Ferguson ND**, Mehta S, Friedrich J, Adhikari NK, Fowler RA, Cook DJ, Rudkowski J, Meggison H, Abbey S, Batt J, Dos Santos C, Flannery J, Leung G, Marshall JC, Moody A, Rubenfeld GD, Scales DC, Sinuff T, Slutsky AS, Cameron JI, Herridge MS. Long-Term Outcomes After Prolonged Mechanical Ventilation: The Towards Recover Study. American Journal of Respiratory & Critical Care Medicine 2011; 183:A2380.
5. Cameron JI, Chan L, Czerwonka A, Chu LM, Matte AL, **Ferguson ND**, Mehta S, Friedrich J, Adhikari NK, Rudkowski J, Meggison H, Abbey S, Batt J, Dos Santos C, Flannery J, Leung G, Marshall JC, Moody A, Rubenfeld GD, Scales DC, Fowler RA, Sinuff T, Slutsky AS, Tomlinson GA, Herridge MS. Long-Term Outcomes After Prolonged Mechanical Ventilation: Family Caregiver Outcomes From The Towards Recover Study. American Journal of Respiratory & Critical Care Medicine 2011; 183:A3168.



6. Penuelas O, Frutos-Vivar F, Esteban A, **Ferguson ND**, Raymondos K, Bin D, Gonzalez M, Nin N, Hurtado J, Rios F, Amin P, Moreno R, Kuiper M, Maggiore S, Thille A, Arabi Y, Villagomez A, Abroug F, Anzueto A. Factors Associated To Failure And Outcome Of Non-Invasive Positive Pressure Ventilation. American Journal of Respiratory & Critical Care Medicine 2011; 183:A3741.
7. Penuelas O, Frutos-Vivar F, Nin N, Esteban A, **Ferguson ND**, Raymondos K, Cooper DJ, Bin D, Gonzalez M, Hurtado J, Amin P, Rios F, Antonio M, Maggiore S, Thille A, Soto L, Matamis D, Arabi Y, Moreno R, Cakar N, Zeggwagh AA, Anzueto A. Has The Mortality Of Mechanically Ventilated Patients Changed In Last Decade? Results Of Three Prospective International Studies. American Journal of Respiratory & Critical Care Medicine 2011; 183:A6231.

**Presentations/Lectures:**

1. 1. *Tracheostomy: When and In Whom?* IX Panamerican and Iberic Congress of Intensive and Critical Care Societies, Cartagena, Colombia, December 2, 2011.
2. *Updated High Frequency Oscillatory Ventilation Practice for 2011.* IX Panamerican and Iberic Congress of Intensive and Critical Care Societies, Cartagena, Colombia, December 1, 2011.
3. *PEEP Levels in ARDS – Review of the Evidence.* IX Panamerican and Iberic Congress of Intensive and Critical Care Societies, Cartagena, Colombia, December 1, 2011.
4. *Airway Pressure Release Ventilation: Friend or Foe?* IX Panamerican and Iberic Congress of Intensive and Critical Care Societies, Cartagena, Colombia, November 30, 2011.
5. *Extubation Failure vs. Extubation Delay in Brain-Injured Patients.* Critical Care Canada Forum 2011, Toronto, ON, November 16, 2011.
6. *PEEP Levels in ARDS.* Asian Intensive Care: Collaboration, The Chinese University of Hong Kong, Hong Kong, November 4, 2011.
7. *Quality-Adjusted Life Years as an Outcome in Critical Care.* Asian Intensive Care: Collaboration, The Chinese University of Hong Kong, Hong Kong, November 4, 2011.
8. *Non-Conventional Modes of Ventilation.* Asian Intensive Care: Collaboration, The Chinese University of Hong Kong, Hong Kong, November 4, 2011.
9. *Lung-Protective Ventilation.* Advances in Cardiovascular Disease, Clinical Medellín, Medellín, Colombia, October 28, 2011.
10. *Mechanical Ventilation for ALI/ARDS.* 2<sup>nd</sup> International Congress on Cardiorespiratory Critical Care, Universidad Manuela Beltrán, Bogotá, Colombia, October 19, 2011.
11. *Role of Tracheostomy in Mechanical Ventilation.* 2<sup>nd</sup> International Congress on Cardiorespiratory Critical Care, Universidad Manuela Beltrán, Bogotá, Colombia, October 19, 2011.
12. *Quality Adjusted Life Years as an ICU Outcome.* 2<sup>nd</sup> International Congress on Cardiorespiratory Critical Care, Universidad Manuela Beltrán, Bogotá, Colombia, October 19, 2011.
13. *Epidemiology of ARDS.* 2<sup>nd</sup> International Congress on Cardiorespiratory Critical Care, Universidad Manuela Beltrán, Bogotá, Colombia, October 19, 2011.
14. *Is Mortality from ARDS Changing?* ESICM Task Force on The ARDS Definition, European Society of Intensive Care Medicine Annual Congress, Berlin, Germany, October 1, 2011.

15. *Why Do We Need a New Definition for ARDS?* ESICM Task Force on The ARDS Definition, European Society of Intensive Care Medicine Annual Congress, Berlin, Germany, September 30, 2011.
16. *Weaning from Mechanical Ventilation – Update for 2011.* 14<sup>th</sup> International Forum on Mechanical Ventilation and Sepsis. Instituto Nacional de Ciencias Medicas y Nutricion Salvador Zubiran, Mexico City, Mexico, July 8, 2011.
17. *High-Frequency Oscillation – Principles and Management.* 14<sup>th</sup> International Forum on Mechanical Ventilation and Sepsis. Instituto Nacional de Ciencias Medicas y Nutricion Salvador Zubiran, Mexico City, Mexico, July 7, 2011.
18. *Non-Conventional Modes of Mechanical Ventilation.* 14<sup>th</sup> International Forum on Mechanical Ventilation and Sepsis. Instituto Nacional de Ciencias Medicas y Nutricion Salvador Zubiran, Mexico City, Mexico, July 7, 2011.
19. *Mechanical Ventilation – Year in Review.* 14<sup>th</sup> International Forum on Mechanical Ventilation and Sepsis. Instituto Nacional de Ciencias Medicas y Nutricion Salvador Zubiran, Mexico City, Mexico, July 7, 2011.
20. *Is There Still Room for HFO in 2011?* 1<sup>st</sup> Paris International Conference on Intensive Care – Mechanical Ventilation, Societé de Réanimation de Langue Francaise, Paris, France, June 9, 2011.
21. *Weaning from Mechanical Ventilation.* Canadian Critical Care Review – Canadian Critical Care Society RCPSC Critical Care National Exam Review Course, Mississauga, ON, June 3, 2011
22. *Respiratory Dysfunction.* Canadian Critical Care Review – Canadian Critical Care Society RCPSC Critical Care National Exam Review Course, Mississauga, ON, June 3, 2011.
23. *Year in Review: Mechanical Ventilation.* American Thoracic Society International Conference, Denver, CO, May 17 2011.
24. *Mechanical Ventilation: What Should We Do Next?* American Thoracic Society International Conference, Denver, CO, May 15 2011.
25. *Alphabet Soup – HFO/APRV/PAV/NAVA for ARDS.* Postgraduate Course – Mechanical Ventilation State of the Art, American Thoracic Society International Conference, Denver, CO, May 14 2011.
26. *The Epidemiology of Mechanical Ventilation – How is Practice Changing Over Time?* The Royal Oldham Hospital 8<sup>th</sup> Annual Critical Care Symposium, Manchester, UK, April 29, 2011.
27. *The Right PEEP (Small Group Tutorial).* The Royal Oldham Hospital 8<sup>th</sup> Annual Critical Care Symposium, Manchester, UK, April 28, 2011.
28. *Airway Pressure Release Ventilation: Friend or Foe?* The Royal Oldham Hospital 8<sup>th</sup> Annual Critical Care Symposium, Manchester, UK, April 28, 2011.
29. *Updated HFO Practice for 2011.* The Royal Oldham Hospital 8<sup>th</sup> Annual Critical Care Symposium, Manchester, UK, April 28, 2011.
30. *High Frequency Oscillation for ARDS Pro/Con Debate: Pro.* 2<sup>nd</sup> Annual Saudi Critical Care Society Congress, Riyadh, Saudi Arabia, April 26, 2011.

31. *Weaning from Mechanical Ventilation: Update for 2011.* 2<sup>nd</sup> Annual Saudi Critical Care Society Congress, Riyadh, Saudi Arabia, April 25, 2011.
32. *Prone Ventilation for ARDS Pro/Con Debate: Con.* 2<sup>nd</sup> Annual Saudi Critical Care Society Congress, Riyadh, Saudi Arabia, April 25, 2011.
33. *ARDS: Tidal Volume Has Decreased but Has Mortality?* 2<sup>nd</sup> Annual Saudi Critical Care Society Congress, Riyadh, Saudi Arabia, April 25, 2011.
34. *Non-Conventional Modes of Mechanical Ventilation: Tutorial.* 31<sup>st</sup> International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium, March 24, 2011.
35. *PEEP Levels in ARDS: Review of the Evidence.* 31<sup>st</sup> International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium, March 24, 2011.
36. *How Mechanical Ventilation is Used Today.* 31<sup>st</sup> International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium, March 23, 2011.
37. *High Frequency Ventilation – How to Monitor.* 31<sup>st</sup> International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium, March 23, 2011.
38. *Outcomes for ICU Trials – Quality Adjusted Life Years.* 31<sup>st</sup> International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium, March 23, 2011.
39. *Pro-Con Debate – High Frequency Ventilation.* 31<sup>st</sup> International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium, March 23, 2011.
40. *Mechanical Ventilation for Severe Asthma.* 31<sup>st</sup> International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium, March 22, 2011.
41. *High Frequency Oscillation: Update for 2011 and the OSCILLATE Trial.* International Conference on Comprehensive Mechanical Ventilation, Orlando Regional Medical Center, Orlando, FL, February 25, 2011.
42. *High Frequency Oscillation – Hands-On Laboratory Workshop.* International Conference on Comprehensive Mechanical Ventilation, Orlando Regional Medical Center, Orlando, FL, February 25, 2011.
43. *Airway Pressure Release Ventilation: Friend or Foe?* International Conference on Comprehensive Mechanical Ventilation, Orlando Regional Medical Center, Orlando, FL, February 25, 2011.
44. *High-Frequency Oscillation in the Adult World.* Critical Care Resident Research Day, Interdepartmental Division of Critical Care Medicine, University of Toronto, Toronto, ON, June 21, 2011.
45. *High-Frequency Oscillation – Update for 2011 & the OSCILLATE Trial.* Critical Care Rounds, Hopital Sacre Coeur, Montreal, QC, June 1, 2011.

46. *High-Frequency Oscillation – Update for 2011 & the OSCILLATE Trial.* Critical Care Grand Rounds, Université de Sherbrooke, Sherbrooke, QC, May 31, 2011.
47. *High-Frequency Oscillation – Update for 2011 & the OSCILLATE Trial.* Department of Critical Care Rounds, National Guard Hospital, King Abdul-Aziz Medical City, Riyadh, Saudi Arabia, April 26, 2011.
48. *Refractory Hypoxaemia: Advanced Ventilation & Beyond.* Michigan Thoracic Society Annual Meeting, Detroit, Michigan, April 15, 2011.
49. *Weaning, Extubation Failure, & Tracheostomy Timing.* Michigan Thoracic Society Annual Meeting, Detroit, Michigan, April 15, 2011.

**Research Funding:**

1. 1. Weaning and Variability Evaluation (WAVE) - a multicenter evaluation of altered heart rate and respiratory rate variability to predict extubation failure 2010-2012  
Principal Investigator: A Seely  
Co-investigators: **ND Ferguson**, D Fergusson, J Hooper, F Lellouche, JC Marshall, D Maziak, L MacIntyre, T Ramsay, GD Rubinfeld, P Wilkes, DC Scales, R Zarychanski  
Granting Agency: Canadian Institutes of Health Research  
Funds Granted: \$650,000
2. The efficacy, cost-effectiveness and ecological impact of Selective Decontamination of the Digestive tract in critically ill patients treated in the Intensive Care Unite (The SuDDICU Study) 2010-2012  
Principal Investigator: BH Cuthbertson  
Co-investigators: KE Burns, DJ Cook, P Dodek, **ND Ferguson**, J Francis, J Grimshaw, R Hall, B Johnson, S Kanji, JC Marshall, L MacIntyre, J Muscedere, G Pagliarello, L Rose, F Webster, C Weijer  
Granting Agency: Canadian Institutes of Health Research  
Funds Granted: \$240,390
3. SLEAP-Sleep, Cognition and Psychology (SLEAP-SCP): Psychological, cognitive, and sleep morbidity following the use of a sedation protocol vs. a sedation protocol and daily sedative interruption in critically ill, mechanically ventilated adults 2010-2011  
Principal Investigator: S Mehta  
Co-investigators: J Hunter, L Burry, C Ethier, **ND Ferguson**, R Maunder, L Rose, M Steinberg  
Granting Agency: Canadian Institutes of Health Research  
Funds Granted: \$35,000
4. SLEAP-PS: Psychological morbidity associated with two sedation strategies in the critically-ill 2010-2011  
Principal Investigator: S Mehta  
Co-Investigators: J Hunter, L Rose, R Maunder, **ND Ferguson**, C Ethier, M Steinberg, L Burry.  
Granting Agency: Canadian Intensive Care Foundation  
Funds Granted: \$25,000
5. The OSCILLation for ARDS Treated Early (OSCILLATE) Trial 2009-2014  
Principal Investigators: **ND Ferguson**, MO Meade  
Co-investigators: DJ Cook, S Mehta, TE Stewart, GH Guyatt, AS Slutsky, NK Adhikari, JO Friedrich, SP Keenan, M Jacka, O Lesur

M Lessard, J Ronco, D Dorscheid, S Gottfried, R Patel  
Granting Agency: Canadian Institutes of Health Research  
Funds Granted: \$3,791,391

6. Towards RECOVER: Long-term outcomes and Needs-Assessment 2009-2012  
In Survivors of Prolonged Mechanical Ventilation and their Caregivers  
Principal Investigators: MS Herridge, J Cameron  
Co-investigators: S Abbey, NK Adhikari, J Batt, DJ Cook, D Dos Santos,  
**ND Ferguson**, J Flannery, RA Fowler, J Friedrich, G Leung,  
JC Marshall, A Matte, H Meggison, A Moody, S Mehta, J Rudkowski,  
GR Rubenfeld, DC Scales, T Sinuff, AS Slutsky, C Tansey, T Tomlinson  
Granting Agency: Canadian Institutes of Health Research  
Funds Granted: \$754,357
7. Center for Resuscitation Science and Knowledge Translation 2008-2011  
Principal Investigator: LJ Morrison  
Co-investigators: P Dorian, Slutsky AS, R Wax, **ND Ferguson**, DC Scales  
A Laupacis, GD Rubenfeld, D Needham, M Zwarenstein, K Dainty  
Granting Agency: Laerdal Foundation  
Funds Granted: \$450,000

**Peer Reviewed Publications:**

1. Evans TW, Nava S, Mata GV, Guidet B, Estenssoro E, **Fowler R**, Scheunemann LP, White D, Manthous CA. Critical care rationing: international comparisons. *Chest*. 2011 Dec;140(6):1618-24.
2. Hill AD, **Fowler RA**, Nathens AB. Impact of Interhospital Transfer on Outcomes for Trauma Patients: A Systematic Review. *J Trauma*. 2011 Dec;71(6):1885-1901.
3. Harvey TC, **Fowler R**, Daneman N. Duration of antibiotic therapy for bacteremia: a systematic review and meta-analysis. *Crit Care*. 2011 Nov 15;15(6):R267.
4. Sud S, Mittmann N, Cook DJ, Geerts W, Chan B, Dodek P, Gould MK, Guyatt G, Arabi Y, **Fowler RA**; On Behalf of the E-PROTECT Investigators and the Canadian Critical Care Trials Group. Screening and Prevention of Venous Thromboembolism in Critically Ill Patients: A Decision Analysis and Economic Evaluation. *Am J Respir Crit Care Med*. 2011 Aug 25. [Epub ahead of print]
5. **Fowler RA**, Shafazand S. Anthrax Bioterrorism: Prevention, Diagnosis, and Management Strategies. *J Bioterrorism & Biodefense* 2011, 2:107.
6. Kuster SP, Katz K, Blair J, Davis I, Downey J, Drews S, Green K, Finkelstein S, **Fowler R**, Green K, Gubbay J, Hassan K, Lapinsky SE, Mazzulli T, McRitchie D, Pataki J, Plevneshi A, Powis J, Rose D, Sarabia A, Simone C, Simor A, McGeer A. When should a diagnosis of influenza be considered in adults requiring intensive care unit admission? Results from population-based active surveillance in Toronto. *Crit Care*. 2011 Jun 28; 15(4):R182.
7. Lombardi R, Nin N, Lorente JA, Frutos-Vivar F, Ferguson ND, Hurtado J, Aperzteguia C, Desmery P, Raymondos K, Tomicic V, Cakar N, Gonzalez M, Elizalde J, Nightingale P, Abroug F, Jibaja M, Arabi Y, Moreno R, Matamis D, Anzueto A, Esteban A; **VENTILA Group**. An assessment of the acute kidney injury network creatinine-based criteria in patients submitted to mechanical ventilation. *Clin J Am Soc Nephrol*. 2011 Jul;6(7):1547-55. Epub 2011 Jun 23.
8. Pelosi P, Ferguson ND, Frutos-Vivar F, Anzueto A, Putensen C, Raymondos K, Apezteguia C, Desmery P, Hurtado J, Abroug F, Elizalde J, Tomicic V, Cakar N, Gonzalez M, Arabi Y, Moreno R, Esteban A; **Ventila Study Group**. Management and outcome of mechanically ventilated neurologic patients. *Crit Care Med* 2011 Jun;39(6):1482-92.
9. Wunderink RG, Laterre PF, Francois B, Perrotin D, Artigas A, Vidal LO, Lobo SM, Juan JS, Hwang SC, Dugernier T, LaRosa S, Wittebole X, Dhainaut JF, Doig C, Mendelson MH, Zwingelstein C, Su S, Opal S; **CAPTIVATE Trial Group**. Recombinant tissue factor pathway inhibitor in severe community-acquired pneumonia: a randomized trial. *Am J Respir Crit Care Med*. 2011 Jun 1; 183(11):1561-8.
10. Etchells E, Adhikari NK, Wu R, Cheung M, Quan S, Mraz R, Wong B, Pinto R, Mehta R, MorrD, **Fowler R**, Sibbald W, Abrams H, Rossos PG. Real-time automated paging and decision support for critical laboratory abnormalities. *BMJ Qual Saf*. 2011 Jul 1 [Epub ahead of print].
11. Goligher EC, Leis JA, **Fowler RA**, Pinto R, Adhikari NK, Ferguson ND. Utility and Safety of Draining Pleural Effusions in Mechanically Ventilated Patients: as systematic review and meta-analysis. *Crit Care*. 2011 Feb 2;15(1):R46.
12. Burns KE, Chant C, Smith O, Cuthbertson B, **Fowler RA**, Cook DJ, Kruger P, Webb S, Alhashemi J, Dominquez-Cherit G, Zala C, Rubenfeld GD, Marshall J. A Canadian Critical Care Trials Group project in collaboration with the international forum for acute care trialists -

Collaborative H1N1 Adjuvant Treatment pilot trial (CHAT): study protocol and design of a randomized controlled trial. *Trials* 2011;12:70.

13. Henrich NJ, Dodek P, Heyland D, Cook DJ, Rocker G, Kutsogiannis D, Dale C, **Fowler R**, Ayas N. Qualitative analysis of an intensive care unit family satisfaction survey *Crit Care Med* 2011; 39 (Jan 28. Epub ahead of print).
14. Scales DC, Dainty K, Hales B, Pinto R, **Fowler RA**, Adhikari NKJ, Zwarenstein M. Effectiveness of multifaceted quality improvement interventions on adoption of evidence-based ICU Practices: A randomized trial. *JAMA* 2011;305(4):363-72.
15. Frost D, Cook DJ, Heyland DK, **Fowler RA**. Patient and health care professional factors influencing end-of-life decision-making during critical illness: a systematic review *Crit Care Med* 2011;39(5):1174-89.

**Non Peer Reviewed Publications:**

1. Kumar A, Christian M, Jouvett P, **Fowler RA**. Pandemic H1N1 Influenza. *Current Concepts in Critical Care* 2011:1-8.
2. **Fowler RA**. Guo R. The Intensivist – The new hospitalist? *Proceedings of the College of Intensive Care Medicine of Australia and New Zealand*. June 2011
3. **Fowler RA**, Thirugnanam S, Sud S. Any evidence for stopping the clot in critically ill patients? In, Pushing the Boundaries of Intensive Care. *Proceedings of the College of Intensive Care Medicine of Australia and New Zealand*. June 2011.

**Review Articles, Letters, and Editorials:**

1. Espay AJ, Vaughan JE, Marras C, **Fowler R**, Eckman MH. Reply: Early versus delayed bilateral subthalamic deep brain stimulation for Parkinson's disease: Need for long-term clinical trials. *Mov Disord*. 2011 Apr 13. doi: 10.1002/mds.23630

**Abstracts:**

1. Shehata N, Rothwell D, Li, L, Forster A, Wilson K, Mazer C.D, Naglie G, **Fowler R**, Tu J, Henry D, Hebert PC, Rubens F. Anemia: Does it Impact. Readmissions Following Coronary Artery Bypass Surgery. *Transfusion*. 2011;51 Suppl 183A.
2. Corrine Davies-Schinkel MSc, Anna Gagliardi PhD, Martin Chapman MB, Ruxandra Pinto PhD, Antonio Capone MD, Bryan Young MD, David Zygun MD, MSc, **Robert Fowler MD, MS**. Barriers to Implementing EEG monitoring Technology in Critical Care: a dichotomy between perceived need and clinical practice. Critical Care Canada Forum. November 11-14 2011. Toronto, Ontario Canada.
3. Corrine Davies-Schinkel MSc, Anna Gagliardi PhD, Bryan Young MD, Martin Chapman MB, Antonio Capone MD, Ruxandra Pinto PhD, David Zygun MD, MSc, **Robert Fowler MD, MS**. Barriers to Implementing EEG monitoring Technology in Critical Care: a scoping review of ICU available neuromonitoring technology. Critical Care Canada Forum. November 11-14 2011. Toronto, Ontario Canada.
4. Corrine Davies-Schinkel MSc, Anna Gagliardi PhD, Martin Chapman MD, Cecil Hahn MD, Antonio Capone MD, Bryan Young MD, Ruxandra Pinto PhD, David Zygun MD, **Robert Fowler MD, MSc**. Barriers to Implementing EEG monitoring in Critical Care: comparing adult and pediatric practice. Critical Care Canada Forum. November 11-14 2011. Toronto, Ontario Canada.

5. Cameron, Jill I.; Chan, Linda; Czerwonka, Anna I.; Chu, Leslie M.; Matte, Andrea; Ferguson, Niall D.; Mehta, Sangeeta; Friedrich, Jan; Adhikari, Neill; **Fowler, Robert**; Cook, Deborah; Rudkowski, Jill; Meggison, Hilary; Abbey, Susan; Batt. LONG-TERM OUTCOMES AFTER PROLONGED MECHANICAL VENTILATION: FAMILY CAREGIVER OUTCOMES FROM THE TOWARDS RECOVER STUDY. Critical Care Canada Forum. November 11-14 2011. Toronto, Ontario Canada.
6. Herridge, Margaret S.; Chu, Leslie M.; Matte, Andrea; Chan, Linda; Tomlinson, George; Ferguson, Niall D.; Mehta, Sangeeta; Friedrich, Jan; Adhikari, Neill; **Fowler, Robert**; Cook, Deborah; Rudkowski, Jill; Meggison, Hilary; Abbey, Susan; Batt. LONG-TERM PATIENT OUTCOMES AFTER PROLONGED MECHANICAL VENTILATION: THE TOWARDS RECOVER STUDY. Critical Care Canada Forum. November 11-14 2011. Toronto, Ontario Canada.
7. Steven Gu (**Fowler RA**). A comparison of the first and second waves of H1N1-Related Critical Illness in Canada. University of Toronto Critical Care Medicine Residents' Day Program. June 21, 2011.
8. Hill AD, **Fowler RA**, Pinto R, Nathens AB. Epidemiology of Major Trauma: A Canadian Perspective. Trauma Association of Canada (TAC). April 7 – 8, 2011 in Banff, AB
9. Tetyana B. Kendzerska, Natasha Nanwa, **Robert A. Fowler**, Colin Shapiro, George Tomlinson, COST-UTILITY ANALYSIS COMPARING CONTINUOUS POSITIVE AIRWAY PRESSURE, ORAL APPLIANCE, AND SURGERY WHEN TREATING MODERATE OBSTRUCTIVE SLEEP APNEA IN MIDDLE-AGED CANADIAN MALES. Society of Medical Decision-Making 2011.
10. ME Kho, E McDonald, N Zytaruk, A Tkaczyk, F Clarke, **R Fowler**, M Christian, A Kumar, KEA Burns, J Marshall, DJ Cook. Costs of Clinical Research Preparation for the H1N1 Influenza Pandemic in Canada: A Single Center, Multi-Site Analysis. Am J Resp Crit Care Med 2011;18124 :A104.
11. M.S. Herridge<sup>1,2</sup>, L.M. Chu<sup>1</sup>, A.L. Matte<sup>1</sup>, L. Chan<sup>1,2</sup>, G. Tomlinson<sup>2</sup>, N.D. Ferguson<sup>1,2</sup>, S. Mehta<sup>1,4</sup>, J. Friedrich<sup>1,5</sup>, N. Adhikari<sup>1,6</sup>, **R. Fowler**<sup>1,6</sup>, D. Cook<sup>7</sup>, J. Rudkowski<sup>6</sup>, H. Meggison<sup>8</sup>, S.E. Abbey<sup>1</sup>, J.A. Batt<sup>5</sup>, C.C dos Santos<sup>5</sup>, J.F. Flannery<sup>8</sup>, G. Leung<sup>6</sup>, J.C. Marshall<sup>5</sup>, A.R. Moody<sup>6</sup>, G. Rubenfeld<sup>6</sup>, D.C. Scales<sup>6</sup>, T. Sinuff<sup>6</sup>, A.S. Slutsky<sup>6</sup>, J.I. Cameron<sup>2</sup>. Long-Term Outcomes after Prolonged Mechanical Ventilation: Survivor and Family Caregiver Outcomes from the Towards RECOVER Study. Am J Resp Crit Care Med XXX;2011:AXXXX
12. M.S. Herridge<sup>1,2</sup>, L.M. Chu<sup>1</sup>, A.L. Matte<sup>1</sup>, L. Chan<sup>1,2</sup>, G. Tomlinson<sup>2</sup>, N.D. Ferguson<sup>1,2</sup>, S. Mehta<sup>1,3</sup>, J. Friedrich<sup>1,4</sup>, N. Adhikari<sup>1,5</sup>, **R. Fowler**<sup>1,5</sup>, D. Cook<sup>6</sup>, J. Rudkowski<sup>6</sup>, H. Meggison<sup>7</sup>, S.E. Abbey<sup>1</sup>, J.A. Batt<sup>4</sup>, C.C dos Santos<sup>4</sup>, J.F. Flannery<sup>8</sup>, G. Leung<sup>5</sup>, J.C. Marshall<sup>4</sup>, A.R. Moody<sup>5</sup>, G. Rubenfeld<sup>5</sup>, D.C. Scales<sup>5</sup>, T. Sinuff<sup>5</sup>, A.S. Slutsky<sup>5</sup>, J.I. Cameron<sup>2</sup>. LONG-TERM PATIENT OUTCOMES AFTER PROLONGED MECHANICAL VENTILATION: THE **TOWARDS RECOVER** STUDY. Am J Resp Crit Care Med XXX;2011:AXXXX
13. Delaney J, **Fowler R**, Long J, Lamontagne F, Marshall J, Kumar A, Hutchison J, Jovet J, On behalf of the ICU-Flu Investigators. Corticosteroids in the treatment of Influenza A 2009 (H1N1) - associated critical illness. Am J Resp Crit Care Med 2011; 17678:B49.
14. Gu S, Long J, Menon K, Cook D, McGeer A, Kumar A, Jovet P, Marshall J, Hutchison J, **Fowler RA** On behalf of the ICU-Flu Investigators. A Comparison of the First and Second Waves of H1N1-Related Critical Illness in Canada. Am J Resp Crit Care Med 2011;17711:B49.
15. Jung J, **Fowler R**, Long J, Zarychanski R, Rodin R, Cook D, Jovet P, Marshall J, Kumar A, On behalf of the ICU-Flu Investigators. 2009-2010 H1N1-RELATED CRITICAL ILLNESS AMONG ABORIGINAL AND NON-ABORIGINAL CANADIANS. Am J Resp Crit Care Med



2011;16731:B49.

16. J Muscedere, J Long, M Ofner, A Kumar, A McGeer, J Marshall, P Jouviet, D Cook, **R Fowler** for the ICU-Flu Study Investigators. PREVALENT AND INCIDENT BACTERIAL INFECTIONS AMONG CANADIAN CRITICALLY ILL PATIENTS WITH INFLUENZA A (H1N1) 2009. Am J Resp Crit Care Med XXX;2011:AXXXX

***Presentations/Lectures:***

1. **RA Fowler.** Update in Critical Care. Division of General Internal Medicine 2011 Faculty Day. Toronto. November 3, 2011.
2. Delaney J, (**RA Fowler** Supervisor) - On behalf of the ICU-Flu Investigators. Corticosteroids in the treatment of Influenza A 2009 (H1N1) - associated critical illness. University of Toronto Critical Care Medicine Residents' Day June 21, 2011.
3. **Fowler, R.** Going Against Family Wishes - A Physician's Experience. Critical Care Canada Forum November 16, 2011.
4. **Fowler RA.** RN-MD Communication in the ICU. Canada Critical Care Forum. Toronto, Ontario, Canada. November 14, 2011.
5. **RA Fowler.** Now That You've Found your Voice – Use it Effectively. Plenary Presentation. Canadian Association of Critical Care Nurses Dynamics 2011 National Conference. London, ON, October 17, 2011.
6. **RA Fowler.** Caring for Patients During Catastrophies. Sainte-Justine Hospital Pediatric Grand Rounds. October 5, 2011.
7. **RA Fowler.** End-of-Life Care in Canada. Canadian Hospice Palliative Care Association. Ottawa, Canada, April 12, 2011.
8. **RA Fowler.** The Commonwealth Fund Harkness Committee. End-of-Life Care in Canada and the US – a binational comparison. The Commonwealth Fund, April 21, 2011.
9. **RA Fowler.** Canadian Respiratory Conferenc. Epidemics and Critical Illness. What have we learned about ventilatory support. Niagara Falls, Canada, April 30, 2011.
10. **RA Fowler.** Critical Care Capacity in Canada. Donation Physicians in a Coordinated OTDT System consultation. Whistler, British Columbia, Canada, February 22, 2011.
11. **RA Fowler.** Influenza- and H1N1-related critical illness – Demand and Capacity in the Health Care System: The Canadian ICU-FLU study. Canadian Critical Care Trials Group. Lake Louise, Alberta, Canada. January 26 2011.
12. **Fowler RA.** The Intensivist – The new hospitalist? College of Intensive Care Medicine of Australia and New Zealand Annual Scientific Meeting. Canberra, Australia. June 3 2011
13. **Fowler RA,** Thirugnanam S, Sud S. Any evidence for stopping the clot in critically ill patients? In, Pushing the Boundaries of Intensive Care. College of Intensive Care Medicine of Australia and New Zealand Annual Scientific Meeting. Canberra, Australia. June 5 2011
14. **Fowler RA.** The Dilemma of the Intensive Care Doctor. College of Intensive Care Medicine of Australia and New Zealand Annual Scientific Meeting. Canberra, Australia. June 6 2011
15. **Fowler RA.** Association between health insurance status and access, care delivery and outcomes

for patients who are critically ill. American Thoracic Society International Conference 2011, Denver, USA. May 18 2011.

16. **Fowler RA.** Critical Care – Access to Care Around the World. The Saudi Critical Care Society 2<sup>nd</sup> International Critical Care Conference. Riyadh, Saudi Arabia. April 25, 2011.
17. **Fowler RA.** RN-MD Communications. The Saudi Critical Care Society 2<sup>nd</sup> International Critical Care Conference. Riyadh, Saudi Arabia. April 26, 2011.
18. **Fowler RA.** Influenza and Critical Illness. The Saudi Critical Care Society 2<sup>nd</sup> International Critical Care Conference. Riyadh, Saudi Arabia. April 26, 2011.

#### **Research Funding:**

1. **\$100,000** (2012-2014). DECISION-making about goals of care for hospitalized medical patients: a multicentre, mixed-methods study. The DECIDE Study. I am a co-investigator with: Daren Heyland, John You, Martin Albert, Kevin Brazil, Andrew Day, James Downar, Roy Ilan, Dev Jayaraman, Jennifer Kryworuchko, Francois Lamontagne, Irene Ma, Anita Palepu, John Shik, Patricia Strachan.
2. **\$99,208** (2011-2013). A National Comparison of Intensity of End-of-Life Care in Canada: Defining Changing Patterns, Risk Factors and Targets for Intervention. CIHR Primary investigator.
3. **\$768,000.** (2011-2013). Council of Academic Hospitals of Ontario (CAHO) Implementation of Antimicrobial Stewardship Programs (ASP) in Intensive Care Units in Ontario Academic Hospitals. PI is Andrew Morris. I am a co-investigator with: Chaim Bell, Lisa Burry, Nick Daneman, Linda Dresser, Marion Elligsen, Margaret Herridge, Sangeeta Mehta, Matthew Muller.
4. **\$23,842** (2011-2012) Planning meeting for the PREEDICCT study. CIHR. PI: Dr. Michael Christian. Co-Is: D. Fisman, R. Fowler, J. Marshall, D. Zygun.
5. **\$63,899** (2010-2011) Canadian Institutes of Health Research (CIHR). EPITEC - Epidemiology of ThromboEmbolism in Critical care; PI Cook DJ. I am a co-investigator with: Dr. M. CROWTHER Dr. P. DEVEREAUX Dr. P. DODEK Dr. R. FOWLER Dr. R. HALL Dr. M. HERRIDGE Dr. M. JACKA Docteur F. LAUZIER Dr. J. MARSHALL Dr. M. MEADE Dr. S. MEHTA Dr. J. MUSCEDERE Dr. A. TURGEON
6. **\$99,972** (2010-11). Canadian Institutes of Health Research (CIHR). Impact of H1N1 pandemic on critical care services for children. PI: Jovet, P. I am a co-investigator with: Kisson N, Hutchison H, Menon JK, Fowler RA.
7. **\$200,000** Collaborative H1N1 Adjuvant Treatment (CHAT) Pilot Trial (2010-02-01 to: 2011-01-31) PI: BURNS, Karen Elizabeth Ann; I am a co-investigator with: MARSHALL, John Christopher, ADHIKARI, Neill Kumar John; CHANT, Clarence; CUTHBERTSON, Brian H ; FOWLER, Robert Allston ; RUBENFELD, Gordon ; SMITH, Orla Marie
8. **\$400,000** (2009-2011). Public Health Agency of Canada. Influenza-and H1N1-Related Critical Illness - Demand and Capacity in the Health Care System: the Canadian ICU-Flu Study. I am the primary investigator with Dr. Philippe Jovet Co-investigators: Dr. Anand Kumar, Dr. Allison McGeer, Dr. Jamie Hutchison, Dr. Kusum Menon, Dr. Deborah Cook, Dr. John Marshall.
9. **\$599,673** (2009-2011). Canadian Institutes of Health Research (CIHR). Influenza-and H1N1-Related Critical Illness - Demand and Capacity in the Health Care System: the Canadian ICU-Flu Study. I am the primary investigator with Dr. Philippe Jovet Co-investigators: Dr. Anand Kumar, Dr. Allison McGeer, Dr. Jamie Hutchison, Dr. Kusum Menon, Dr. Deborah Cook, Dr. John Marshall.

10. **\$385,628** (2009-2011). Pregnant women: who is at risk and is the H1N1 flu vaccine safe for the baby? Canadian Institutes of Health Research (CIHR). I am a Co-investigator with: Dr. Victoria Allen, Dr. Sarah Manos, Dr. Shelly McNeill, Dr. Guy Boivin, Dr. Emmanuel Bujold, Dr. Katy Gouin, Dr. Catherine McCourt, Dr. Louise Pelletier, Dr. Rache Rodin, Dr. Anne-Marie Ugnat, Dr. Brenda Coleman, Dr. Allison McGeer, Dr. Kellie Murphy, Dr. Matthew Sermer, Dr. Jennie Johnstone, Dr. Mark Loeb, Dr. Steven Drews, Dr. Dr. Marie Louie, Dr. Thomas Louie, Dr. Reg Sauve, Dr. Leonora Henderson, Dr. Mark Joffe, Dr. Bonita Lee, Dr. Michelle Levy, Dr. Geoffrey Taylor, Dr. George Zahariadis, Dr. Deborah Money
11. **\$29,222** (2008-2010) Network of Excellence in Simulation for Clinical Teaching and Learning (NESCTL) "Level of Clinical Supervision: Is Near Guidance Superior to Indirect Guidance for Hospital Trainees (The LOSING SIGHT Study)". Principal Investigator - Dominique Piquette. I am a co-investigator with: Vicki LeBlanc, Jordan Tarshis, Glenn Regehr, Craig Dale
12. **\$230,563** (2008-2011) Heart and Stroke Foundation of Canada .E-PROTECT. The Economic Evaluation of the PROTECT trial. I am the primary investigator. Co-investigators: Nicole Mittmann, Deborah Cook, William Geerts, Gordon Guyatt, Peter Dodek, Michael Gould.
13. **Personal – Heart and Stroke Foundation of Ontario/Canada – Funded Clinician-Scientist**. Phase II, 2010-2013 (\$55,000 per year plus research stipend)
14. **Mentee** – Corrine Davies-Schinkel. The Queen Elizabeth II/Dr. Arnie Aberman Graduate Scholarships in Science and Technology University of Toronto School of Graduate Studies 2011/2012 (\$15000). I am the primary supervisor for this award.

**Peer Reviewed Publications:**

1. Adhikari NK, Bashir A, Lamontagne F, Mehta S, Ferguson ND, Zhou Q, Hand L, Czarnecka K, Cook DJ, Granton JT, **Friedrich JO**, Freitag A, Watpool I, Meade MO. High-frequency oscillation in adults: a utilization review. *Crit Care Med* 2011 Dec; **39**(12):2631-44.
2. Bagshaw SM, Wald R, Barton J, Burns KEA, **Friedrich JO**, House AA, James MT, Levin A, Moist L, Pannu N, Stollery DE, Walsh MW. Clinical factors associated with initiation of renal replacement therapy in critically ill patients with acute kidney injury—A prospective multicenter observational study. *J Crit Care* 2011; epub ahead of print.
3. **Friedrich JO**, Adhikari NKJ, Beyene J. Ratio of means for analyzing continuous outcomes in meta-analysis performed as well as mean difference methods. *J Clin Epidem* 2011 May; **64**: 556-64.
4. Chant C, Smith OM, Marshall JC, **Friedrich JO**. Relationship of catheter-associated urinary tract infection to mortality and length of stay in critically ill patients: A systematic review and meta-analysis of observational studies. *Crit Care Med* 2011 May; **39**(5):1167-73.

**Abstracts:**

1. Sud S, **Friedrich J**, Sud M, Adhikari N. Meta-analysis, meta-regression, and patient- and trial- level data subgroup analysis: an example of ecological bias in a meta-analysis of prone ventilation in patients with severe hypoxemic respiratory failure due to ALI/ARDS. *Am J Respir Crit Care Med* 2011 May; **183** (abstract issue): A3738.
2. Herridge MS, Chu LM, Matte AL, Chan L, Tomlinson GA, Ferguson ND, Mehta S, **Friedrich J**, Adhikari N, Fowler R, Cook DJ, Rudkowski J, Meggison H, Abbey S, Batt J, dos Santos C, Flannery J, Leung G, Marshall J, Moody A, Rubinfeld G, Scales DC, Sinuff T, Slutsky AS, Cameron JI. Long-term patient outcomes after prolonged mechanical ventilation: the Towards RECOVER study. *Am J Respir Crit Care Med* 2011 May; **183** (abstract issue): A2380.
3. Cameron JI, Chan L, Czerwonka A, Chu LM, Matte AL, Ferguson ND, Mehta S, **Friedrich J**, Adhikari N, Rudkowski J, Meggison H, Abbey S, Batt J, dos Santos C, Flannery J, Leung G, Marshall J, Moody A, Rubinfeld G, Scales DC, Fowler R, Sinuff T, Slutsky AS, Tomlinson GA, Herridge MS. Long-term outcomes after prolonged mechanical ventilation: family caregiver outcomes from the Towards RECOVER Study. *Am J Respir Crit Care Med* 2011 May; **183** (abstract issue): A3168.

**Peer Reviewed Publications:**

1. Hoeper MM, **Granton J**. ICU management of patients with severe pulmonary hypertension and right heart failure. *Am J Resp Crit Care Med*. 184(10):1114-24. **Co-Principal Author**.
2. de Perrot M, **Granton JT**, McRae K, Cypel M, Pierre A, Waddell TK, Yasufuku K, Hutcheon M, Chaparro C, Singer L, Keshavjee S. Impact of extracorporeal life support on outcome in patients with idiopathic pulmonary arterial hypertension awaiting lung transplantation. *J Heart Lung Transplant*. **Coauthor or Collaborator**.
3. Mehta S, **Granton J**, Lapinsky SE, Newton G, Bandayrel K, Little A, Siau C, Cook DJ, Ayers D, Singer J, Lee TC, Walley KR, Storms M, Cooper J, Holmes CL, Hebert P, Gordon AC, Presneill J, Russell JA. Agreement in electrocardiogram interpretation in patients with septic shock. *Chest*. Sep;39(9):2080-6. **Co-Principal Author**.
4. Tobler D, Yalonetsky S, Crean AM, **Granton JT**, Burchill L, Silversides CK, Wald RM. Right heart characteristics and exercise parameters in adults with Ebstein anomaly: New perspectives from cardiac magnetic resonance imaging studies. *Int J Cardiol*. Aug 26. [Epub ahead of print]. **Coauthor or Collaborator**.
5. de Perrot M, McRae K, Shargall Y, Pletsch L, Tan K, Slinger P, Ma M, Paul N, Moric J, Thenganatt J, Mak S, **Granton JT**. Pulmonary endarterectomy for chronic thromboembolic pulmonary hypertension: The Toronto experience. *Can J Cardiol*. 27:692-697. **Coauthor or Collaborator**.
6. Adhikari NK, Bashir A, Lamontagne F, Mehta S, Ferguson ND, Zhou Q, Hand L, Czarnecka K, Cook DJ, **Granton JT**, Friedrich JO, Freitag A, Watpool I, Meade MO. High-frequency oscillation in adults: A utilization review. *Crit Care Med*. Jul 14. [Epub ahead of print]. **Coauthor or Collaborator**.
7. McRae K, Shargall Y, Ma M, Thenganatt J, Slinger P, **Granton JT**, de Perrot M. Feasibility of blood conservation strategies in pulmonary endarterectomy for chronic thromboembolic pulmonary hypertension. *Interact Cardiovasc Thorac Surg*. Jul;13(1):35-8. Epub 2011 Mar 21. **Coauthor or Collaborator**.
8. de Perrot M, McRae K, Shargall Y, Thenganatt J, Moric J, Mak S, **Granton JT**. Early post-operative vascular compliance predicts outcome after pulmonary endarterectomy for chronic thromboembolic pulmonary hypertension. *Chest*. **Co-Principal Author**.
9. Ethier C, Burry L, Martinez-Motta C, Tirgari S, Jiang D, McDonald E, **Granton J**, Cook D, Mehta S; Canadian Critical Care Trials Group. Recall of intensive care unit stay in patients managed with a sedation protocol or a sedation protocol with daily sedative interruption: a pilot study. *J Crit Care*. **Coauthor or Collaborator**.
10. Greutmann M, Le TL, Tobler D, Biaggi P, Oechslin EN, Silversides CK, **Granton JT**. Generalised muscle weakness in young adults with congenital heart disease. *Heart*. Jul;97(14):1164-8. (Trainee publication, Dr. Greutmann was a fellow in the congenital cardiac program). **Senior Responsible Author**.

**Non-peer Reviewed Book Chapters:**

1. Cara Reimer and **John Granton**. Pharmacology of the Pulmonary Circulation. In *Principles and Practice of Anesthesia for Thoracic Surgery*. Ed Peter Slinger, Randal Blank, Javier Campos, Edmond Cohen and Karen McRae. Springer. New York, Heidelberg, London. 2011. pp 133-42. **Senior Responsible Author**.

**Presentations/Lectures:**

- 2011 Jun 3 **Invited Lecturer.** Acute Cardiac Care. 10th Summer Conference in Intensive Care Medicine. Society of Critical Care Medicine (USA). Alberta, Canada. Mysteries of the Right Heart  
Pulmonary Hypertension. (Continuing Education).
- 2011 Jun 3 **Invited Lecturer.** Acute Cardiac Care. 10th Summer Conference in Intensive Care Medicine. Society of Critical Care Medicine (USA). Alberta, Canada. Mysteries of the Right Heart  
Management of Right Heart Failure. (Continuing Education).
- 2011 Mar 26 **Invited Lecturer.** Treatment of pulmonary hypertension in the ICU. 10th international pulmonary hypertension forum. Munich, Germany. (Continuing Education).
- 2011 Mar 26 **Chair.** Pulmonary hypertension in other conditions. 10 international pulmonary hypertension forum. Munich, Germany. Presenter(s): Dr. Wells, Dr. Adir and Dr. Pepke-Zada. (Continuing Education).
- 2011 Nov 16 **Chair.** AC Bryan Symposium - Understanding Physiology. Canadian Critical Care Forum. Ontario, Canada. Chaired session with Sheldon Magder. (Continuing Education).
- 2011 Nov 16 **Invited Lecturer.** Understanding PVR. Canadian Critical Care Forum. Toronto, Ontario, Canada. Presenter(s): Presented on the concept of pulmonary vascular resistance, limitations of current measurement and alternative approaches to understanding right ventricular afterload. (Continuing Education).
- 2011 Nov 14 **Chair.** Sedation - The basics: Mechanisms, Methods and Current Approaches. Canadian Critical Care Forum. Ontario, Canada. Chaired session on sedation. Responsible for summary of proceedings at the conclusion of the morning sessions - written report. (Continuing Education).
- 2011 Apr 30 **Invited Speaker.** Canadian Respiratory Conference. Canadian Lung and Canadian Thoracic Society. Ontario, Canada. Pulmonary Hypertension - A goal directed approach. (Continuing Education).
- 2011 Nov **Speaker.** Pulmonary Hypertension Awareness. Global National News. Ontario, Canada.
- 2011 Jan **Respirology expert.** Hiccoughs. Why we get them. Global National News. Toronto, Ontario, Canada.
- 2011 Oct 1 **Invited Speaker.** Diagnosis of Ventilator Associated Pneumonia. 7th annual infectious diseases - critical care pharmacotherapy conference. Contemporary issues in the management of infections. Toronto, Ontario, Canada. Reviewed evidence for diagnostic approaches for VAP. (Continuing Education).
- 2011 Sep 16 **Invited Speaker.** Advances in Pulmonary Hypertension. University of Toronto. Ontario, Canada. Pathophysiology of Pulmonary Hypertension. (Continuing Education).
- 2011 Jan 28 **Invited Speaker.** Approach to Massive Pulmonary Embolism. Ontario Lung Association. Toronto, Ontario, Canada. (Continuing Education).
- 2011 Jan **biography.** Inside Queen's Park. Government and Political Analysis. Ontario, Canada. Review of my role in lung health and importance of a lung health strategy for Ontario.
- 2011 Jan 11 **Invited Speaker.** Update in Pulmonary Hypertension. Eli Lilly. Toronto, Ontario, Canada. Eli Lilly National Corporate Meeting.

**Research Funding:**

1. 2011 Nov - 2012 Oct **Supervisor.** Osteopontin in Idiopathic Pulmonary Arterial Hypertension, A Biomarker and Therapeutic Target. Entelligence Award Program. 100,000 USD. [Research Fellowships].
2. 2011 Apr - 2014 Mar **Co-applicant.** Screening for dysphagia in patients following prolonged intubation. Canadian Institutes of Health Research (CIHR). PI: Martino, Rosemary. Collaborators: Martino, Rosemary, Terry Yeo. Stacy Skortez (PhD Candidate). 212,077 CAD. [Grants].
3. 2009 Jun - 2012 Jun **Co-applicant.** Studies of Sympathetic Nervous System Activation in Patients with Pulmonary Arterial Hypertension. Heart and Stroke Foundation of Canada. 172,788 CAD. [Grants].
4. 2009 Apr - 2012 Apr **Co-applicant.** The Oscillation for ARDS Treated Early (OSCILLATE) Trial. CIHR. 4,051,583 CAD. [Grants].
5. 2009 Apr - 2012 Apr **Co-Principal Investigator.** Prospective Evaluation of Long-term Outcomes after Pulmonary Embolism: ELOPE. Canadian Institutes of Health Research (CIHR). 829,330 CAD. [Grants].

***Presentations/Lectures:***

1. 2011 Sep 22 **Invited Speaker**. Case Studies in Shock. EMU Europe. Tuscany, Italy.
2. 2011 Sep 20 **Invited Speaker**. Sepsis: what you really need to do in the ED. North York General Hospital. Tuscany, Italy. Presenter(s): **Sara Gray**.
3. 2011 Nov **Invited Lecturer**. Emergency Medicine Grand Rounds, City-Wide, Advanced Concepts in Ventilation. University of Toronto Emergency Medicine. Toronto, Ontario, Canada. Presenter(s): **Sara Gray**. (Continuing Education).

***Research Funding:***

1. 2010 Dec - 2013 Dec **Co-Investigator**. The PACT study: The impact of a post arrest consult team on process and clinical outcomes in patients resuscitated from out-of-hospital cardiac arrest. Heart and Stroke Foundation of Canada. Resuscitation and Knowledge Transfer and Exchange 2010 Initi. PI: Brooks, SC. Collaborators: Crystal E, Dainty KN, Dorian P, Fam N, Friedrich J, **Gray S**, Jeffs L, Madan M, Rubinfeld G, Scales D, Szadkowski L, Morrison LJ. 198,726 CAD. [Grants].
2. 2010 Mar - 2011 Jul **Co-Investigator**. Post Cardiac Arrest Care (SPARC) II: The Development of Post Cardiac Arrest Centres of Excellence. AFP Innovation Fund. PI: Brooks, Steven. Collaborators: Morrison L, Dorian P, Baker A, Slutsky A, **Gray S**, Friedrich J, Scales D, Fam N. 202,847 CAD. [Grants].
3. 2009 Sep - 2011 Sep **Co-Principal Investigator**. The ED Vent Study: Mechanical Ventilation in the Emergency Department: a prospective observational pilot study. Canadian Association of Emergency Physicians. PI: Loiuise Rose. Collaborators: **Sara Gray** & Louise Rose. 4,990. [Grants].



**Peer Reviewed Publications:**

1. Myrden, A., Kushki, A., Sejdic, E., **Guerguerian, A.M.**, Chau, T. A Brain-Computer Interface Based on Bilateral Transcranial Doppler Ultrasound. PLoS One. 6(9):e24170 (8pp) Epub 2011 Sep 7 (Thesis co-supervisor). **Coauthor or Collaborator**.
2. Massam J, Bitnun A, Solomon M, Somers GR, **Guerguerian AM**, van Wylick R, Waters V. Invasive aspergillosis in cystic fibrosis: a fatal case in an adolescent and review of the literature. Pediatr Infect Dis J. 2011 Feb;30(2):178-80. Review. **Coauthor or Collaborator**.

**In Press:**

1. Moghimi S, Kushki A, Power S, **Guerguerian AM**, Chau T. Automatic detection of a pre-frontal cortical response to emotionally-rated music using multi-channel near-infrared spectroscopy. Journal of Neural Engineering. Submission ID: JNE/400878/PAP. In Press. **Coauthor or Collaborator**.

**Non-peer Reviewed Book Chapters:**

1. **Guerguerian AM**, Tasker RC, Deshpande JK. Head and spinal cord trauma. In: Nichols DG, Paidas CN, Schleien CL, Yaster M, editors. Golden Hour: The Handbook of Advanced Pediatric Life support. 3rd ed. St. Louis: Elsevier; Feb 2011:236-259. **Principal Author**.

**Presentations/Lectures:**

1. 2011 Nov **Invited Speaker**. ECLS II - Cases & Discussion - Opportunities for minimizing cerebral morbidity with ECLS. Canada Critical Care Forum. Toronto, Ontario, Canada. November 13-16, 2011.
2. 2011 Nov **Invited Speaker**. Cardiac ICU II - CPR - ECMO in the Cardiac Arrest Setting. Canada Critical Care Forum. Toronto, Ontario, Canada. November 13-16, 2011.
3. 2011 Nov **Invited Speaker**. Neuro Critical Care I - Neurofunctional monitoring in patients (or children) with critical illness. Canada Critical Care Forum. Toronto, Ontario, Canada. November 13-16, 2011.
4. 2011 Jul **Invited Speaker**. Neuromonitoring in Critically Ill Children. SickKids Centre for Brain & Behaviour 2nd Biennial Conference Brain Injury in Children - July 12-14, 2011. Toronto, Ontario, Canada.
5. 2011 Mar **Invited Speaker**. Expert Panels on Resuscitation: Expert Panel 2 - The Lung. 6th World Congress on Pediatric Critical Care. Sydney, Australia.
6. 2011 Mar **Invited Speaker**. Plenary Session: Monitoring the Injured Brain - "Monitoring brain homeostasis". 6th World Congress on Pediatric Critical Care Sydney Convention and Exhibition Centre - March 13-17, 2011. Sydney, Australia.
7. 2011 Mar **Facilitator**. Brain Monitoring Workshop. 6th World Congress on Pediatric Critical Care, Sydney Convention and Exhibition Centre. Sydney, Australia.
8. 2011 Mar **Chair**. Brain: Traumatic Brain Injury - Rapid-Fire Expert Panel 1: Second Tier Therapies in Traumatic Brain Injury. 6th World Congress on Pediatric Critical Care, Sydney Convention and Exhibition Centre. Sydney, Australia. March 13-17, 2011.

9. 2011 Feb **Invited Speaker.** Pediatric and Adult Intensive Care: State-of-the-Art. CNMC ECMO AND ADVANCED THERAPIES FOR RESPIRATORY FAILURE SYMPOSIUM, Lung Transplants, Keystone Conference Center. Keystone, Colorado, United States.

**Research Funding:**

1. 2010 Jul - 2012 Jun **Co-Applicant.** Mechanical lung assist as a means to achieve primary in-series palliation for single centric neonates: a proof of concept study in neonates and infants. Heart and Stroke Foundation of Canada (HSFC). NA7103. PI: Van Arsdell, Glen S. Collaborators: Co-Applicants: Merklinger, Sandra; Taylor, Katherine; Honjo, Osami. 77,133. [Grants].
2. 2010 Mar - 2012 Feb **Site Investigator.** Serum biomarkers and quality of life in children with traumatic brain injury (TBI). ONF/VNI Grant Application. PI: Hutchison, James S. Collaborators: Anderson, Vicky. 505,527.
3. 2010 Feb - 2012 Feb **Principal Applicant.** Neuroimaging proof of concept. Ontario Neurotrauma Foundation (ONF). 99,975  
*The Pediatric TBI CT Scan Tool.*
4. 2009 Jul - 2011 Jun **Co-Applicant.** Safer medications for children: quantifying nephrotoxicity through secondary analysis of electronic health data. Canadian Institutes of Health Research (CIHR). Maternal and Health Operating Grant. 100,000.
5. 2009 May - 2011 Apr **Principal Applicant.** Brain injury and repair in critically ill children. Hospital for Sick Children. Research Institute Funds. 94,000.

***Peer Reviewed Publications:***

1. Herridge MS, Tansey CM, Matte A, Tomlinson G, Diaz-Granados N, Cooper A, Guest CB, Mazer CD, Mehta S, Stewart TE, Kudlow P, Cook D, Slutsky AS, Cheung AM and the Canadian Critical Care Trials Group. Functional Disability 5 Years after Acute Respiratory Distress Syndrome. *New England Journal of Medicine* 2011;364(14):1293-1304.

***Presentations/Lectures:***

1. Guest CB. Nutrition. University of Toronto Critical Care Medicine residency training program, 2007, 2011.
2. Guest CB. Scientific Research and Experimental Development Tax Credits. Medical-Dental-Midwifery Staff Association, Sunnybrook Health Sciences Centre, 2011.
3. Guest CB, Morissey J. Business Essentials: Structure, Tax and Liability. Department of Anaesthesia, University of Toronto, 2011.
4. Boehm L, Guest CB. Scientific Research and Experimental Development Tax Credits. Sunnybrook Research Institute, 2011.
5. Guest CB. Scientific Research and Experimental Development Tax Credits. Senior Medical Council, Sunnybrook Health Sciences Centre, 2011.

**Peer Reviewed Publications:**

1. 37. Hawryluck L, Bouali R, Danjoux N, Multi-professional recommendations for access and utilization of critical care services: towards consistency in practice and ethical decision-making processes, *Journal of Law Medicine and Ethics*, Summer 2011
2. Hui D, Morrison L, Windrim R, Lausman A, Hawryluck L, Dorian P, Lapinsky S, Halpern S, Campbell D, Hawkins P, Wax R, Carvalho J, Dainty K, Maxwell C, Jeejeebhoy F, Commentary A Novel Implementation Strategy for the 2010 Guidelines for the Management of Cardiac Arrest in Pregnancy, *JOGC*, 2011 in press
3. Downar J, Luk T, Sibbald RW, Santini T, Mikhael J, Berman H, Hawryluck L, Why Do Patients Agree to a "Do Not Resuscitate" or "Full Code" Order? Perspectives of Medical Inpatients, *J Gen Intern Med*. 2011 Jan 11. [Epub ahead of print]
4. Hawryluck L., Palliative Care in the ICU, Palliative Care Textbook Emmanuel L and Librach L editors 2011 Oxford Press Chicago 2011
5. A Novel Implementation Strategy for the 2010 Guidelines for the Management of Cardiac Arrest in Pregnancy. Hui D, Morrison L, Windrim R, Lausman A, Hawryluck L, Dorian P, Lapinsky S, Halpern S, Campbell D, Hawkins P, Wax R, Carvalho J, Dainty K, Maxwell C, Jeejeebhoy F. *J Obstet Gynaecol Can*. 2011 Aug;33(8):858-63.

**Presentations/Lectures:**

- 1 Ethical and legal issues around end of life care, futility and conflict, Does CPR always have to be offered? workshops (2) CRISP PGY 1-3 Internal Medicine May 2011
2. Medical Grand rounds: " Do everything?!" Ethics, Law and life-sustaining treatments in Ontario, August 2011
3. The Medical Chart: a forensic Analysis, University of Toronto and Osgoode Hall Law School September 2011
4. The Medical Chart: a forensic Analysis, University of Ottawa Law School September 2011
5. Law for International Critical care Fellows, University of Toronto, December 2011
6. **Distinguished Speaker**. Advance Burn Care week long course. Choithram Hospital and Research Centre Indore India, Indore, India. Presenter(s): Laura Hawryluck. acute resuscitation, leadership and crisis management, analgesia and sedation, triage and resource allocation, decision-making, end of life care, conflict management. 2011 Nov 20
7. **Chair**. Acute Resuscitation Symposium. Ontario, Canada. Day long innovative interactive resuscitation on acute resuscitation. 2011 Mar 29

**Research Funding:**

1. 2009 Jul – 2011 Jul **Co-Principal Investigator**. Development of a Standard Ethical Framework to Shape Health Policy Development in Ontario. Canadian Institutes of Health Research (CIHR), 69791. [Grants]. Total Amount: 12,500 CAD. 2010 Jul - 2011 Jun: 6,250 CAD (prorated).

2. Ethics and Values in Health Policy: improving care transitions for Ontario patients across the continuum of care, PHSI \$ 336 947.00, CO-investigator 2011- 2014
3. Development of a standard ethical framework to shape health policy development in Ontario with MHLTC Health Policy division, CIHR Co-PI, \$12 500 2010-present
4. Cardiopulmonary Resuscitation in Transplant recipients, co-PI 2011- 2012 unfunded
5. Educational needs assessment for Critical Care in Nepal co-PI, 2011-present unfunded
6. Continuity of Care Rounds: an innovative approach to improving quality of care of longer stay MSICU patients co-PI, 2011-present unfunded
7. Off service patients: can CCRT meet their care needs, co-PI 2011-present unfunded
8. Resuscitation Outcomes Consortium Amiodarone, Lidocaine or Neither for out of hospital cardiac arrest due to VF or VT. Co- Investigator REB 11-0503B 2011-May 2013
9. Resuscitation Outcomes Consortium Trial of Continuous compressions vs standard CPR in out of hospital arrests. Co-Investigator REB 11-0208B 2011 May-2013
10. Hemodynamics post lung transplant in patients with pulmonary hypertension, Co-PI, 2010-present unfunded
11. Resuscitation Outcome Consortium Amiodarone, Lidocaine or placebo for out of hospital cardiac arrest in ventricular fibrillation or ventricular tachycardia, NIH funded, UHN site lead 2011
12. Resuscitation Outcome consortium Trial of continuous compressions vs standard CPR in patients with out of hospital cardiac arrest, NIH multi-site trial , UHN site lead 2011

**Peer Reviewed Publications:**

1. **Herridge MS.** Recovery and Long-term Outcome in Acute Respiratory Distress Syndrome. Crit Care Clin. 2011; 27(3):685-704. **Principal Author.**
2. **Herridge MS.** Long-term Outcomes after ARDS. Critical Care Clinics. Critical Care Clinics 2011; 27 (3):685-704. **Principal Author.**
3. **Herridge MS,** Tansey CM, Matte A, Tomlinson G, Diaz-Granados N, Cooper A, Guest CB, Mazer CD, Mehta S, Stewart TE, Kudlow P, Cook D, Slutsky AS, Cheung AM and the Canadian Critical Care Trials. Functional Disability Five Years after Acute Respiratory Distress Syndrome. N Engl J Med. 2011; 354: 1293-304. (Lead article). Impact Factor 53. **Principal Author.**
4. Wilcox E, **Herridge MS.** Clinical Year in Review III. Advances in mechanical ventilation, Acute Respiratory Distress Syndrome, Non-Pulmonary ICU, Quality Performance Assessment Metrics in your Practice. Proc Am Thorac Soc. 2011 Sep;8(5):404-10. (Trainee publication, Clinical and Research Fellow). **Senior Responsible Author.**
5. **Herridge MS.,** Flaherty KR. . Clinical Year in Review II. Advances in Lung Cancer, Sleep apnea, Interventional Pulmonary/Pleural Disease, Cystic Fibrosis. Proc Am Thorac Soc. 2011 Sep;8(5):398-403. **Co-Principal Author.**
6. Adhikari N, Tansey C, McAndrews MP, Matte A, Pinto R, Cheung AM, Diaz-Granados N, **Herridge MS.** Chest. Self-reported depression symptoms and memory complaints in survivors five years after acute respiratory distress. Chest. 2011 Oct 13. [Epub ahead of print]. Impact Factor 6.5. **Senior Responsible Author.**
7. Wilcox ME, **Herridge MS.** Lung Function and Quality of Life in Survivors of the Acute Respiratory Distress Syndrome. Presse Med. 2011 Dec;40(12 Pt 2):e595-603. Epub 2011 Nov 9. **Senior Responsible Author.**

**In Press:**

1. **M.S. Herridge**<sup>1,2</sup>, L.M. Chu<sup>1</sup>, A.L. Matte<sup>1</sup>, L. Chan<sup>1,2</sup>, G. Tomlinson<sup>2</sup>, N.D. Ferguson<sup>1,2</sup>, S. Mehta<sup>1,3</sup>, J. Friedrich<sup>1,4</sup>, N. Adhikari<sup>1,5</sup>, R. Fowler<sup>1,5</sup>, D. Cook<sup>6</sup>, J. Rudkowski<sup>6</sup>, H. Meggison<sup>7</sup>, S.E. Abbey<sup>1</sup>, J.A. Batt<sup>4</sup>, C.C dos Santos<sup>4</sup>, J.F. Flannery<sup>8</sup>, G. Leung<sup>5</sup>, J.C. Marshall<sup>4</sup>, A.R. Moody<sup>5</sup>, G. Rubenfeld<sup>5</sup>, D.C. Scales<sup>5</sup>, T. Sinuff<sup>5</sup>, A.S. Slutsky<sup>5</sup>, F. Lamontagne<sup>9</sup>, M. Levasseur<sup>10</sup>, J.I. Cameron<sup>2</sup> in collaboration with the Canadian Critical Care Trials Group. LONG-TERM PATIENT OUTCOMES AFTER PROLONGED MECHANICAL VENTILATION: THE TOWARDS RECOVER STUDY. American Thoracic Society/ Proc Am Thorac Soc. In Press. **Principal Author.**
2. J.I. Cameron<sup>1,8</sup>, L. Chan<sup>1,2</sup>, A. Czerwonka<sup>1,2</sup>, L.M. Chu<sup>2</sup>, A. Matte<sup>2</sup>, N.D. Ferguson<sup>1,2</sup>, S. Mehta<sup>1,3</sup>, J. Friedrich<sup>1,4</sup>, N. Adhikari<sup>1,5</sup>, R. Fowler<sup>1,5</sup>, D. Cook<sup>6</sup>, J. Rudkowski<sup>6</sup>, H. Meggison<sup>7</sup>, S.E. Abbey<sup>2</sup>, J.A. Batt<sup>4</sup>, C.C dos Santos<sup>4</sup>, J.F. Flannery<sup>8</sup>, G. Leung<sup>5</sup>, J.C. Marshall<sup>4</sup>, A.R. Moody<sup>5</sup>, G. Rubenfeld<sup>5</sup>, D.C. Scales<sup>5</sup>, T. Sinuff<sup>5</sup>, A.S. Slutsky<sup>5</sup>, F. Lamontagne<sup>9</sup>, M. Levasseur<sup>10</sup>, G. Tomlinson<sup>1,2</sup>, **M.S. Herridge**<sup>1,2</sup>. Long-Term Outcomes after Prolonged Mechanical Ventilation: Family Caregiver Outcomes from the Towards RECOVER Study. American Thoracic Society/ Proc Am Thorac Soc. In Press. **Senior Responsible Author.**
3. K.K.Y. Koo, K. Choong, D.J. Cook, **M. Herridge**, A. Newman, V. Lo<sup>4</sup>, K. Burns, V. Schulz<sup>1</sup>, G. Guyatt, M.O. Meade. Development of a Canadian Survey of Mobilization of Critically Ill Patients in Intensive Care Units :Current Knowledge, Perspectives and Practices. Am J Respir Crit Care Med. In Press. **Coauthor or Collaborator.**

### **Review Articles, Letters, and Editorials:**

1. **Herridge MS.** The Challenge of Designing a Post-ICU Rehabilitation Intervention. Crit Care. 2011 25;15 (5):1002. **Principal Author.**
2. Azoulay E, **Herridge MS.** Understanding ICU Staff Burnout: The Show Must Go On. Am J Respir Crit Care Med. 2011 Nov 15;184(10):1099-100. **Co-Principal Author.**
3. **Herridge MS.** Functional Disability Five Years after Acute Respiratory Distress Syndrome. N Engl J Med. 2011; 365: 274-276. **Principal Author.**

### **Book Chapters:**

1. Detsky M, **Herridge MS.** Physical function, disability and rehabilitation in the Elderly Critically Ill. Springer. ed. B. Guidet 2011. In Press (Trainee publication). **Senior Responsible Author.**

### **Abstracts:**

1. J.I. Cameron, L. Chan, A. Czerwonka, L.M. Chu, A. Matte, N.D. Ferguson, S. Mehta, J. Friedrich, N. Adhikari, R. Fowler, D. Cook, J. Rudkowski, H. Meggison, S.E. Abbey, J.A. Batt, C.C dos Santos, J.F. Flannery, G. Leung, J.C. Marshall, A.R. Moody, G. Rubenfeld, D.C. Scales, T. Sinuff, A.S. Slutsky, G. Tomlinson, **M.S. Herridge.** Long-Term Outcomes after Prolonged Mechanical Ventilation: Family Caregiver Outcomes from the Towards RECOVER Study. Am. J. Respir. Crit. Care Med. May 2011; 183: A3168. **Co-Principal Author.**
2. **M.S. Herridge,** L.M. Chu, A.L. Matte, L. Chan, G. Tomlinson, N.D. Ferguson, S. Mehta, J. Friedrich, N. Adhikari, R. Fowler, D. Cook, J. Rudkowski, H. Meggison, S.E. Abbey, J.A. Batt, C.C dos Santos, J.F. Flannery, G. Leung, J.C. Marshall, A.R. Moody, G. Rubenfeld, D.C. Scales, T. Sinuff, A.S. Slutsky, J.I. Cameron. Long-Term Patient Outcomes After Prolonged Mechanical Ventilation: The Towards RECOVER Study. Am. J. Respir. Crit. Care Med. May 2011; 183: A2380. **Principal Author.**

### **Presentations/Lectures:**

1. 2011 May **Chair.** Clinical Year in Review- Asthma, COPD, Host-Microbe Interactions in Airway Disease, Pulmonary Vascular. American Thoracic Society. Denver, Colorado, United States.
2. 2011 **Chair.** Process of Care, Quality of Life, Long-term Follow-up. American Thoracic Society. Denver, Colorado, United States.
3. 2011 **Chair.** Clinical Year in Review -Interstitial Lung Disease, Occupational Lung Disease, Education and Pediatrics. American Thoracic Society. Denver, Colorado, United States.
4. 2011 **Chair.** Clinical Year in Review- Lung Cancer, Sleep Apnea, Interventional Pulmonary/Pleural Disease, Cystic Fibrosis. American Thoracic Society. Denver, Colorado, United States.
5. 2011 **Chair.** Clinical Year In Review- Mechanical Ventilation, ARDS, Non-pulmonary ICU, Quality Performance Metrics in Your Practice. American Thoracic Society. Denver, Colorado, United States.
6. 2011 **Visiting Professor.** First Annual Mark and NanciAnn Deheny Lectureship in Critical Care "Long-Term Outcomes in patients and family caregivers after critical illness". , University of Chicago, Chicago May 2011. University of Chicago. Chicago, Illinois, United States.
7. 2011 **Distinguished Speaker.** " Clinical Year in Review: ARDS". American Thoracic Society. New Orleans, Louisiana, United States.

8. 2011 **Invited Speaker.** "Long-term Outcomes for ARDS Survivors" , New Orleans, May 2010. American Thoracic Society. New Orleans, Louisiana, United States.
9. 2011 **Visiting Professor.** Visiting Professor- Enrique Fernandez MD Memorial Lecture "Long-Term Outcomes after critical illness: The need for family-centred care" , National Jewish Health, Denver, CO. November 2011. National Jewish Health. Denver, Colorado, United States.
10. 2011 Nov **Presenter.** Long-Term Patient Outcomes After Prolonged Mechanical Ventilation. Critical Care Canada Forum. Ontario, Canada. Presenter(s): Dr. **Margaret Herridge.**
11. 2011 Nov **Presenter.** Long-Term Outcomes after Prolonged Mechanical Ventilation: Family Caregiver Outcomes from the Towards RECOVER Study. Critical Care Canada Forum. Canada. Presenter(s): Dr. **Margaret Herridge.**
12. 2011 Jun **Presenter.** Long-Term Patient Outcomes After Prolonged Mechanical Ventilation: The Towards RECOVER Study. Respiriology Research Day. Toronto, Ontario, Canada.

***Research Funding:***

1. 2011 Jul - 2013 Jun **Co-Investigator.** Muscle Outcomes after Critical Illness. Physicians Services Incorporated Foundation (The) (PSI). PI: Batt, Jane. 80,000 CAD. [Grants].
2. 2011 Jul - 2012 Jun **Co-Investigator.** The Effects of Electrical Muscle Stimulation (EMS) on Muscle Atrophy and Functional Outcomes in Critically Ill Patients: A Pilot Randomized Controlled Trial. Canadian Respiratory Health Professionals. PI: Lo, Vincent and Mathur, Sunita. 24,931 CAD. [Grants].
3. 2011 Jul - 2012 Jun **Co-Investigator.** The Canadian Pandemic Research Preparedness Strategy. Public Health Agency of Canada. PI: Karen Burns, Rob Fowler and John Marshall. 250,000 CAD. [Grants].
4. 2010 Sep - 2012 Aug **Co-Investigator.** Muscle outcomes after critical illness. Physicians Services Inc. PI: Jane Batt. 169,634 CAD. [Grants].
5. 2009 Sep - 2013 Aug **Principal Investigator.** Towards RECOVER: Long-term Clinical Outcomes and Needs Assessment in ICU Survivors of Prolonged Mechanical Ventilation and their Caregivers. Canadian Institutes of Health Research (CIHR). 654,368 CAD. [Grants].
6. 2009 Mar - 2011 Mar **Principal Investigator.** Towards RECOVER: Long-term Clinical Outcomes and Needs Assessment in ICU Survivors of Prolonged Mechanical Ventilation and their Caregivers. Ministry of Health. Alternate Funding Plan (AFP) Innovation Fund. 196,000 CAD. [Grants].



***Presentations/Lectures:***

1. Obstetric Teams and the Anesthetist: Key Findings From a Qualitative Study. Sharma S, Reeves S, Rees C, **Houston P**, Morgan P. Canadian Conference for Medical Education (CCME) May 2011. Toronto, Canada
2. Obstetric Teams and the Anesthesiologist - Examining the Role of Boundaries. Sharma S, **Houston P**, Morgan P, Reeves S. (Abstract accepted for oral presentation). Social Science Perspectives in Health Professions Education Symposium. May 2011. Toronto, Canada
3. Obstetric Teams and the Anesthetist – A Study in Progress. Sharma S, **Houston P**, Morgan P, Reeves S. (Abstract accepted for oral presentation). 1<sup>st</sup> International Conference on Faculty Development in the Health Professions. Faculty of Medicine, University of Toronto May 2011. Toronto, Canada
4. The Role of the Vice President, Education at St. Michael's. The Ottawa Hospital. September 2011. Ottawa, Canada.
5. Overview of the Education Portfolio at St. Michael's Hospital. Shantou Delegation Visit to Li Ka Shing International Healthcare Education Centre. September 2011. Toronto, Canada
6. Education at St. Michael's. Li Ka Shing Knowledge Institute Opening Event. May 2011. Toronto, Canada
7. Medical School Administration and Financing: Improving the Student Experience. East West Alliance Meeting. May 2011. Shantou, China
8. The Role of the Vice President, Education and Support of Continuing Education at St. Michael's. University of Toronto Office of Continuing Education and Professional Development Strategic Retreat. April 2011. Toronto, Canada.

**Peer Reviewed Publications:**

1. Berger RMF, Beghetti M, **Humpl T**, Raskob GE, Ivy DD, Jing ZC, Bonnet D, Schulze-Neick I, Barst RJ. Clinical features of Pediatric pulmonary hypertensive vascular disease: The global registry tracking outcomes and practice in pediatric pulmonary hypertension (TOPP). *The Lancet in press 2011 CPA*
2. Sajan I, Manlhiot C, Reyes J, McCrindle BW, **Humpl T**, Friedberg MK. Pulmonary arterial capacitance in children with idiopathic pulmonary arterial hypertension and pulmonary arterial hypertension associated with congenital heart disease: relation to pulmonary vascular resistance, exercise capacity, and survival. *Am Heart J* 2011 162:562-568 **CPA**
3. **Humpl T**, Reyes JT, Erickson S, Armano R, Holtby H, Adatia I. Sildenafil Therapy for Neonatal and Childhood Pulmonary Vascular Disease. *Cardiol Young*. 2011 21:187-93 **CPA**
4. Morales DL, Almond CS, Jaquiss RD, Rosenthal DN, Naftel DC, Massicotte MP, **Humpl T**, Turrentine MW, Tweddell JS, Cohen GA, Kroschwitz R, Devaney EJ, Canter CE, Fynn-Thompson F, Reinhartz O, Imamura M, Ghanayem NS, Buchholz H, Furness S, Mazor R, Gandhi SK, Fraser CD Jr. Bridging children of all sizes to cardiac transplantation: the initial multicenter North American experience with the Berlin Heart EXCOR ventricular assist device. *J Heart Lung Transplant* 2011 30:1-8 **CPA**

**Non-peer Reviewed Books/Chapters:**

1. Beghetti M. Co Editors; Barst RJ, Berger RMF, **Humpl T**, Dunbar I, Schulze-Neick I. *Pediatric Pulmonary Hypertension*, 2011 Elsevier GmbH, Munich
2. Bonnet D, **Humpl T**. "Out of Proportion" Pulmonary Hypertension and Other Forms of the Disease. In: *Pediatric Pulmonary Hypertension*. Beghetti M, Barst RJ, Berger RMF, **Humpl T**, Ivy D, Schulze-Neick (Eds.) Elsevier (2011) 269-280 **SRI**
3. **Humpl T**. Pulmonary Hypertension Associated with Lung Diseases and/or Hypoxia. In: *Pediatric Pulmonary Hypertension*. Beghetti M, Barst RJ, Berger RMF, **Humpl T**, Ivy D, Schulze-Neick (Eds.) Elsevier (2011) 299-313 **PA**

**Presentations/Lectures:**

1. Woo R, Chan C, Seto W, Pong S, Hales B, Streitenberger K, Kilburn J, Mayne L, Runham L, St. George-Hyslop, C, Morgan C, Gilhooly T, Schwartz S, **Humpl T**, Kotsakis A, Russell J. Medication reconciliation performed by dispensary assistants for paediatric patients admitted to cardiology and cardiac critical care unit. *Critical Care Canada Forum*, Toronto, November 2011.
2. Woo R, Chan C, Seto W, Pong S, Hales B, Streitenberger K, Kilburn J, Mayne L, Runham L, St. George-Hyslop, C, Morgan C, Gilhooly T, Schwartz S, **Humpl T**, Kotsakis A, Russell J. Medication reconciliation performed by dispensary assistants for paediatric patients admitted to cardiology and cardiac critical care unit. *Canadian Society of Hospital Pharmacists Annual General Meeting*, Toronto, November 2011.
3. Schulze-Neick I, Humpl T, Berger RMF, Raskob G, Weintraub R, Saji B, Yung D, Barst RJ, Beghetti M, Hemodynamic characterization at diagnosis in children with PH: Insights from the global TOPP registry. *European Society of Cardiology Paris, France, August 2011 SRI*
4. Berger RMF, Humpl T, Schulze-Neick I, Raskob GE, Ivy DD, Jing ZC, Bonnet D, Beghetti M, Barst RJ on Behalf of the TOPP Study Group. TOPP: Clinical features of pediatric pulmonary

hypertension in a global. 45th Annual Meeting of the Association of European Paediatric Cardiology. Granada Spain, May 2011 SRI

5. Beghetti M, Berger RMF, Schulze-Neick I, Raskob G, Day R, Pulido T, Feinstein J, Barst RJ, Humpl T on Behalf of the TOPP Study Group. Diagnostic procedures in pediatric pulmonary hypertension (PH) - Results from the first global registry: Tracking Outcomes and Practice in Pediatric Pulmonary Hypertension (TOPP) 45th Annual Meeting of the Association of European Paediatric Cardiology. Granada Spain, May 2011 **SRI**
6. Barst RJ, **Humpl T**, Schulze-Neick I, Raskob G, Ivy DD, Jing Z-C, MD, Bonnet D, Beghetti M, Berger RMF: TOPP: Clinical features of pediatric pulmonary hypertension in an international registry. 2011 PAS/ASPR. Denver, USA, April 2011 **SRI**
7. Sudden death with Pulmonary Hypertension – Expected or unexpected? Canadian Cardiovascular Society – Symposium on sudden death in children with congenital heart disease. Vancouver, Canada, October 2011
8. Pulmonary vascular outcomes. CDH Toronto: Refining Art, Defining Science & Improving Outcomes. Toronto, Canada, June 2011
9. Results from the EXCOR<sup>®</sup> Pediatric IDE Trial. Berlin, Germany, November 2011
10. MCS for chronic heart failure: SickKids' experience. Pediatric Intensive Care Society Cambridge, UK, September 2011
11. Pulmonary veno-occlusive disease - A rare form of pulmonary hypertension in children. Slano, Croatia, June 2011
12. Mechanical support and its role in the salvage of patients with pulmonary hypertension: bridge or destination therapy? 4<sup>th</sup> Conference on Childhood Pulmonary Vascular Disease. San Francisco, California, USA, March 2011
13. Pulmonary veno-occlusive disease. 4<sup>th</sup> Conference on Childhood Pulmonary Vascular Disease. San Francisco, California, USA, March 2011
14. Unusual forms of Pulmonary Arterial Hypertension and Congenital Heart Disease. ACTIVATE, Vienna, Austria, February 2011

**Peer Reviewed Publications:**

1. Fraser DD, Close TE, Rose KL, Ward R, Mehl M, Farrell C, Lacroix J, Creery D, Kesselman M, Stanimirovic D, Hutchison JS (CA) for the Canadian Critical Care Translational Biology Group. Severe traumatic Brain injury in children elevates glial fibrillary acidic protein in cerebrospinal fluid and serum. *Ped Crit Care Med* 2011;12:319-24.
2. Parshuram C, Duncan H, Joffe A, Farrell C, Lacroix J, Middaugh K, Hutchison JS (CA), Wensley D, Beyene J, Parkin P, for the Canadian Critical Care Trials Group. Multi-centre validation of the Bedside Paediatric Early Warning System Score: A severity of illness score to detect evolving critical illness in hospitalized children. *Crit Care* 2011;15:R185

**In Press:**

1. Ebrahim S, Kulkarni A, Hutchison J, Bowman K, Singh S, Sananes R, Parshuram C. Adaptive behavior, functional and quality of life outcomes of children requiring urgent ICU admission. *Ped Crit Care Med*, In press.
2. Zolkipli Z, Sherlock M, Biggar WD, Taylor G, Hutchison JS (CA), Peliowski A, Alman BA, Ling SC, Tein I. Abnormal fatty acid metabolism in spinal muscular atrophy may predispose to perioperative risks. In press, *European Journal of Paediatric Neurology*.

**Book Chapters:**

1. Hutchison JS (**SRA**). Clinical, physiologic and pharmacologic effects of hypothermia therapy. In: *Current Concepts in Pediatric Critical Care*. Editor: Philip C. Spinella, Society for Critical Care Medicine, 2011.

**Abstracts:**

1. Nguyen A, Sutcliffe IT, Doherty DR, Shih J, Baumann E, Michaud J, Stanimirovic D, Hutchison JS. The anti-inflammatory effects of hypothermia therapy following global cerebral ischemia in C57Bl/6 mice. *World Congress of Pediatric Critical Care Medicine*, Sydney, Australia, March 14 to 17, 2011.
2. Lo TY, Renaud D, Post M, Hutchison J. Novel brain trauma biomarkers: Post-traumatic serum levels of eicosanoids and leukotrienes are altered significantly. *6th World Congress on Pediatric Critical Care*. *Ped Crit Care Med* 2011;12:A113.
3. Lo T, Snell S, Suh J, Hutchison J. Novel post-traumatic outcome prediction using acute serum levels of amino and organic acids. *6th World Congress on Pediatric Critical Care*. *Ped Crit Care Med* 2011;12:A112.

**Presentations/Lectures:**

1. Critical Care Canada Forum, Toronto, Ontario, Canada, Nov 14-16, 2011  
Session Chair: Cardiopulmonary Resuscitation  
Lecture: Neurocritical Care: How to use biomarkers of cerebral ischemia and neurotrauma.
2. Paediatric Neurocritical Care Conference, Children's Hospital, Padua, Italy, November 10 and 11, 2011  
Lectures:
  1. How to develop a neurocritical care research network
  2. Mechanisms of neuroprotection

3. American Thoracic Society Meeting, Denver, CO, May 18, 2011.  
Session Chair: Neurocritical Care.
4. 6th World Congress on Pediatric Critical Care; March 14 to 17, 2011; Sydney, Australia.  
Chair: Sedation and Analgesia in Acquired brain Injury  
Management of Severe Traumatic Brain Injury  
Lectures:
  1. Oxygen and the brain
  2. Neuromonitoring
  3. Omics in brain injury
  4. Management of traumatic brain injury
5. Current Concepts in Pediatric Critical Care, Society for Critical Care Medicine, January 14<sup>th</sup>, 2011, San Diego, California  
Clinical, physiologic and pharmacologic effects of hypothermia therapy.

**Research Funding:**

1. 2010-2014 Canadian Institutes of Health Research. The Bedside Paediatric Early Warning System: A cluster randomized controlled trial of the impact on mortality and processes of care. Parshuram C, Hutchison J (**Co-Investigator**). \$3,300,000.00.
2. 2010-2015 National Heart Lung and Blood Institute. A randomized controlled trial of Therapeutic Hypothermia After Pediatric Cardiac Arrest (THAPCA). Moler F and Dean M. Hutchison J (**Co-Investigator**, 10% salary support as site-PI and member Executive Committee + payment per patient enrolled). \$21,000,000.00 (US).
3. 2010-2012 Ontario Neurotrauma Foundation/Victoria Neurotrauma Initiative. Biomarkers and quality of life in children with traumatic brain injury. Hutchison J (**Co-Principal Investigator**, data coordinating centre and biomarker laboratory work at SickKids, Toronto), Anderson V (Co-Principal Investigator), Guerguerian A-M, Beauchamp M, Post M. \$505,527.00.
4. 2010-2012 Ontario Neurotrauma Foundation. The Pediatric Traumatic Brain Injury Computerized Tomography Scan Tool. Guerguerian A-M, Hutchison JS (**Co-Investigator**), Kulkarni A, Laughlin S. \$98,000.00.
5. 2010-2011 Canadian Institutes of Health Research. Impact of H1N1 pandemic on critical care services for children. Jouvett P, Fowler RA, Hutchison JS (**Co-Investigator**), Kissoon N, Menon K. \$99,972.00.
6. 2009- 2011 Canadian Institutes of Health Research. Influenza and H1N1-related Critical Illness. Demand and Capacity in the Health Care System: The Canadian ICU Flu Study. Fowler RA, Jouvett PA, Cook DJ, Kumar A, McGeer AJ, Marshall JC, Menon K, Hutchison J (**Co-Investigator**). \$597,681.00.
7. 2009-2012 Canadian Institutes of Health Research/ SickKids New Investigator Grant. Continuous EEG monitoring in the Paediatric Intensive Care Unit. Hahn C, Hutchison J (**mentor and Co-Investigator**), Parshuram C. \$431,695.00.
8. 2009-2012 Physicians Services Investigators. Continuous EEG monitoring in the Paediatric Intensive Care Unit. Hahn C, Hutchison J (**Co-Investigator**), Parshuram C. \$170,000.00.
9. 2007-2012 Canadian Foundation for Innovation. Centre for Study of Complex Childhood Disease. Post M (PI). Hutchison J (**Co-Investigator**, obtained funding for a laser confocal intravital microscope and a continuous EEG monitor). \$20,400,000.00.

10. 2007-2011 Ontario Neurotrauma Foundation. Attention and Traumatic Brain Injury. Hutchison JS (**Co-Principal Investigator**), Schachar R (Co-Principal Investigator), Perez-Valezquez H, Dennis M, Raubaud C. \$250,000.00.

**Peer Reviewed Publications:**

1. G Curley, **BP Kavanagh**, JG Laffey. Hypocapnia and the injured brain: Evidence for harm. **SRA** *Critical Care Medicine* 39:229-30, 2011
2. T Niitsu, S Tsuchida, V Peltekova, D Engelberts, I Copland, G Otulakowski, M Post, **BP Kavanagh**. Cyclooxygenase inhibition in ventilator-induced lung injury **SRA** *Anesthesia and Analgesia* 112:153-159, 2011
3. T Jaecklin, D Engelberts, G Otulakowski, H O'Brodovich, M Post, **BP Kavanagh**. Lung-derived soluble mediators are pathogenic in ventilator-induced lung injury **SRA** *American Journal of Physiology-Lung Cell Mol Physiol* 300:L648-658, 2011
4. G Otulakowski, **BP Kavanagh**. Hypercapnia in acute illness: sometimes good, sometimes not (*Editorial*). **SRA** *Critical Care Medicine* 39:1581-1582, 2011
5. AA Kroon, J Wang, **B Kavanagh**, Z Huang, M Kuliszewski, JB van Goudoever, M Post. Prolonged mechanical ventilation induces cell cycle arrest in newborn rat lung. **C** *PLoSOne* 6:e16910, 2011
6. AD Bersten, **BP Kavanagh**. A metabolic window into acute respiratory distress syndrome: stretch, the "baby" lung, and atelectrauma (*Editorial*). **SRA** *American Journal of Respiratory & Critical Care Medicine* 183:1120-1122, 2011
7. DN Wijesundera, **BP Kavanagh**. Prevention of pain from propofol infection (*Editorial*). **C** *British Medical Journal* 342:d1102, 2011
8. JF Boylan, **BP Kavanagh**, J Armitage. Randomized controlled trials: important but overrated? **C** *J R Coll Physicians Edinb.* 41:126-131, 2011
9. MA Walsh, M Merat, G La Rotta, P Joshi, V Joshi, T Tran, S Jarvis, CA Caldarone, GS Van Arsdell, AN Redington, **BP Kavanagh**. Airway pressure release ventilation improves pulmonary blood flow in infants following cardiac surgery. **SRA** *Critical Care Medicine* 39: 2599-2604, 2011

**Book Chapters:**

1. M Duggan & **BP Kavanagh**. Pulmonary Atelectasis. **SRA** *Kendig's Disorders of the Respiratory Tract in Children*. Editor V Chernick, T Boat, F Ratjen & A Bush. Saunders Elsevier, Philadelphia 2011
2. A Kornecki & **BP Kavanagh**. Acute Respiratory Distress Syndrome. **SRA** *Kendig's Disorders of the Respiratory Tract in Children*. Editor V Chernick, T Boat, F Ratjen & A Bush. Saunders Elsevier, Philadelphia 2011
3. J Laffey, **BP Kavanagh**. Permissive Hypercapnia. **SRA** *Principles & Practice of Mechanical Ventilation, 3<sup>rd</sup> ed.* (McGraw-Hill, New York). **Editor:** MJ Tobin, 2011
4. S Tsuchida, **BP Kavanagh**. Ventilator-induced lung injury. **SRA** *Pediatric Critical Care Medicine, 2<sup>nd</sup> ed.* (Springer-Verlag London) **Editors:** T Shanley, D Wheeler & HR Wong, 2011

**Presentations/Lectures:**

1. Society of Critical Care Medicine 2011 Congress, **San Diego, USA, JANUARY 2011**
  - Role of HFOV in ARDS

2. 17<sup>th</sup> Annual Winterlude Symposium, Department of Anesthesiology, University of Ottawa, **Ottawa, Canada, FEBRUARY 2011**
  - *(Pro/Con Debate)* This house is of the opinion that recent research tells us how to ventilate normal lungs
3. 6<sup>th</sup> World Congress on Pediatric Critical Care, **Sydney, Australia, MARCH 2011**
  - *(Pro/Con Debate)* NICE or not so NICE: Tight glycemic control in children.
  - Understanding VILI in children
  - Novel ventilatory strategies
  - *(Pro/Con Debate)* Conventional RCTs in children are inappropriate
4. 31<sup>st</sup> International Symposium of Intensive Care and Emergency Medicine, **Brussels, Belgium, MARCH 2011**
  - Atelectrauma is not important
  - *(Moderator)* The host response to infection
  - *(Pro/Con Debate)* Hypercapnia is good for you
  - Negative-pressure ventilation may be better
  - What do we know about PEEP levels?
  - Glucose control: Review of the evidence
5. 2<sup>nd</sup> Saudi Critical Care Society International Conference, **Riyadh, Saudi Arabia, APRIL 2011**
  - Current evidence and future direction in pathogenesis of VILI
  - CO2 in PICU
  - Protocols in acute care
6. American Thoracic Society Annual Meeting, **Denver, USA, MAY 2011**
  - *(Co-Chair)* Mini Symposium: Lung Injury in the Intensive Care Unit: Mechanisms, Therapies, Physiology and Outcomes
  - *(Lead Facilitator)* Poster Session: Acute Lung Injury: Diverse Novel Insights
  - *(Co-Chair)* The Consequences of Five Important Papers: From the Author (and the Editor)
  - *(Co-Chair)* (Non)Permissive Hypercapnia: Bench to Bedside
7. 52<sup>nd</sup> Annual McGill Anesthesia Update, **Montreal, Canada, MAY 2011**
  - Guidelines and protocols for the pediatric patient in the acute care setting
8. ERASMUS Critical Care Days, **Rotterdam, the Netherlands, JUNE 2011**
  - Molecular mechanism of lung injury (key note lecture)
  - Ethics and Ventilation session (Co-Chair)
  - Protective ventilation should be done in all our patients: relevant for all age groups in pediatrics?
9. 6<sup>th</sup> International Pediatric Transplant Association (IPTA) Congress on Pediatric Transplantation, **Montreal, Canada, JUNE 2011**
  - Donation after cardiac death in children: experience and outcomes
10. 8<sup>th</sup> Symposium of Neonatal & Pediatric Mechanical Ventilation, **Sao Paulo, Brazil, AUGUST 2011**
  - Mechanisms of ventilator induced lung injury; Are lungs more susceptible to injury induced by ventilation?; As a gene may contribute to acute lung injury; Therapeutic permissive hypercapnia; Volume control on SDR
11. 21<sup>st</sup> Argentinean Congress on Pediatric Critical Care, **Puerto Madryn, Argentina, AUGUST 2011**
  - Acute pulmonary injury (plenary session)
  - Mechanical ventilation: strategy for pulmonary protection
12. Massachusetts General Hospital – Department of Anesthesia, **Boston, USA, SEPTEMBER 2011**



- Invited speaker – Anesthesia Grand Rounds (Glucose Control in Acute Care – Lessons from Clinical Trials)
13. American Society of Anesthesiologists Annual Meeting, **Chicago, USA, OCTOBER 2011**
    - Invited speaker - Refresher Course Lecturer (Pulmonary Hypertension)
  14. European Society of Intensive Care Medicine, **Berlin, Germany, OCTOBER 2011**
    - Hypercapnia and Lung Injury; Monitoring Oxygenation; Management of ICU Hyperglycemia
  15. IPOKRATES Sepsis Meeting, **Cape Town, South Africa, OCTOBER 2011**
    - Ventilator-Induced Lung Injury; Glucose Management in ICU
  16. Critical Care Canada Forum 2011, **Toronto, Canada, NOVEMBER, 2011**
    - Threats and opportunities: The future of critical care (co-moderator)
    - Plenary session – Activated Protein C (co-moderator)
    - Settling (only) for Best – Shaping Excellence in ICU Care (co-moderator)
    - ARDS: therapeutics – what causes VILI?
    - Organ donation in the Pediatric ICU
  17. Bowman Symposium on Lung Development, **Winnipeg, Canada, NOVEMBER 2011**
    - Ventilator-Induced Lung Injury in Neonates
  18. Ibero-American Congress of Intensive Care, **Cartagena, Colombia, DECEMBER 2011**
    - CO<sub>2</sub>: friend or enemy?
    - Biologic markers in ARDS
    - A practical approach to alveolar recruitment

**Research Funding:**

1. Therapeutic Potential of Hepoxilin Analogues (Operating Grant) Canadian Institutes of Health Research (CIHR) Co-Principal applicant  
PI: M Post 2008-2013 620,000
2. Ventilator-Induced Lung Injury: Linking gene activation, physiology and outcome (Operating Grant) Canadian Institutes of Health Research (CIHR) Principal Applicant Co-applicant  
M Post 2008-2013 643,000
3. Preclinical Assessment of Therapeutic Hypercapnia (Operating Grant) Canadian Institutes of Health Research (CIHR) Sole Applicant  
(Renewal) 2009-2014 563,000

**Peer Reviewed Publications:**

1. Topolovec-Vranic J, Pollmann-Mudryj MA, Ouchterlony A, **Klein DJ**, Spence J, Romaschin A, Rhind S, Tien HC, Baker AJ. The value of serum biomarkers in prediction models of outcome following mild traumatic brain injury. *The Journal of Trauma, Injury, Infection and Critical Care*. 2011;71(5 Suppl 1):3478-86. **Coauthor or Collaborator**.
2. Brown AD, G. Baker R, **Klein DJ**, Veillard JHM. Playing to our Strengths in Evidence and Policy. *Healthcare Papers*. 2011.11(2):26-30. **Coauthor or Collaborator**.
3. Nalla B, Chen R, **Klein DJ**. Diagnosing and understanding the mechanisms behind orthodeoxia syndrome. *Canadian Journal of Anesthesia*. 2011 May;58(5):464-7. Epub 2011 Feb 17. (Trainee publication, Bhanu Nalla - Cardiac Intensive Care Fellow). **Senior Responsible Author**.
4. **Klein DJ**, Briet F, Nisenbaum R, Romaschin A, Mazer CD. Endotoxemia during cardiopulmonary bypass is associated with risk of infection after cardiac surgery: A prospective observational study. *Critical Care*. 2011 Feb 23;15(1):R69. Epub 2011 Feb 23. **Principal Author**.

**In Press:**

1. Oduyayo A, Adhikari N, Barton J, Burns K, Friedrich JO, **Klein DJ**, Lapinsky S, Litwin S, Meret A, Moineddin R, Richardson B, Richardson R, Zaltzman A, Hladunewich M, Wald R. The Epidemiology of Acute Kidney Injury in Canadian Critical Care Units. *Canadian Journal of Anesthesia*. In Press. **Coauthor or Collaborator**.
2. Yaguchi A, Yuzawa J, **Klein DJ**, Takeda M and Harada T. Combining intermediate levels of the endotoxin activity assay (EAA) with other biomarkers in the assessment of patients with sepsis: results of an observational study. *Critical Care*. In Press. **Coauthor or Collaborator**.

**Abstracts:**

1. Charbonney E., **Klein DJ**, Marshall JC. Systemic Endotoxemia Following Multiple Trauma Is Associated with Early Shock and Predicts Subsequent Mortality. Presented at the Surgical Infection Society (2011). (Trainee publication). **Coauthor or Collaborator**.
2. **Klein DJ**, Briet F, Michaud D, Nisenbaum R, Romaschin A, Mazer D. Endotoxemia during cardiopulmonary bypass. Presented at ISICEM (2011). A009. **Principal Author**.

**Presentations/Lectures:**

1. 2011 Sep **Invited Speaker**. Medical, Legal, and Ethical Considerations in Critical Care - A Roundtable Discussion. St. Michael's Hospital Critical Care Grand Rounds. Toronto, Ontario, Canada. Presenter(s): **David J. Klein**, Gilbert Sharpe, Brian Cuthbertson, James Downar.

**Research Funding:**

1. 2011 Jan - 2013 Jan **Co-Investigator**. STandard versus Accelerated initiation of Renal Replacement Therapy in Acute Kidney Injury (STARRT-AKI). Canadian Institute for Health Research (CIHR). PI: Wald, R. Collaborators: Sean Bagshaw; Neill Adhikari; Karen Burns; Jan Friedrich; Amit Garg; Michelle Hladunewich; Andrew House, Steven Lapinsky; Orla Smith; Kevin Thorpe; Robert Richardson. 275,000 CAD. [Grants].

**Peer Reviewed Publications:**

1. Kotsakis A, Lobos AT, Parshuram C, Gilleland J, Gaiteiro R, Mohseni-Bod H, Singh R, Bohn D; on behalf of the Ontario Pediatric Critical Care Response Team Collaborative. Implementation of a Multicenter Rapid Response System in Pediatric Academic Hospitals Is Effective. *Pediatrics* 2011 Jul 128(1):72-78.

**Abstracts:**

1. **International Pediatric Simulation Symposia and Workshop, Toulouse, France**  
**October 2011**  
Becoming and Educator in Simulation – Current Status and Future Direction

**Peer Reviewed Publications:**

1. Mehta S, Granton J, **Lapinsky SE**, Newton G, Bandayrel K, Little A, Siau C, Cook DJ, Ayers D, Singer J, Lee TC, Walley KR, Storms M, Cooper J, Holmes CL, Hebert P, Gordon AC, Presneill J, Russell JA; the Vasopressin and Septic Shock Trial (VASST) Investigators. Agreement in electrocardiogram interpretation in patients with septic shock. *Crit Care Med*. 2011;39:2080-2086.
2. Kuster SP, Katz KC, Blair J, Downey J, Drews SJ, Finkelstein S, Fowler R, Green K, Gubbay J, Hassan K, **Lapinsky SE**, Mazzulli T, McRitchie D, Pataki J, Plevneshi A, Powis J, Rose D, Sarabia A, Simone C, Simor A, McGeer A. When should a diagnosis of influenza be considered in adults requiring intensive care unit admission? Results from population-based active surveillance in Toronto. *Crit Care*. 2011;15:R182. [Epub ahead of print]
3. Malinowski AK, McGeer A, Robertson J, Sermer M, Farine D, **Lapinsky SE**, Maxwell C. H1N1 in Pregnancy: A Tertiary Care Centre Experience. *J Obstet Gynaecol Can*. 2011;33:698-704.
4. Bandayrel K, **Lapinsky S**, Christian M. Information Technology Systems for Critical Care Triage and Medical Response During an Influenza Pandemic: A Review of Current Systems. *Disaster Med Public Health Prep*. 2011 Jun 27
5. **Lapinsky SE**. Acute respiratory failure in obstetric patients. *Curr Womens Health Rev* 2011; 7:143-150.
6. Hui D, Morrison LJ, Windrim R, Lausman AY, Hawryluck L, Dorian P, Lapinsky SE, Halpern SH, Campbell DM, Hawkins P, Wax RS, Carvalho JC, Dainty CN, Maxwell C, Jeejeebhoy FM. The American Heart Association 2010 Guidelines for the Management of Cardiac Arrest in Pregnancy: Consensus recommendations on implementation strategies. *J Obstet Gynecol Canada* 2011;33:858-63
7. Lapinsky SE, Hallett D, Collop N, Drover J, Lavercombe P, Leeman M, Moola S, Paruk F, Bernstein M, Moodley J. Evaluation of standard and modified severity of illness scores in the obstetric patient. *J Crit Care*. 2010 Nov 22. [Epub ahead of print]

**Abstracts:**

1. Gopal, Archana; Yeung, Melanie; Lapinsky, Stephen; Cuthbertson, Brian H.; Granton, John; Steel, Andrew; Cafazzo, Joseph. DESIGN AND EVALUATION OF AN ELECTRONIC VITAL SIGNS CAPTURE AND SURVEILLANCE SYSTEM. *Critical Care Canada Forum* 2011

**Presentations/Lectures:**

1. 2011 April Emirates Critical Care Conference, Dubai, UAE  
"Workshop: Data, Information and Knowledge Management in Critical Care"
2. 2011 Nov Critical Care Canada Forum, Toronto  
"NIV overview: indications and interfaces"  
"Lung symptoms, pregnancy and the ICU"
3. 2011 Nov Medical Disorders in Pregnancy, Maternal-Fetal Medicine, Mount Sinai Hospital, Toronto  
"Pregnant patients and the ICU"

**Research Funding:**

1. 2011 Jul - 2013 Jun **Co-Investigator**. Standard versus Accelerated initiation of Renal Replacement Therapy in Acute Kidney Injury (STARRT-AKI). *Canadian*

Institutes of Health Research (CIHR). PI: Wald, Ron. 227,720 CAD. [Clinical Trials].

2. 2011 Jul - 2012 Jun **Co-Investigator**. Clinical prediction models for critically ill pregnant women: MEOWS and CIPHER. Canadian Institutes of Health Research (CIHR). Maternal Health Catalyst Grant. PI: Peter von Dadelszen. 100,000 CAD. [Clinical Trials].
3. 2010 - 2012 Collaborative H1N1 influenza adjuvant treatment (CHAT) pilot trial. PSI, CIHR  
PI: Dr. J. Marshall
4. 2008-2013 Natural Sciences and Engineering Research Council of Canada (NSERC). NSERC Strategic Network: Healthcare support through information technology enhancements. PI: Dr. D. Plant. **Collaborator**. \$5,000,000. [Grants].

***Book Chapters:***

1. **Bernard Lawless, Stuart F. Reynolds:** Creating Process and Policy Change in Healthcare. In: Textbook of Rapid Response Systems. (Devita, Hillman, Bellomo: eds.) Springer, New York, 2011: pp 438. **CPA**

***Presentations/Lectures:***

1. London Health Sciences Corporation, London, Ontario, Jun 10, 2011. Challenges in Critical Care.

***Research Funding:***

1. Knowledge Synthesis of Implementation Strategies for Critically Ill Patients (the Kritical Study). **Sinuff, T.**, Garland A, Muscedere J, Rubinfeld G, Lawless B, Dodek P, Heyland D, Cook D, Stewart T: CHIR. (\$96,672 2009 - 2011.)
2. Trauma System Development in Canada: Overcoming the Challenges of Geography Through an Evaluation of Structures and Process. **Nathens A**, Rubinfeld G, Morrison LM, Gagliardi A, Pong R, Schuurman N, Cusimano M, Hameed M, Lawless B, Peters P, Snider C, Tallon J, Schwartz B, Pandya A: CIHR. (\$2,264,139 2010 - 2015.)

***Peer Reviewed Publications:***

1. Rodriguez-Arias D, Smith MJ and **Lazar NM**. Donation after circulatory death: burying the dead donor rule. Am J Bioeth. 2011 Aug;11(8):36-43. **Co-Principal Author**.

***Presentations/Lectures:***

1. 2011 Nov 13 **Invited Speaker**. Dead Donor Rule: Time to bury it? Canadian Critical Care Forum. Toronto, Ontario, Canada. Presented at the annual resident day update. (Continuing Education).
2. 2011 Sep 29 **Invited Speaker**. Conflict Resolution in the ICU. International Fellowship Program, Mount Sinai Hospital and UHN. Toronto, Ontario, Canada.
3. 2011 Aug 12 **Invited Speaker**. Patient centred, value based, goal directed care planning. Meet the professor, Mount Sinai Hospital and UHN. Toronto, Ontario, Canada.
4. 2011 Jul 5 **Invited Speaker**. Summer Physiology Series; Shunt, Deadspace. University of Toronto, Critical Care Program. Toronto, Ontario, Canada.

**Peer Reviewed Publications:**

1. Schmidt EP, **Lee W. L.**, Zemans R. L., Yamashita C., Downey G.P. On, around, and through: neutrophil-endothelial interactions in innate immunity. *Physiology* 2011;26(5):334-47. **Coauthor or Collaborator**. I was responsible for the section on transcellular leukocyte migration (about 40% of the article).
2. Goldenberg N, Steinberg B, Slutsky A, **Lee WL**. Broken Barriers - A New Take on Sepsis Pathogenesis. *Science Translational Medicine* 2011;3(88):88ps25. (Trainee Publication) **Senior Responsible Author**. (citation is duplicated above)
3. **Lee WL**, Liles WC. Endothelial activation, dysfunction and permeability during severe infections. *Current Opinion in Hematology* 2011;18:191-6. **Principal Author**.

**Presentations/Lectures:**

1. 2011 May **Supervisor**. BisC from Mycobacterium tuberculosis has a role in fatty acid metabolism. American Society of Microbiology. New Orleans, United States. Presenter(s): Tran V, Burke A, Liu J, **Lee WL**. (Trainee Presentation).
2. 2011 Nov **Invited Speaker**. Microvascular leak - an unrecognized therapeutic target in sepsis. Critical Care Canada Forum (international clinical and research meeting). Canada.
3. 2011 Sep **Invited Speaker**. The start of clinician-scientist training. Clinician Investigator Trainee Association of Canada. Canada.
4. 2011 Jun **Supervisor**. Critical Care Medicine Research Day. Toronto, Canada. Presenter(s): Susan M. Armstrong. (Trainee Presentation). **Winner, Best Poster Presentation (Basic Science) – her second year in a row.**
5. 2011 Jun **Supervisor**. Examining superinfection: reduced neutrophil transendothelial migration following infection with influenza virus. Summer Student Research Day, Keenan Research Centre, St. Michael's Hospital. Presenter(s): Adrian Budhram (summer student). (Trainee Presentation). **Honourable Mention, Poster Presentation**

**Research Funding:**

1. 2011 Jun - 2013 Jun **Principal Investigator**. Pathogenesis of serious infections with influenza: role and mechanisms of microvascular leak. Physicians' Services Incorporated Foundation. Collaborators: Dr. Theo Moraes, Dr. Lucy Osborne. 170,000 CAD. [Grants].
2. 2011 Apr - 2014 Apr **Principal Investigator**. Pathogenesis of severe disease from influenza - role and mechanisms of microvascular leak. Early Research Award, Ministry of Research and Innovation (Ontario). 150,000 CAD. [Grants].
3. 2010 Jul - 2011 Jun **Principal Investigator**. Influenza infection of human endothelium leads to microvascular leak: cellular and molecular mechanisms. Ontario Thoracic Society. Collaborators: Dr. Theo Moraes, Hospital for Sick Children. 50,000 CAD. [Grants]  
*Top-rated grant (basic and clinical research) nation-wide.*
4. 2010 Jun - 2013 Jun **Co-Investigator**. Unraveling the role of SDF-1/CXCR4 signaling in diabetic nephropathy. Canadian Diabetes Association. Collaborators: Dr. Andrew



Advani. 300,000 CAD. [Grants].

5. 2009 Jul - 2012 Jun **Principal Investigator.** CIHR Clinician Scientist Phase II. CIHR. 300,000 CAD. [Grants].

6. 2009 Apr - 2012 Mar **Principal Investigator.** Determining the mechanisms of resistance of Mycobacterium tuberculosis to innate immunity: role of BisC. J. P. Bickell Foundation. 60,000 CAD. [Grants].

7. 2008 Feb - 2013 Jan **Principal Investigator.** Determining the role of BisC in the resistance of Mycobacterium tuberculosis to innate immunity. Dean's Fund, University of Toronto. 10,000 CAD. [Grants].

**Peer Reviewed Publications:**

1. Papia G, Fan J, Kapus A, Szaszi K, **Marshall JC**, Tawadros P, Ailenberg M, Rotstein OD: Altered inhibitory kappa-B alpha expression in alveolar macrophages following resuscitated hemorrhagic shock. *Shock* 2011; 35(2):171-177.
2. **Marshall JC**, Reinhart K: The Global Sepsis Alliance: Building new collaborations to confront an under-recognized threat. *Surg. Infect.* 2011; 12(1):1-2.
3. Burns KEA, Chant C, Smith O, Cuthbertson B, Fowler R, Cook DJ, Kruger P, Webb S, Alhashemi J, Dominguez-Cherit G, Zala C, Rubenfeld GD, **Marshall JC**: Collaborative H1N1 Adjuvant Treatment (CHAT) Pilot Trial: A Canadian Critical Care Trials Group Project in collaboration with the International Forum for Acute Care Trialists. *Trials* 2011; 12(1):70
4. Bloos F, **Marshall JC**, Dellinger RP, Vincent J-L, Gutierrez G, Rivers E, Balk RA, Laterre P-F, Angus DC, Reinhart K, Brunkhorst FM: Multinational, observational study of procalcitonin in ICU patients with pneumonia requiring mechanical ventilation: A multicenter observational study. *Crit.Care* 2011; 15(2):R88.
5. Chant C, Smith OM, **Marshall JC**, Friedrich O: Relationship of catheter-associated urinary tract infection to mortality and length of stay in critically ill patients: A systematic review and meta-analysis of observational studies. *Crit. Care Med.* 2011; 39(5):1167-1173.
6. Malam Z, Parodo J, Waheed F, Szaszi K, Kapus A, **Marshall JC**: Pre-B cell colony-enhancing factor (PBEF/Nampt/Visfatin) primes neutrophils for augmented respiratory burst activity through partial assembly of the NADPH oxidase. *J. Immunol.* 2011; 186(11):6474-6484.
7. Lacroix J, Hébert P, Fergusson D, Tinmouth A, Blajchman MA, Callum J, Cook D, **Marshall JC**, McIntyre L, Turgeon AF for the ABLE Study Group: The Age of Blood Evaluation (ABLE) randomized controlled trial: Study Design. *Transfus. Med. Rev.* 2011; 25(3):197-205.
8. Seely AJ, Kauffman SA, Bates JH, Macklem PT, Suki B, **Marshall JC**, Batchinsky AI, Perez-Velazquez JL, Seiver A, McGregor C, Maksym G, Kamath MV, Similowski T, Buchman TG, Letellier C, Filoche M, Frasc M, Straus C, Glass L, Godin PJ, Morris JA, Sow D, Nenadovic V, Arnold RC, Norris P, Moorman JR: Proceedings from the Montebello Roundtable discussion. *J. Crit. Care* 2011; 26(3):325-327.
9. Hanberger H, Walther S, Leone M, Barie PS, Rello J, Lipman J, **Marshall JC**, Anzueto A, Sakr Y, Pickkers P, Fellieter P, Engoren M, Vincent J-L, for the EPIC II Investigators: Increased mortality associated with methicillin-resistant *Staphylococcus aureus* (MRSA) infection in the intensive care unit: Results from the EPIC II study. *International Journal of Antimicrobial Agents* 2011; 38(4):31-35.

**Presentations/Lectures:**

1. 40<sup>th</sup> Annual Congress, Society of Critical Care Medicine, San Diego CA, January 17, 2011: Toll-like receptors: Recognizing danger in the innate immune system.
2. Wellcome Trust/International Severe Acute Respiratory Infection Consortium, London UK, February 14-16, 2011. The International Forum for Acute Care Trialists (InFACT).
3. Visiting Professor, Department of Critical Care Medicine, University of Pittsburgh School of Medicine, February 22, 23, 2011. 1. The caspase-8 survivalsome: Mechanisms of prolonged

- neutrophil survival in trauma and sepsis. 2. Catalyzing global collaboration in critical care research: The InFACT H1N1 initiative.
4. 2011 Canadian Critical Care Conference, Whistler, B.C. February 23-25, 2011. 1. Empiric antibiotics for ICU-acquired infections: Balancing risks and benefits. 2. Source control for complex abdominal infections.
  5. 31<sup>st</sup> International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium, March 22-25, 2011. 1. The epidemiology of sepsis in 2011. 2. Outcome measures for clinical trials in critical care: More than mortality.
  6. 8<sup>th</sup> National Congress on Advances in Anesthesiology and Resuscitation, Shanghai, China, March 26, 2011. Sepsis: From basic biology to clinical management.
  7. 31<sup>st</sup> Annual Conference, Korean Society of Critical Care Medicine/11<sup>th</sup> Joint Congress KSCCM/JSJCCM, Seoul, Korea April 22-23, 2011. 1. Severe H1N1 infection: An international perspective. 2. What have we learned from the H1N1 pandemic? 3. Sepsis: Current therapy, future prospects.
  8. CIHR/ICRC Pulmonary Network Meeting, Montreal Quebec, May 5, 2011: The Canadian Critical Care Trials Group.
  9. 9<sup>th</sup> International Symposium on Emergency Medicine and the Critically Ill Patient, Santiago, Chile, May 12-14, 2011. 1. Critical illness is an iatrogenic state. 2. Damage control for the intensivist. 3. Management of severe pancreatitis.
  10. Canadian Critical Care Trials Group Research Education Day, St. Alexis-des-Monts, Québec, June 14, 2011. Building an academic career.
  11. XIV Foro Internacional de Medicina Crítica, Mexico City, Mexico, July 8-10, 2011. 1. PIRO: A staging system for critical illness. 2. Resuscitation and deresuscitation. 3. Damage control for the intensivist.
  12. 53<sup>rd</sup> Annual Meeting, Israeli Society of Critical Care Medicine, Nazareth, Israel, July 14-16, 2011. 1. The immune response in critical illness. 2. Principles of source control.
  13. COPICON Congress 2011, Durban South Africa, July 27 – 31, 2011. 1. Critical illness is an iatrogenic state. 2. Apoptosis in the pathogenesis of critical illness.
  14. Weimar Sepsis Update 2011, Weimar, Germany, September 7-10, 2011. How do I treat sepsis in a surgical patient?
  15. 24<sup>th</sup> Annual Congress, European Society of Intensive Care Medicine, Berlin, Germany, October 1-5, 2011. 1. Building a research team. 2. Grant writing: What you should know. 3. The concept of run-in trials. 4. Care of the septic patient is best advanced by targeting the doctor.
  16. Sepsis 2011 Beijing, China October 27-28, 2011. 1. Clinical trials in sepsis: A critique. 2. The role of the neutrophil. 3. The PROWESS Shock Trial.
  17. Critical Care Canada Forum, Toronto, Canada, November 14 – 16, 2011. 1. Active deresuscitation: Does it have a role? 2. I'm a physician. What quality means to the practitioner. 3. InFACT: Global collaboration in critical care research.
  18. IX Congreso Panamericano e Ibérico de Medicina Crítica y Cuidado Intensivo, Cartagena, Colombia, November 30 – December 2, 2011. 1. Host-microbial interactions in critical illness. 2. PIRO: A staging model for critical illness. 3. Damage control for the intensivist. 4.

Resuscitation and deresuscitation. 5. InFACT: Global collaboration in critical care research.

**Research Funding:**

1. Age of blood evaluation (ABLE) trial in the resuscitation of critically ill patients (PI Dr. Jacques Lacroix) Canadian Institutes of Health Research \$2,927,294, 2008-2011
2. Characterization of a novel, caspase-8-dependent survival pathway in inflammatory neutrophils. Canadian Institutes of Health Research (\$100,277/year, 2009-2014)
3. The RECOVER Program: Phase I Towards RECOVER – Outcomes and needs assessment in survivors of prolonged mechanical ventilation and their caregivers. (Co-investigator; PI Herridge MS, Cameron JI) Canadian Institutes of Health Research (\$704,367, 2009-2013)
4. Influenza-and H1N1-Related Critical Illness - Demand and Capacity in the Health Care System: the Canadian ICU Flu Study (Co-investigator; PIs Drs. Robert Fowler, Philippe Jouvett) Canadian Institutes of Health Research; \$597,681 2009-2011.
5. The Collaborative H1N1 Adjuvant Therapy (CHAT) Trial: Rosuvastatin versus placebo as adjuvant therapy for severe H1N1 infection. (Principle Investigator; Co-investigator Dr. Karen Burns) Canadian Institutes of Health Research; \$200,000, 2010-2011.
6. EPITEC - Epidemiology of ThromboEmbolism in Critical care. (Co-investigator, PI Dr. Deborah Cook) Canadian Institutes of Health Research; \$30,000 2010/2011
7. The efficacy, cost-effectiveness and ecological impact of Selective Decontamination of the Digestive tract in critically ill patients treated in the Intensive Care Unit (The SuDDICU study) PHASE 2- An exploratory study of the perceived risks, benefits and barriers to the use of SDD in Canadian critical care units. (Co-investigator; PI Dr. Brian Cuthbertson) Canadian Institutes of Health Research; \$66,000 2010/2011.
8. Weaning and Variability Evaluation (WAVE)- a multicenter evaluation of altered heart rate and respiratory rate variability to predict extubation failure (Co-investigator; PI Dr. Andrew Seely) Canadian Institutes of Health Research; \$98,245 2010/2011.
9. Animals, Humans, and the Continuity of Evidence: A Study of Clinical Translation (Co-investigator, PIs Jonathan Kimmelman and Dean A Fergusson) Canadian Institutes of Health Research; \$273,952, 2011/2014

**Peer Reviewed Publications:**

1. Fawzy H, Fukumatchi K, **Mazer CD**, Harrington A, Latter D, Bonneau D, Errett L. Complete Mapping of The Tricuspid Valve Apparatus Using Three -Dimensional Sonomicrometry. *J Thorac Cardiovasc Surg* 2011;141(4):1037-43.
2. Hall R, **Mazer CD**. Antiplatelet drugs: A review of their pharmacology and management in the perioperative period. *Anesth Analg* 2011;112(2):292-318.
3. Shehata N, **Mazer CD**, Thorpe KE. Blood transfusion and cardiac surgery. *JAMA* 2011;305(4):357-358.
4. **Mazer CD**, Leong-Poi H, Chhina T, Alfardan Z , Lapierre H, Wang Z, Jackson ZS, Qiang B, Mahoney J, Latter D, Hare GMT, Strauss BH, Teitel J. Recombinant factor VIIa affects anastomotic patency of vascular grafts in a rabbit model. *J Thorac Cardiovasc Surg* 2011;142(2):418-23.
5. Ferraris VA, Brown JR, Despotis GJ, Hammon JW, Reece TB, Saha SP, Song HK, Clough ER, Shore- Lesserson LJ, Goodnough LT, **Mazer CD**, Shander A, Stafford-Smith M, Waters J, Baker RA, Dickinson TA, Fitzgerald DJ, Likosky DS, Shann KG. 2011 update to the Society of Thoracic Surgeons and the Society of Cardiovascular Anesthesiologists Blood Conservation Clinical Practice Guidelines. *Ann Thorac Surg* 2011;91(3):944-82.
6. Klein DJ, Briet F, Nisenbaum R, Romaschin AD, **Mazer CD**. Endotoxemia related to cardiopulmonary bypass is associated with increased risk of infection after cardiac surgery: a prospective observational study. *Crit Care* 2011;15(1):R69.
7. Herridge MS, Tansey CM, Matte A, Tomlinson G, Diaz-Granados N, Cooper A, Guest CB, **Mazer CD**, Mehta S, Stewart TE, Kudlow P, Cook D, Slutsky AS, Cheung AM, and the Canadian Critical Care Trials Group. Functional disability five years after acute respiratory distress syndrome. *N Engl J Med* 2011;364(14):1293-304.
8. Wiesenthal JD, Fazio LM, Perks AE, Blew BD, **Mazer D**, Hare G, Honey RJ, Pace KT. Effect of pneumoperitoneum on renal tissue oxygenation and blood flow in a rat model. *Urology* 2011;77(6):1508.e9-15.
9. Backman S, Baker A, Beattie S, Brasher P, Bryson G, Cheng D, Crawford M, Deschamps A, Donati F, Drolet P, Gelb AW, Grocott H, Hare G, Hébert P, Karkouti K, Lessard M, **Mazer D**, de Médicis E, Merry A, Miller DR, Moher D, Morley-Forster P, Plaud B, Preston R, Rashid S, Sladen R, Tsui B, Werner C; 2011 Editorial Board, Canadian Journal of Anesthesia. 2011 Canadian Journal of Anesthesia Guide for Authors. *Can J Anaesth* 2011 Jul;58(7):668-696.
10. Pavenski K, Hare GMT, **Mazer CD**. Erythropoietic neuroprotection: Holy Grail or potential to fail? *Int Care Med* 2011;9(2011):1403-5.
11. Shehata N, Burns LA, Nathan H, Hebert P, Hare GMT, Fergusson D, **Mazer CD**. A randomized controlled pilot study of adherence to transfusion strategies in cardiac surgery. *Transfusion* 2011;52(1):91-9.
12. El Beheiry MH, Heximer SP, Voigtlaender-Bolz J, **Mazer CD**, Connelly KA, Wilson DF, Beattie

WS, Tsui AK, Zhang H, Golam K, Hu T, Liu E, Lidington D, Bolz SS, Hare GM. Metoprolol impairs resistance artery function in mice. *J Appl Physiol*. 2011 Jul 28. [Epub ahead of print] PubMed PMID: 21799135.

13. Bokesch PM, Szabo G, Wojdyga R, Grocott HP, Smith PK, **Mazer CD**, Veticaden S, Wheeler A, Levy JH. Phase 2 Prospective, randomized, double-blind trial comparing the effects of tranexamic acid with ecallantide on blood loss from high-risk cardiac surgery with cardiopulmonary bypass (CONSERV-2 Trial). *J Thorac Cardiovas Surg*. 2011 July 1 PMID: 21724197
14. Tsui AKY, Marsden PA, **Mazer CD**, Adamson SL, Henkelman RM, Ho JJD, Wilson DF, Heximer SP, Connelly KA, Bolz SS, Lidington D, El-Beheiry MH, Dattani ND, Chen KM, Hare GMT. Priming of hypoxia inducible factor by neuronal nitric oxide synthase is essential for adaptive responses to severe anemia. *Proc Natl Acad Sci (USA)* 2011;108(42):17544-9.

### **Abstracts:**

1. Trop S, Marshall J, Rotstein O, Slutsky A, **Mazer D**, Dumont DJ, Bourdeau A, Verma S. Prolonged cardiovascular system failure in South Asians undergoing cardiopulmonary bypass correlates with prolonged inflammation and increased TLR-4 mediated signaling. Presented at Canadian Cardiovascular Congress, October 2011 Vancouver, BC.
2. Hu T, **Mazer D**, Leong-Poi H, Liu E, Fujii H, Beattie S, Hare GMT.  $\beta$ 1-antagonism preserved brain perfusion in anemic rats. Presented at the CAS annual meeting, Toronto, June 24-28, 2011.
3. Lecker I, Wang D-S, Chen X, **Mazer D**, Orser B. Antifibrinolytic drugs inhibit glycine receptors in mouse neurons. Presented at the CAS annual meeting, Toronto, June 24-28, 2011.
4. Kim N, Halperin ML, Cheema-Dhadli S, Hare GM, **Mazer D**. Hypoxia-induced water diuresis in rats: role of vasopressin. Presented at the CAS annual meeting, Toronto, June 24-28, 2011.
5. Tsui AKY, Marsden PA, Henkelman RM, **Mazer CD**, Hare GMT. Utilizing HIF-(ODD) Luciferase mice to determine the hypoxic threshold after recovery from hemodilutional anemia. Society of Cardiovascular Anesthesiologists annual meeting. April 30-May 4, 2011. Savannah, GA.
6. Tsui AKY, Marsden PA, Henkelman RM, Lee KM, **Mazer CD**, Hare GMT. Differences in organ specific HIF- $\alpha$  expression before and after acute anemia in HIF- $\alpha$  (ODD) Luciferase mice. IARS Annual Meeting, May 2011 Vancouver, BC.
7. Hu T, **Mazer CD**, Liu E, Fujii H, Leong-Poi H, Beattie WS, **Hare GMT**. Low dose Nebivolol preserved brain perfusion in hemodiluted rats. Canadian Society of Cardiac Surgeons Annual Meeting, October 22-26, 2011, Vancouver BC.
8. Trop S, Marshall J, Rotstein O, Slutsky A, **Mazer D**, Dumont DJ, Bourdeau A, Verma S. "Prolonged cardiovascular system failure in South Asians undergoing cardiopulmonary bypass correlates with prolonged inflammation and increased TLR4-mediated signaling. – MD." Presented at Critical Care Canada Forum, November 2011.
9. Shehata N, Rothwell D, Li L, Forster A, Wilson K, **Mazer CD**, Naglie G, Fowler R, Tu J, Henry D, Hebert PC, Rubens F. "Anemia: Does it impact hospital readmissions following coronary artery bypass surgery. *Transfusion* 2011;51 Suppl 183A

**Presentations/Lectures:**

1. Update on blood conservation in cardiac surgery." Canadian Society for Transfusion Medicine Conference, Toronto 2011, May 12-15, 2011.
2. "The bleeding patient after cardiac surgery – how to treat?" 13<sup>th</sup> Capital City Conference of the German Society of Anesthesiology and Intensive Care Medicine. Berlin, Germany September 11-13, 2011.
3. "Transfusion complications and transfusion guideline in cardiac surgery." 9<sup>th</sup> Meeting of the Asian Society of Cardiothoracic Anesthesia. Taipei, Taiwan. September 30-October 2, 2011.
4. "Coagulation management in cardiac surgery: HIT and heparin resistance." 9<sup>th</sup> Meeting of the Asian Society of Cardiothoracic Anesthesia. Taipei, Taiwan. September 30-October 2, 2011.
5. "Hyperglycemia during cardiac surgery." 9<sup>th</sup> Meeting of the Asian Society of Cardiothoracic Anesthesia. Taipei, Taiwan. September 30-October 2, 2011
6. "New hemostatic agents – panel on blood management." ASA Annual Meeting, Chicago IL. Oct 16, 2011.
7. "Sedation – The Basics – Mechanisms, Methods and Current Approaches: Procedural Sedation – The Essentials". Presented at Critical Care Canada Forum, November 2011.

**Research Funding:**

1. Improving outcomes in cardiac surgery: strategies to reduce tissue hypoxia. University of Toronto, Department of Anesthesia 2011 Merit Award Research Competition, 2011-2013
2. Transfusion requirements in cardiac surgery (TRICS II). Co-principal investigator. CIHR: 2011-2014.
3. Plasma utilization in cardiac surgery (PUCS): a multicentre observational study. Co-applicant. CIHR 2011-2012.
4. Steroids in Cardiac Surgery (SIRS) Trial. Site- principal investigator. CIHR. 2011-2013
5. Translational studies of mechanisms of renal dysfunction following cardiopulmonary bypass: The role of tissue hypoxia. University of Toronto, Department of Anesthesia 2009 Merit Award Research Competition, 2009-2011.
6. Platelet transfusion and cardiac surgery. (Co-investigator). Canadian Blood Services 2010-2011

**Peer Reviewed Publications:**

1. Keenan SP, Sinuff T, Burns K, Muscedere J, Kutsogiannis J, **Mehta S**, Dodek P, Cook DJ, Ayas N, Adhikari N, Hand L, Scales D, Pagnotta R, Lazosky L, Rucker G, Dial S, Laupland K, Sanders K, for The Canadian Critical Care Trials Group (CCCTG) and Canadian Critical Care Society (CCCS) Noninvasive Ventilation Guidelines Group. Clinical practice guidelines for noninvasive positive pressure ventilation (NPPV) and noninvasive continuous positive airway pressure (nCPAP) in the acute care setting. *Can Med Assoc J* 2011; 22;183(3):E195-214. Epub February 14, 2011.
2. Dalteparin versus Unfractionated Heparin in Critically Ill Patients. The PROTECT Investigators for the Canadian Critical Care Trials Group and the Australian and New Zealand Intensive Care Society Clinical Trials Group. *N Engl J Med* 2011; 364:1305-1315.
3. Herridge MS, Tansey CM, Matte A, Tomlinson G, Diaz-Granados N, Cooper A, Guest CB, Mazer CD, **Mehta S**, Stewart TE, Kudlow P, Cook D, Slutsky AS, Cheung AM, and the Canadian Critical Care Trials Group. Functional disability five years after Acute Respiratory Distress Syndrome. *N Engl J Med* 2011; 364:1293-1304.
4. Burry L, Rose L, McCullagh I, Ferguson ND, Ferguson D, **Mehta S**. Daily sedation interruption versus no daily sedation interruption for critically ill adult patients requiring invasive mechanical ventilation for publication. *Cochrane Database of Systematic Reviews* 2011, Issue 6. Art. No.: CD009176.
5. **Mehta S**, Granton J, Lapinsky S, Newton G, Bandayrel K, Little A, Siau C, Cook DJ, Ayers D, Singer J, Walley KR, Storms M, Cooper DJ, Holmes CL, Hebert P, Gordon AC, Presneill J, Russell JA, for the Vasopressin and Septic Shock Trial (VASST) Investigators. Agreement in ECG interpretation in patients with septic shock. *Critical Care Medicine* 2011;39(9):2080-2086.
6. Warr J, Thiboutot Z, Rose L, **Mehta S**, Burry L. Current therapeutic uses, pharmacology, and clinical considerations of Neuromuscular Blocking Agents for critically ill adults. *Annals of Pharmacotherapy* 2011; 45: Epub August 9, 2011.
7. Adhikari NKJ, Bashir A, Lamontagne F, **Mehta S**, Ferguson ND, Zhou Q, Hand L, Czarnecka-Kujawa KJ, Cook DJ, Granton JT, Friedrich JO, Freitag A, Watpool I, Meade MO. High frequency oscillation in adults: a retrospective cohort study. *Critical Care Medicine* 2011;39 (12):2631-2644, epub July 14, 2011.
8. **Mehta S**, McCullagh I, Burry L. Current sedation practices: lessons learned from international surveys. *Anesthesiology Clinics* 2011; 29(4):607-624.

**Non Peer Reviewed Publications:**

1. Mah CL, Ferguson ND, Stewart TE, **Mehta S**. High Frequency Ventilation. In *Textbook of Critical Care*, Vincent J.L. Ed.: Elsevier Saunders, Philadelphia, 2011; Vol 6, pp 354-359.

**In Press:**

1. Summa C, Burry L, Carvalhana V, Bailie T, Hallett D, Hynes P, Ramganes S, **Mehta S**, Lapinsky S. Errors associated with intravenous infusions in a closed intensive care unit. *Can J Hosp Pharm* 2012 - In press.
2. McMullen SM, Meade M, Rose L, Burns K, **Mehta S**, Doyle R, Henzler D, for the Canadian Critical Care Trials Group (CCCTG). Partial ventilatory support modalities in acute respiratory failure: a systematic review. *PLoS ONE* 2012 - In press.

**Abstracts:**

1. D Heels-Ansdell, N Zytaruk, M Meade, **S Mehta**, R Hall, R Zarychanski, M Rocha, W Lim, F Lamontagne, L McIntyre, P Dodek, S Vallance, A Davies, J Cooper, D Cook for the PROTECT



- Investigators, CCCTG and ANZICS CTG. Pulmonary Embolism In Medical-Surgical ICU Patients. *Critical Care* 2011, 15 (Suppl 1):P19
- Hand L, Adhikari N, Cook DJ, **Mehta S**, Matte AL, McArdle T, Clarke F, Lamontagne F, Meade M, Ferguson ND. Initial ventilatory parameters for high frequency oscillation in a pilot RCT compared with recent historical controls. *Am J Respir Crit Care Med* 2011; 183:A1685.
  - Herridge MS, Chu LM, Matte AL, Chan L, Tomlinson G, Ferguson ND, **Mehta S**, Friedrich J, Adhikari N, Fowler R, Cook D, Rudkowski J, Meggison H, Abbey SE, Batt JA, dos Santos CC, Flannery JF, Leung G, Marshall JC, Moody AR, Rubenfeld G, Scales DC, Sinuff T, Slutsky AS, Cameron JI. Long-term patient outcomes after prolonged mechanical ventilation: The Towards RECOVER Study. *Am J Respir Crit Care Med* 2011; 183:A2380.
  - Cameron JI, Chan L, Czerwonka A, Chu LM, Matte AL, Ferguson ND, **Mehta S**, Friedrich J, Adhikari N, Fowler R, Cook D, Rudkowski J, Meggison H, Abbey SE, Batt JA, dos Santos CC, Flannery JF, Leung G, Marshall JC, Moody AR, Rubenfeld G, Scales DC, Sinuff T, Slutsky AS, Tomlinson G, and Herridge MS on behalf of the Towards RECOVER Investigators. Long-term outcomes after prolonged mechanical ventilation: Family Caregivers Outcomes from the Towards RECOVER Study. *Am J Respir Crit Care Med* 2011; 183:A3168.
  - Burry L, Steinberg M, Kim S, Devlin J, Ashley B-J, Smith O, Poretta P, Lee Y, Harvey J, Brown M, Cheema P, Wong Z, and **Mehta S** for the SLEAP Investigators and Canadian Critical Care Trials Group. Clinicians' perspectives on the use of a sedation protocol or daily sedative interruption in mechanically ventilated patients enrolled in a multicenter sedation trial. *Intensive Care Medicine* 2011; 37 (1): S83.
  - Crowther MA, Langevin S, Cooper JL, Dodek P, Muscedere J, Albert M, Khwaja K, Kutsiogiannis J, **Mehta S**, Klinger J, Friedrich J, McIntyre L, Ostermann M, Guyatt G, Zytaruk N, Heels-Ansdell D, Sheppard J, Cook DJ, and Warkentin TE. Laboratory HIT testing in critically ill patients. *Blood (American Society of Hematology Annual Meeting Abstracts)* 2011; 118: Abstract 198.
  - Burry L, Steinberg M, Kim S, Devlin J, Ashley B-J, Smith O, Poretta P, Lee Y, Harvey J, Brown M, Cheema P, Wong Z, and **Mehta S** for the SLEAP Investigators and Canadian Critical Care Trials Group. Clinicians' perspectives on the use of a sedation protocol or daily sedative interruption in mechanically ventilated patients enrolled in a multicenter sedation trial. *Critical Care Canada Forum, Toronto, November, 2011.*
  - Hand L, Adhikari N, Cook DJ, **Mehta S**, Matte AL, McArdle T, Clarke F, Lamontagne L, Meade M, Ferguson ND for the CCCTG. Initial ventilation parameters for high frequency oscillation in a pilot RCT compared with recent historical controls. *Critical Care Canada Forum, Toronto, November, 2011.*
  - Herridge MS, Chu LM, Matte AL, Chan L, Tomlinson G, Ferguson ND, **Mehta S**, Friedrich J, Adhikari N, Fowler R, Cook D, Rudkowski J, Meggison H, Abbey SE, Batt JA, dos Santos CC, Flannery JF, Leung G, Marshall JC, Moody AR, Rubenfeld G, Scales DC, Sinuff T, Slutsky AS, Cameron JI. Long-term patient outcomes after prolonged mechanical ventilation: The Towards RECOVER Study. *Critical Care Canada Forum, Toronto, November, 2011.*
  - Cameron JI, Chan L, Czerwonka A, Chu LM, Matte AL, Ferguson ND, **Mehta S**, Friedrich J, Adhikari N, Fowler R, Cook D, Rudkowski J, Meggison H, Abbey SE, Batt JA, dos Santos CC, Flannery JF, Leung G, Marshall JC, Moody AR, Rubenfeld G, Scales DC, Sinuff T, Slutsky AS, Tomlinson G, and Herridge MS on behalf of the Towards RECOVER Investigators. Long-term outcomes after prolonged mechanical ventilation: Family Caregivers Outcomes from the Towards RECOVER Study. *Critical Care Canada Forum, Toronto, November, 2011.*

#### **Presentations/Lectures:**

- Chest X-ray interpretation. Department of medicine subspecialty noon rounds, Mount Sinai Hospital, March 25, 2011.

2. On being a doctor. Lambton Kingsway Junior Middle School. April 8, 2011.
3. Clinical Research in the Medical Surgical ICU. ICU Respiratory Therapist Research Education Day. Mount Sinai Hospital, May 18, 2011.
4. Non-invasive ventilation. Department of Medicine subspecialty noon rounds, Mount Sinai Hospital, June 13, 2011.
5. Chest X-ray interpretation. Department of medicine subspecialty noon rounds, Mount Sinai Hospital, September 8, 2011.
6. Clinical Research in the Medical Surgical ICU. ICU Respiratory Therapist Research Education Day. Mount Sinai Hospital, September 28, 2011.
7. Respiratory failure. Department of Medicine subspecialty noon rounds, Mount Sinai Hospital, December 9, 2011.
8. Results of the SLEAP Study – Plenary session. Critical Care Canada Forum, Toronto, November 14, 2011.
9. 13<sup>th</sup> Annual International Meeting of Respiratory Care Indonesia (Respina) 2011, Jakarta, Indonesia, December 2011. Invited as distinguished speaker – Declined.
10. Invited to facilitate Critical Care thematic poster session. American Thoracic Society meeting, Denver, Colorado, May 2011 - Declined.
11. Poster presentation judge, University of Toronto Critical Care Medicine Research Day Program, June 21, 2011.
12. InFact LKSKI ISARIC Colloquium on Pandemic Research Preparedness. June 27-29, 2011. Invited participant.
13. Consensus conference participant: Acute Care Sedation - Targeting Delirium and Duration. Critical Care Canada Forum Toronto, November 14, 2011.

**Research Funding:**

1. SLEAP: A randomized trial of daily sedative interruption in critically ill, mechanically ventilated patients being managed with a sedation protocol.  
Principal Investigator  
Granting agency: CIHR application # 171322, 2007-2011  
Year 1 funds: \$465,914, Total funds: \$999,832
2. Towards RECOVER -Long-term outcomes and needs assessment in survivors of prolonged mechanical ventilation and their caregivers.  
Co-Investigator. PIs Drs. M. Herridge and J. Cameron.  
Granting agency: Alternate Funding Plan Innovation Fund- Ministry of Health- Province of Ontario; \$185,000 for Funding period 04/09-03/11
3. OSCILLation for ARDS Treated Early (OSCILLATE) Trial  
Co-Investigator. PI Dr. M. Meade.  
Granting Agency: CIHR  
2009-2014, Year 1 \$691,537
4. Towards RECOVER - Long-term outcomes and needs assessment in survivors of prolonged mechanical ventilation and their caregivers.  
Co-Investigator. PIs Drs. M. Herridge and J. Cameron.  
Granting agency: CIHR Fall 2008 Priority Announcement from the Institute of Health Services and Policy Research.  
2009-2011: \$754,357
5. SLEAP-PS: Psychological morbidity associated with two sedation strategies in the critically-ill.  
Principal Investigator.  
Granting agency: Canadian Intensive Care Foundation.

Funding period March 2010 – April 2011, Total funds \$25,000.

6. SLEAP- Sleep, Cognition and Psychology (SLEAP-SCP): Psychological, cognitive and sleep morbidity following the use of a sedation protocol vs a sedation protocol and daily sedative interruption in critically ill, mechanically ventilated adults.  
Co-principal Investigator, with Dr. Jonathan Hunter.  
Granting agency: CIHR Operating Grant Program  
Funding period: Oct 2010 – Sept 2012, Total funds \$63,494
7. EPITEC - Epidemiology of ThromboEmbolism in Critical care.  
Co-Investigator. PI: Dr. D. Cook  
Granting agency: CIHR  
Funding period: Oct 2010 – Sept 2011, Total funds \$63,899
8. Daily sedation interruption versus no daily sedation interruption for critically ill adult patients requiring invasive mechanical ventilation: A systematic review.  
Co-Investigator, PI Dr. Lisa Burry  
Granting agency: Canadian Society of Hospital Pharmacists Research and Education Foundation  
Funding period: January 13, 2011 – January 2012. Total funds \$3,500.
9. A prospective evaluation of the association between psychoactive medications and delirium in critically ill adults.  
Co-investigator. PI Dr. Lisa Burry  
Granting agency: University of Toronto Rx & D Pilot Research Grant in Clinical Pharmacy Research for 2011  
Funding period: May 3, 2011 – May 2012. Total funds \$24,985.
10. Antimicrobial Stewardship Programs (ASP) in Intensive Care units in Ontario Academic Hospitals.  
Co-investigator, PI Dr. Andrew Morris  
Granting Agency: Council of Academic Hospitals of Ontario (CAHO).  
Funding period: December 2011 to November 2012. Total funds \$768,000.

***Presentations/Lectures:***

1. **National Conference of Pediatric Critical Care, Hyderabad, India, 2011**  
Simulation as a learning tool in PICU
2. **National Conference of Pediatric Critical Care, Hyderabad, India, 2011**  
Training the Pediatric intensivist
3. **National Conference of Pediatric Critical Care, Hyderabad, India, 2011**  
Catheter Related Blood Stream Infections
4. **National Conference of Pediatric Critical Care, Hyderabad, India, 2011**  
Workshop on Simulation of Pediatric emergencies – Faculty
5. **National Conference of Pediatric Critical Care, Hyderabad, India, 2011**  
Procedural Workshop - Faculty
6. **56<sup>th</sup> OMA Anesthesia Meeting, Toronto, 2011**  
Surviving Sepsis
7. **Department of Pediatric Grand Round, Hamad Medical Corporation, Doha, Qatar, 2011**  
Surviving Sepsis: The good, the bad and the ugly
8. **CDH Toronto Inaugural Meeting, Toronto, 2011**  
6 challenging cases, presenter/ facilitator
9. **Critical Care Research Rounds (Special Presentation on Education), Toronto, 2011**  
Procedures in Medical Education: Beyond ... “See one, teach one, kill one ...”
10. **Pediatric ORNGE Education Day, 2011**  
Pulmonary Hypertension: How do you handle the transport?
11. **CONFES Rounds “The Academic Home of the Pediatric Medicine Fellowships”, 2011**  
Septic Shock: Applying physiology to management

***Peer Reviewed Publications:***

1. **Hadi Mohseni-Bod**, Tavey Dorofaeff, Peter Cox, "Infections in the Pediatric Intensive Care Unit", chapter in "Textbook of Clinical Pediatrics", edited by Elzouki, A.Y., Stapleton, F.B., Whitley, R.J., Oh, W., Harfi, H.A., Nazer, H Springer Verlag, in publication, -**Hadi Mohseni-Bod**, Tavey Dorofaeff, Peter Cox, "Infections in the Pediatric Intensive Care Unit", chapter in "Textbook of Clinical Pediatrics", edited by Elzouki, A.Y., Stapleton, F.B., Whitley, R.J., Oh, W., Harfi, H.A., Nazer, H Springer Verlag, 2011
2. Afrothite Kotsakis, Anna-Theresa Lobos, Christopher Parshuram, Jonathan Gilleland, Rose Gaitero, **Hadi Mohseni-Bod**, Ram Singh, Desmond Bohn. "Implementation of a multicenter rapid response system in pediatric academic hospitals is effective". *Pediatrics* 2011 July; 128(1):72-8
3. **Hadi Mohseni-Bod**, Helena Frndova, Rose Gaitero, Helen Holtby, Desmond Bohn. "Evaluation of a new Pediatric Continuous Oximetry Catheter". *Pediatric Critical Care Medicine* 2011 July; 12(4):437-41

**Peer Reviewed Publications:**

1. Xiao W, Mindrinos MN, Seok J, Cuschieri J, Cuenca AG, Gao H, Hayden DL, Hennessy L, Moore EE, Minei JP, Bankey PE, Johnson JL, Sperry J, **Nathens AB**, Billiar TR, West MA, Brownstein BH, Mason PH, Baker HV, Finnerty CC, Jeschke MG, Lopez MC, Klein MB, Gamelli RL, Gibran NS, Arnoldo B, Xu W, Zhang Y, Calvano SE, McDonald- Smith GP, Schoenfeld DA, Storey JD, Cobb JP, Warren HS, Moldawer LL, Herndon DN, Lowry SF, Maier RV, Davis RW and Tompkins RG. A genomic storm in critically injured humans. *J Exp Med*. 2011 Dec 19;208(13):2581-90. Epub 2011 Nov 21. **Coauthor or Collaborator.**
4. Hill AD, Fowler RA and **Nathens AB**. Impact of Interhospital Transfer on Outcomes for Trauma Patients: A Systematic Review. *J Trauma*. 2011 Dec;71(6):1885-1901. **Senior Responsible Author.**
5. Nascimento B, Rizoli S, Rubenfeld G, Fukushima R, Ahmed N, **Nathens A**, Lin Y and Callum J. Cryoprecipitate transfusion: assessing appropriateness and dosing in trauma. *Transfus Med*. 2011 Dec;21(6):394-401. **Coauthor or Collaborator.**
6. Schneider EB, Efron DT, MacKenzie EJ, Rivara FP, **Nathens AB** and Jurkovich GJ. Premorbid statin use is associated with improved survival and functional outcomes in older head-injured individuals. *J Trauma*. 2011 Oct;71(4):815-9. **Coauthor or Collaborator.**
7. Knudson MM, Gomez D, Haas B, Cohen MJ and **Nathens AB**. Three thousand seven hundred thirty-eight posttraumatic pulmonary emboli: a new look at an old disease. *Ann Surg*. 2011 Oct;254(4):625-32. **Senior Responsible Author.**
8. Desai KH, Tan CS, Leek JT, Maier RV, Tompkins RG and Storey JD. Dissecting inflammatory complications in critically injured patients by within-patient gene expression changes: a longitudinal clinical genomics study. *PLoS Med*. 2011 Sep;8(9):e1001093. Epub 2011 Sep 13. **Coauthor or Collaborator.**
9. Ahn H, Singh J, **Nathens A**, MacDonald RD, Travers A, Tallon J, Fehlings MG and Yee A. Pre-hospital care management of a potential spinal cord injured patient: a systematic review of the literature and evidence-based guidelines. *J Neurotrauma*. 2011 Aug;28(8):1341-61. **Coauthor or Collaborator.**
10. Ingraham AM, Cohen ME, Raval MV, Ko CY and **Nathens AB**. Variation in quality of care after emergency general surgery procedures in the elderly. *J Am Coll Surg*. 2011 Jun;212(6):1039-48. **Senior Responsible Author.**
11. Haas B, Gomez D, Neal M, Hoeft C, Ahmed N, **Nathens AB**. Good neighbors? The effect of a level 1 trauma center on the performance of nearby level 2 trauma centers. *Ann Surg*. 2011 May;253(5):992-5. **Senior Responsible Author.**
12. Stelfox HT, Straus SE, **Nathens A** and Bobranska-Artiuch B. Evidence for quality indicators to evaluate adult trauma care: a systematic review. *Crit Care Med*. 2011 Apr;39(4):846-59. **Coauthor or Collaborator.**
13. Stapleton RD, Martin TR, Weiss NS, Crowley JJ, Gundel SJ, **Nathens AB**, Akhtar SR, Ruzinski JT, Caldwell E, Curtis JR, Heyland DK, Watkins TR, Parsons PE, Martin JM, Wurfel MM, Hallstrand TS, Sims KA, Neff MJ. A phase II randomized placebo-controlled trial of omega-3 fatty acids for the treatment of acute lung injury. *Crit Care Med*. 2011 Mar 17. **Coauthor or Collaborator.**

14. Xu W, Seok J, Mindrinos MN, Schweitzer AC, Jiang H, Wilhelmy J, Clark TA, Kapur K, Xing Y, Faham M, Storey JD, Moldawer LL, Maier RV, Tompkins RG, Wong WH, Davis RW, Xiao W. Inflammation and Host Response to Injury Large-Scale Collaborative Research Program. Human transcriptome array for high-throughput clinical studies. Proc Natl Acad Sci U S A. 2011 Mar 1;108(9):3707-12. **Coauthor or Collaborator**.
15. Haas B, Gomez D, Hemmila MR, **Nathens AB**. Prevention of complications and successful rescue of patients with serious complications: Characteristics of high performing trauma centers. J Trauma. 2011 Mar; 70(3):575-582. **Senior Responsible Author**.
16. Ingraham AM, Cohen ME, Raval MV, Ko CY, **Nathens AB**. Effect of trauma center status on 30-day outcomes after emergency general surgery. J Am Coll Surg. 2011 Mar;212(3):277-86. **Senior Responsible Author**.
17. Glavan BJ, Holden TD, Goss CH, Black RA, Neff MJ, **Nathens AB**, Martin TR and Wurfel MM. Genetic variation in the FAS gene and associations with acute lung injury. Am J Respir Crit Care Med. 2011 Feb 1;183(3):356-63. Epub 2010 Sep 2. **Coauthor or Collaborator**.
18. Gomez D, Haas B, Ahmed N, Tien H, **Nathens A**. Disaster preparedness of Canadian trauma centres: the perspective of medical directors of trauma. Can J Surg. 2011 Feb;54(1):9-16. **Senior Responsible Author**.
19. Haas B, Gomez D, Xiong W, Ahmed N, **Nathens AB**. External benchmarking of trauma center performance: have we forgotten our elders? Ann Surg. 2011 Jan;253(1):144-50. **Senior Responsible Author**.
20. Haut ER, Schneider EB, Patel A, Streiff MB, Haider AH, Stevens KA, Chang DC, Neal ML, Hoefft C, **Nathens AB**, Cornwell EE 3rd, Pronovost PJ, Efron DT. Duplex ultrasound screening for deep vein thrombosis in asymptomatic trauma patients: a survey of individual trauma surgeon opinions and current trauma center practices. J Trauma. 2011 Jan;70(1):27-33. **Coauthor or Collaborator**.
21. Ingraham AM, Cohen ME, Raval MV, Ko CY, **Nathens AB**. Comparison of hospital performance in emergency versus elective general surgery operations at 198 hospitals. J Am Coll Surg. 2011 Jan;212(1):20-28. **Senior Responsible Author**.
22. Harvey A, Bandiera G, **Nathens AB**, Leblanc VR. The Impact of Stress on Resident Performance in Simulated Trauma Scenarios. J Trauma. 2011. **Co-Principal Author**.

***In Press:***

1. Haas B, Gomez D, Stukel T, Rubinfeld G, **Nathens AB**. The mortality benefit of direct trauma center transport in a regional trauma system: a population based analysis. J Trauma. In Press. **Senior Responsible Author**.
2. Lenartowicz M, Parkovnick M, McFarlan A, Haas B, Straus SE, **Nathens AB**, Wong CL. An evaluation of a proactive geriatric trauma consultation service. Ann Surg. In Press. **Co-Principal Author**.
3. Stelfox HT, Straus SE, **Nathens AB**, Gruen RL, Hameed SM, Kirkpatrick A. Trauma Center Quality Improvement Programs in the United States, Canada and Australasia. Ann Surg. 2012. In Press. **Coauthor or Collaborator**.

4. Doumouras AG, Keshet I, **Nathens AB**, Ahmed N, Hicks CM. A crisis of faith? A review of simulation in teaching team-based, crisis management skills to surgical trainees. J Surg Educ. 2012 May-Jun;69(3). In Press. **Coauthor or Collaborator**.

#### **Book Chapters:**

1. **Nathens AB**, Maier RV. Critical care. In: Greenfield's Surgery: Scientific Principles and Practice, 5th edition. (Mulholland M, Lillemo K, Doherty G, Maier R, Upchurch G, Simeone D.: eds.) Lippincott Williams and Wilkins, Philadelphia. 2011. **Principal Author**.

#### **Multimedia:**

1. Haas B, Gomez D, Steel A, **Nathens A**. Ratio of units of red blood cells to fresh frozen plasma for severely injured patients undergoing massive transfusion (Protocol). Cochrane Database of Systematic Reviews. 2011, Issue 3. Art. No.: CD009033. **Senior Responsible Author**.

#### **Presentations/Lectures:**

1. 2011 Sep Do racial disparities in complications vary by site of care? American Association for the Surgery of Trauma. Chicago, Illinois, United States. Presenter(s): Haider AH, Schneider EB, Castillo R, Carlini A, Haut ER, Efron DT, Rivara FP, **Nathens AB**, Jurkovich GH, Cornwell E, MacKenzie EJ.
2. 2011 Sep Comparing methods for modeling access to trauma center care. 2011 Esri Health GIS Conference. Arlington, Virginia, United States. Presenter(s): Doumouras A, Gomez D, Haas B, Boyes DM, **Nathens AB**. (Trainee Presentation).
3. 2011 Apr Three thousand seven hundred thirty-eight posttraumatic pulmonary emboli: a new look at an old disease. American Surgical Association. Chicago, Illinois, United States. Presenter(s): Knudson MM, Gomez D, Haas B, Cohen MJ, **Nathens AB**.
4. 2011 Oct **Presenter**. Sepsis - Update in Surgical Critical Care. American College of Surgeons. San Francisco, California, United States. Presenter(s): **Nathens AB**.
5. 2011 Sep **Invited Lecturer**. Trauma Systems. University of London at Queen Mary. London, United Kingdom. Presenter(s): **Nathens AB**. Trauma Systems (Masters in Trauma Science Lecture Series).
6. 2011 Sep **Visiting Professor**. Trauma Quality Improvement. Department of Surgery, University of New Mexico. Albuquerque, New Mexico, United States. Presenter(s): **Nathens AB**.
7. 2011 Aug **Invited Speaker**. Performance indicators in NTDB and TQIP. Japan Trauma DataBank (International Surgical Week). Tokyo, Japan. Presenter(s): **Nathens AB**.
8. 2011 Aug **Invited Speaker**. American College of Surgeons Trauma Quality Improvement Program. Western States Rural Trauma Leadership Conference. Park City, Utah, United States. Presenter(s): **Nathens AB**.
9. 2011 Aug **Invited Speaker**. ACS Trauma Quality Improvement Program. International Surgical Society. Yokohama, Japan. Presenter(s): **Nathens AB**.
10. 2011 Aug **Invited Speaker**. ACS Trauma Quality Improvement Program. Western States Trauma Leadership Forum. Park City, Utah, United States. Presenter(s): **Nathens AB**.
11. 2011 Sep Early cholecystectomy for acute cholecystitis: a population-based analysis of practice patterns in Ontario. CAGS. London, Ontario. Presenter(s): Charles de Mestral, Brandon



Zagorski, Ori Rotstein, David Gomez, Barbara Haas, Andreas Laupacis, Sunjay Sharma, Jennifer Bridge, **Avery B. Nathens**. (oral presentation).

12. 2011 Sep A Population-based Analysis of Pediatric and Adult Vascular Trauma in Canada. CSVS. Presenter(s): Charles de Mestral, Andrew Dueck, Sunjay Sharma, Barbara Haas, David Gomez, **Avery B. Nathens**. (Oral presentation).
13. 2011 Nov **Invited Speaker**. Current Concepts in Intraabdominal Infection. Department of Surgery, Memorial University. St. John's, Canada. Presenter(s): **Nathens AB**.
14. 2011 Oct **Invited Speaker**. Update in intra-abdominal infection. Ontario Association of General Surgeons. Toronto, Ontario, Canada. Presenter(s): **Nathens AB**.
15. 2011 Dec **Invited Speaker**. Bariatric trauma. St. Michael's Hospital ED and Trauma Care Conference. Toronto, Ontario, Canada. Presenter(s): **Nathens AB**.

### **Research Funding:**

1. 2011 Jul - 2015 Jul  
Measuring the **Co-Investigator**. Developing a Patient and Family-Centred Approach for Quality of Trauma Care. Canadian Institutes of Health Research (CIHR). PI: Stelfox, Tom. 628,692 CAD. [Grants]  
*Co-investigator 2011-2014.*
2. 2011 Apr - 2013 Apr **Principal Investigator**. Improving Patient Transition from Acute Trauma Care Hospitalization: Identifying information and communication gaps during the discharge process. Ministry of Health and Long Term Care - Innovation Funding. MOHLTCI AHSC AFP Innovation Fund. Collaborators: Jennifer Bridge. 23,000 CAD. [Grants].
3. 2010 Jul - 2015 Jun **Site Investigator**. HL-10-006 Toronto Regional Coordinating Center; Clinical Research Consortium to Improve Resuscitation Outcomes. National Institutes of Health (NIH) (USA). PI: Morrison LJ. Collaborators: Dorian P, Cheskes S, Slutsky A. 1,110,780 CAD. [Grants] *NIH Department of Health and Human Resources/Heart & Stroke Foundation/Canadian Institute of Health Research.*
4. 2010 Jul - 2015 Jun **Principal Investigator**. Trauma System Development in Canada: Overcoming the Challenges of Geography Through an Evaluation of Structure and Process. Canadian Institutes of Health Research (CIHR). Collaborators: Cusimano M, Gagliardi A, Gomez D, Haas B, Hameed M, Lawless B, Morrison L, Peters P, Pong R, Rubinfeld G, Schurmann N, Snider C, Tallon J. 2,264,139 CAD. [Grants].
5. 2010 Jul - 2012 Jun **Co-Principal Investigator**. From Data to Daily Practice: An Integrative Approach to Improving Trauma Centre Access in Rural Regions. Canadian Institutes of Health Research (CIHR). Fellowship. PI: Haas B. Collaborators: Gagliardi A. 110,000 CAD. [Grants].
6. 2010 Jul - 2012 Jun **Principal Investigator**. Towards Equity in Access to Trauma Care: A Mixed-Methods Approach to Spatial Analyses of Existing Trauma Transfer Networks. Canadian Institutes of Health Research (CIHR). Collaborators: Gagliardi A, Gomez D, Haas B, Rubinfeld G, Gozdyra P. 199,844 CAD. [Grants].

7. 2010 Jul - 2011 Jun **Co-Principal Investigator.** Early versus delayed cholecystectomy for acute calculous cholecystitis: Decision and cost-utility analysis. The Canadian Association of General Surgery. PI: De Mastral C. 10,000 CAD. [Grants].
8. 2010 Jul - 2011 Jun **Co-Principal Investigator.** Early versus delayed laparoscopic cholecystectomy: a population-based analysis of safety, efficacy and cost-utility. Physicians Services Incorporated Foundation (The) (PSI). PI: De Mestral C. 19,000 CAD. [Grants].
9. 2010 Jul - 2011 Jun **Principal Investigator.** Development of Interfacility Transfer Criteria for Major Trauma. St.Michael's Hospital Medical Services Association. 33,750 CAD. [Grants].
10. 2010 Jul - 2011 Jun **Co-Principal Investigator.** Establishing Stakeholder Research Priorities for Measuring the Quality of Trauma Care. Canadian Institutes of Health Research (CIHR). PI: Stelfox HT. Collaborators: Gruen S, Straus S. 19,984 CAD. [Grants].
11. 2010 Jul - 2011 Jun **Co-Principal Investigator.** A Feasibility Study Examining Referral to Community-Based Youth Violence Interventions for Youth Injured Violence. Canadian Institutes of Health Research (CIHR). PI: Snider C. 99,838 CAD. [Grants].
12. 2009 Jul - 2012 Jun **Co-Investigator.** From NSQIP to TQIP - Trauma Quality Improvement Project. Agency for Healthcare Research and Quality (AHRQ) (formerly Agency for Health Care Policy and Research). PI: Shahid S. 887,489 CAD. [Grants].
13. 2008 Jul - 2011 Jun **Co-Principal Investigator.** Access to Trauma Care in Canada: A National Comparison. Canadian Institutes of Health Research (CIHR). PI: Hill A. Collaborators: Fowler RA. 92,500 CAD. [Grants] *Frederick Banting and Charles Best Canada Graduate Scholarships - Doctoral Award.*
14. 2006 Jul - 2011 Jun **Principal Investigator.** Canada Research Chair in Trauma Systems Development. Canadian Institutes of Health Research (CIHR). 500,000 CAD. [Grants].

**Peer Reviewed Publications:**

1. **Papia G**, Fan J, Kapus A, Szaszi K, Marshall JC, Tawadros P, Ailenberg M, Rotstein OD. Altered inhibitory  $\kappa$ B $\alpha$  expression in LPS-stimulated alveolar macrophages following resuscitated hemorrhagic shock. *Shock*. 2011 Feb;35(2):171-7. **Principal Author**.
2. Kirkpatrick AW, **Papia G**, McCloskey SA, Polk HC Jr, Akca O, Qadan M. CAGS and ACS evidence based reviews in surgery. 36. Effect of high perioperative oxygen fraction on surgical site infection. *Can J Surg. Evidence Based Reviews in Surgery Group*. *Can J Surg*. 2011 Feb;54(1):67-9. No abstract available.

**Presentations/Lectures:**

1. 2011 Apr 19 **Invited Lecturer**. The use of checklists and bundles to reduce patient harm and improve healthcare. Vascular Surgery Grand Rounds, Cleveland Clinic Foundation Department Vascular Surgery. Cleveland, Ohio, United States. Presenter(s): **Papia, G**.
2. 2011 Apr 2 **Attendee**. Quality Improvement: What Every MRP Needs to know (April 2-3, 2011). University of Toronto. Toronto, Ontario, Canada. Workshop. (Continuing Education).
3. 2011 Feb 10 **Invited Speaker**. Endovascular intervention in critical limb ischemia: When to stop and when to continue. Tremblant Vascular Surgery Meeting. Quebec, Canada. Presenter(s): **Papia, G**. (Continuing Education).
4. 2011 May **Invited Speaker**. Vascular surgery in Canada: the endovascular era. University of Toronto, Department of Surgery. Toronto, Ontario, Canada. Presenter(s): **Papia, G**. Presented to the Wisconsin Surgical Club.
5. 2011 Mar 25 **Invited Speaker**. Hybrid Revascularizations. Toronto Endovascular Conference. Toronto, Ontario, Canada. Presenter(s): **Papia, G**. (Continuing Education).
6. 2011 Mar 25 **Invited Speaker**. Tibial Interventions. Toronto Endovascular Conference. Toronto, Ontario, Canada. Presenter(s): **Papia, G**. (Continuing Education).
7. 2011 Mar 3 **Invited Speaker**. Checklist Implimentation in Ontario Challenges and Successes. Refuling your Quality Agenda, Manitoba Institute for Patient Safety. Canada. Presenter(s): **Papia, G**. (Continuing Education).
8. 2011 Mar 3 **Invited Speaker**. Effective Communication and Safety in the operating room: What does it look like and do we really have it? (Ran workshop). Refuling your Quality Agenda, Manitoba Institute for Patient Safety. Canada. Presenter(s): **Papia, G**. (Continuing Education).

**Research Funding:**

1. 2011 Nov - 2015 Dec **Co-Investigator**. Curcumin to Prevent Perioperative Complications After Elective Abdominal Aortic Aneurysm Repair: a Randomized Controlled Trial. Canadian Institutes of Health Research (CIHR). Multi Center Study. PI: Tobe, Sheldon; Hladunewich, Michelle. Collaborators: Site Co-PI with Sheldon Tobe (Nephrology). 322,419 CAD. [Grants]

**Peer Reviewed Publications:**

1. Uppal N, Yasseen B, Seto W, **Parshuram CS**. Drug formulations that require less than 0.1 mL of stock solution to prepare doses for infants and children. CMAJ 2011. DOI:10.1503 [SRA]
2. **Parshuram CS**, Bayliss A, Reimer J, Middaugh K, Blanchard N. Implementing the Bedside Paediatric Early Warning System in a community hospital: a prospective observational study. Paediatrics and Child Health 2011; 16(3) e18-e 22 [SRA]
3. Stremler R, Dhukai Z, Wong L, **Parshuram CS**. Factors influencing sleep for parents of critically ill hospitalised children: a qualitative analysis. Intensive Crit Care Nurs 2011, 27:37-45. [C]
4. Kotsakis A, Lobos AT, **Parshuram CS**, Gilleland J, Gaiteiro R, Mohseni-Bod H, Singh R, Bohn D: Implementation of a Multicenter Rapid Response System in Pediatric Academic Hospitals Is Effective. Pediatrics 2011, 128:72-78 [C]
5. de Wildt SN, van Schaik RH, Soldin OP, Soldin SJ, Brojeni PY, van der Heiden IP, Parshuram CS, Nulman I, Koren G: The interactions of age, genetics, and disease severity on tacrolimus dosing requirements after pediatric kidney and liver transplantation. 2011 Dec;67(12):1231-41. [C]
6. Taylor K, Vandenberg S, le Huquet A, Blanchard N, **Parshuram CS**: Parental attitudes to digital recording: A paediatric hospital survey. J Paediatr Child Health 2011, 47:335-339. [SRA]
7. Bismilla Z, Breakey VR, Swales J, Kulik DM, Pai N, Singh N, **Parshuram CS**: Prospective evaluation of residents on call: before and after duty-hour reduction. Pediatrics 2011, 127:1080-1087. [SRA]

**In Press:**

1. Accepted Pediatric Critical Care Medicine  
S Ebrahim, S Singh, JS Hutchison, AV Kulkarni, R Sananes, KW Bowman, **Parshuram CS**. Adaptive behavior, functional and quality of life outcomes of children requiring urgent ICU admission

**Presentations/Lectures:**

1. Slater MB Anand V, Uleryk EM, Parshuram CS.  
A systematic review of the RIFLE in children: its application and association with measures of mortality and morbidity  
Canada Critical Care Forum, Toronto Ontario, Nov 2011
2. 2011 AHA (accepted, but unable to present)  
Matke A, Bailey EJ, Parshuram CS. Submersion injury and cardiac arrest in children: A 20 year experience.
3. 2011 Interdepartmental Division of Critical Care Medicine Residents Day

Matke A, Bailey EJ, Parshuram CS. Submersion injury and cardiac arrest in children: A 20 year experience. (prize winning abstract).

4. Presenter: The Bedside PEWS  
**Grand Rounds**, North York General Hospital, Toronto, Jan 2011
5. Presenter: Methods to detect evolving critical illness in hospitalized children  
**City-wide Research Rounds** University of Toronto Critical Care Program, August 2011
6. Presenter: Evaluating Precision of Therapy (EPT): acetaminophen & milrinone in critically ill Children **CIHR Grant Writing Workshop**. Hollywood Theatre, Hospital for Sick Children, Toronto, August 2011
7. Expert Panel Member  
**Departmental Research Rounds**, Department of Critical Care Medicine, Hospital for Sick Children, December 2011.  
Supervising Presenter with R Osborne (IMS graduate student)
8. SickKids Patient Safety Symposium. Toronto, Ontario, June 2011  
Invited Speaker :Challenges of medication safety for children
9. Invited Presenter: The IoM report on residents: sleep, supervision & safety  
**6th World Congress on Pediatric Critical Care**, Sydney NSW, Australia March 2011
10. Invited Speaker: Identifying child deterioration  
**Grand Rounds**, Our Lady Childrens Hospital, Dublin, Ireland. May 2011
11. Invited Speaker: Duty Hours, enhancing sleep, supervision & safety.  
**Paediatric Grand Rounds**, St. Georges Hospital, London, England. October 2011
12. Invited speaker: Introducing EPOCH a cluster randomized trial of the Bedside PEWS: rationale, development and design
13. **Paediatric Grand Rounds**, Royal Brompton Hospital, London, England. October 2011 Invited speaker: Towards the truth about Early Warning Systems in children.  
  
**Paediatric Medical Grand Rounds**, Kings College Hospital, London, England. October 2011
14. Invited speaker: EPOCH: rationale for and design of this cluster randomized trial of an intervention to prevent cardiopulmonary arrest in children.  
  
**Paediatric Nursing Grand Rounds**, Kings College Hospital, London, England. October 2011
15. Invited speaker: The rationale for and design of a cluster randomized trial of a documentation-based system of care to prevent cardiopulmonary arrest in children.  
**Hospital Grand Rounds**, St. Georges Hospital, London, England. October 2011
16. Invited speaker: Medication Safety in Children: an oxymoron.  
**Paediatric Grand Rounds**, The Royal London Hospital, London, England. October 2011
17. Invited speaker: Introducing EPOCH: rationale, design and outcomes.  
**Canada Critical Care Forum**, Toronto ON November 2011
18. Invited Presenter: Communication in ICU

**7th International Symposium**, Rapid Response Systems and Medical Emergency Teams,  
Toronto, Ontario. November 2011

***Research Funding:***

1. 2010-14 Canadian Institutes of Health Research  
The Bedside Paediatric Early Warning System: a cluster RCT of mortality and processes of care. \$3,000,000
2. 2009-11 Canadian Institutes of Health Research  
Safer Medications for Children: Quantifying nephrotoxicity through secondary analysis of electronic health data. PI: Parshuram. \$100,000
3. 2009-12 SickKids Foundation New Investigator Grant  
Non-convulsive Status Epilepticus in Critically Ill Children  
PI: Hann C (Parshuram 5%). \$300,000
4. 2010-12 Ontario Neurotrauma Foundation  
The Pediatric TBI CT Scan Tool  
PI Guerguerian A. (Parshuram 5%). \$100,000
5. 2009-11 Labbatt Family Heart Center Start-up Grant  
Audio-recording and feedback to improve the performance of resuscitation  
PI: K Taylor (Parshuram 40%). \$15,000

***Presentations/Lectures:***

1. Piquette D, Tarshis J, Fowler R, Regehr G, Pinto, R, LeBlanc V. Effects of the level of clinical supervision on team resuscitation and resident learning during simulated ICU scenarios. Simulation Summit 2011, Montreal, Canada. November 2011. (Oral presentation)
2. Piquette D, Tarshis J, Sinuff T, Fowler R, LeBlanc V. Effect of stress on residents' cognitive reasoning during simulated resuscitation scenarios. AMEE Annual Conference, Vienna, Austria. September 2011. (Oral presentation)
3. Piquette D, Sinuff T, Fowler R, Tarshis J, LeBlanc, V. Impact of Acute Stressors on Resident Performance During Simulated Resuscitation (The Stress Study). Society of Critical Care Medicine Annual Conference, San Diego CA, USA. January 2011. (Poster presentation)

**Abstracts:**

1. Turgeon AF, Lauzier F, Thibodeau M, **Rigamonti A**, Bernard F, Meade M, Reddy K, Burns K, Scales D, McIntyre L, Green R, Griesdale D, Zygun D, Moore L, Savard M, Paquet J, Jichici D, Fergusson D. Enrolment in a multicenter prospective pilot study of severe traumatic brain injury. *Neurocritical Care* 2011 15:S255. **C**
2. Turgeon AF, Lauzier F, Scales DC, Bernard F, Meade MO, **Rigamonti A**, Burns KE, Reddy K, Moore L, mcintire L, Green R, Savard M, Griesdale D, Zygun D, Paquet J, Jichici D, Fergusson DA. TBI Prognosis Study: Enrolment in a multicenter prospective pilot study of severe traumatic brain injury. *Critical Care Canada Forum* 2011; 27. **C**

**Presentations/Lectures:**

1. **Transcranial Doppler Sonography: Principles and Applications**, Invited lecture, Spedali Civili di Brescia, University of Brescia, Italy, November 2011
2. **Transcranial Doppler (TCD): Overview and Hands-on Workshop**, Keynote speaker and co-organizer, *Canadian Anesthesiologists' Society, 2011 Annual Meeting, Toronto, Ontario*, June 28th, 2011

**Research Funding:**

1. 2010 – 2011 Co-Investigator, Site Principal Investigator  
“Early determination of neurological prognosis in ICU patients with severe traumatic brain injury: TBI Prognosis Pilot Study” Multicentre Observational Study. Site PI. Recruitment completed in June 2011.
2. 2009 – 2011 Principal Investigator  
“Effect of Scalp Nerve Blocks on Post-Operative Pain and Discharge Times in Patients Undergoing Supra-Tentorial Craniotomy and General Anesthesia” (Double Blinded Randomized Controlled Trial), Recruitment completed in December 2011. Manuscript in preparation.
3. 2011 – \* University of Toronto, Department of Anaesthesia Merit Award. \$40,000 per year for 2 years (salary support)



**Peer Reviewed Publications:**

1. Rezende-Neto JB; Oliveira AJ; Neto MP, Botoni F; **Rizoli SB**. A technical modification for percutaneous tracheostomy: prospective case series study on one hundred patients. World Journal Emergency Surgery. **Senior Responsible Author**.
2. Beckett A, Engels P, Paton-Gay John, Tien H, **Rizoli S**. Tension pneumomediastinum. Journal of Trauma. **Senior Responsible Author**.
3. Aufderheide TP, Nichol G, Rea TD, Brown SP, Leroux BG, Pepe PE, Kudenchuk PJ, Christenson J, Daya MR, Dorian P, Callaway CW, Idris AH, Andrusiek D, Stephens SW, Hostler D, Davis DP, Dunford JV, Pirralo RG, Stiell IG, Clement CM, Craig A, Van Ottingham L, Schmidt TA, Wang HE, Weisfeldt ML, Ornato JP and Sopko G. A trial of an impedance threshold device in out-of-hospital cardiac arrest. N Engl J Med. 2011 Sep 1;365(9):798-806. **Coauthor or Collaborator**.
4. Stiell IG, Nichol G, Leroux BG, Rea TD, Ornato JP, Powell J, Christenson J, Callaway CW, Kudenchuk PJ, Aufderheide TP, Idris AH, Daya MR, Wang HE, Morrison LJ, Davis D, Andrusiek D, Stephens S, Cheskes S, Schmicker RH, Fowler R, Vaillancourt C, Hostler D, Zive D, Pirralo RG, Vilke GM, Sopko G and Weisfeldt M. Early versus later rhythm analysis in patients with out-of-hospital cardiac arrest. N Engl J Med. 2011 Sep 1;365(9):787-97. **Coauthor or Collaborator**.
5. Bulger EM, Tower CM, Warner K, Garland T, Cuschieri J, **Rizoli S**, Rhind S, Junger W. Increased neutrophil adenosine A3 receptor expression is associated with hemorrhagic shock and injury severity in trauma patients. Shock. **Co-Principal Author**.
6. Nascimento B, Al Mahroos M, Callum J, Capone A, Hoffmann JP, Tien H, **Rizoli S**. Vitamin K-dependent coagulation factor deficiency in trauma: a comparative analysis between INR and Thromboelastography. Transfusion. **Senior Responsible Investigator**.
7. Spencer Netto F, Tien H, Ng J, Ortega S, Scarpelini S, **Rizoli SB**, Geerts W. Pulmonary emboli after blunt trauma: timing, clinical characteristics and natural history. Injury. 2011: epub ahead: pp of print. In Press. **Co-Principal Author**.
8. Bulger EM, May S, Kerby J, Emerson S, Stiell IG, Schreiber MA, Brasel KJ, Tisherman SA, Coimbra R, **Rizoli S**, Minei JP, Hata JS, Sopko G, Evans DC, Hoyt DB, ROC. Prehospital hypertonic resuscitation following traumatic hypovolemic shock: a randomized, placebo controlled trial. Annals of Surgery. 2011: 253(3): pp 431-441. **Co-Principal Author**.
9. Nascimento B, Lin Y, Callum J, Reis M, Pinto R, **Rizoli S**. Recombinant Factor VIIa (rFVIIa) is associated with increased 24-hour survival without increased late survival in massively transfused civilian trauma patients. Clinics (Sao Paulo). 2011: 66(1): pp 101-6. **Senior Responsible Investigator**.
10. Nascimento B, **Rizoli S**, Callum J. The lost (to follow up) intervention. Transfusion. 2011: 51(5): pp 1118-9. **Co-Principal Author**.
11. Qureshi A, Smith A, Wright F, Brenneman F, **Rizoli S**, Hsieh T, Tien HC. The impact of an acute care emergency surgical service on timely surgical decision-making and emergency department overcrowding. Journal of the American College of Surgeons. 2011: Epub ahead: pp of print. **Co-Principal Author**.
12. **Rizoli S**. Plasmalyte. Journal of Trauma. 2011: 70(5): pp S17-S18. **Principal Author**.

13. Luyet C, Boudah R, McCartney C, Zeldin R, **Rizoli S**. Low frequency jet ventilation through a bronchial blocker for tracheal repair after a rare complication of percutaneous dilatational tracheostomy. *Journal of Cardiothoracic Anesthesia*. 2011: epub ahead: pp of print. **Senior Responsible Investigator**.
14. Tien HCN, Jung V, Pinto R, Mainprize T, Scales D, **Rizoli SB**. Reducing time-to-treatment decreases mortality of trauma patients with acute subdural hematoma. *Annals of Surgery*. 2011: 253(6): pp 1178-83. **Senior Responsible Investigator**.
15. Jansen JO; Scarpelini S; Pinto R; Tien HC; Callum J; **Rizoli SB**. Hypoperfusion in Severely Injured Trauma Patients is Associated with Reduced Coagulation Factor Activity. *Journal of Trauma*. 71(5):S435-S440, November 2011. **Senior Responsible Author**.
16. Passos EM, Engels PT, Doyle JD, Beckett A, Nascimento B Jr, **Rizoli SB**, Tien HC. Societal Costs of Inappropriate Emergency Department Thoracotomy. *J Am Coll Surg*. 2011 Nov 21. [Epub ahead of print]. **Coauthor or Collaborator**.
17. Nascimento B; **Rizoli S**; Rubenfeld G; Lin Y; Callum J; Tien HC. Design and Preliminary Results of a Pilot Randomized Controlled Trial on a 1:1:1 Transfusion Strategy: The Trauma Formula-Driven Versus Laboratory-Guided Study. *Journal of Trauma*. 71(5):S418-S426, November 2011. **Coauthor or Collaborator**.
18. **Rizoli SB**.; Scarpelini S; Callum J; Nascimento B; Mann KG.; Pinto R; Jansen J; Tien HC. Clotting Factor Deficiency in Early Trauma-Associated Coagulopathy. *Journal of Trauma*. 71(5):S427-S434, November 2011. **Principal Author**.
19. **Rizoli S**; Nascimento B Jr; Key N; Tien HC; Muraca S; Pinto R; Khalifa M; Plotkin A; Callum J:. Disseminated Intravascular Coagulopathy in the First 24 Hours After Trauma: The Association Between ISTH Score and Anatomopathologic Evidence. *Journal of Trauma*. 71(5):S441-S447, November 2011. **Principal Author**.

#### **Book Chapters:**

1. **Rizoli S**, Aird WC. Coagulopathy. *Textbook of Critical Care*. (Vincent, Abraham, Moore, Kochanek, Fink, eds). Elsevier, New York 2011: pp 81-83. **Principal Author**.
2. **Rizoli S**, Aird WC. Thrombocytopenia. *Textbook of Critical Care*. (Vincent, Abraham, Moore, Kochanek, Fink, eds). Elsevier, New York 2011: pp 78-80. **Principal Author**.

#### **Abstracts:**

1. 2011 May What is new in surgical bleeding? The Wisconsin Surgical Club. Toronto, Ontario. Presenter(s): Rizoli S.
2. 2011 Jan 25 Permissive hypotension does not reduce regional organ perfusion compared to normotensive resuscitation: animal study with fluorescent microspheres. 24th Annual Scientific Assembly of Eastern Association for the Surgery of Trauma. Naples, United States. Presenter(s): Rezende-Neto JB, Schmidt BM, **Rizoli SB**, Andrade MV, Lisboa TA, Da Silva E, Cunha-Melo JR.
3. 2011 Jan 25 A new device for percutaneous tracheostomy. 24th Annual Scientific Assembly of Eastern Association for the Surgery of Trauma. Naples, United States. Presenter(s): Rezende-Neto JB, **Rizoli S**. Jan 25, 2011 - Jan 29, 2011. (Poster).
4. 2011 Apr Clostridium Difficile: more aggressive and more fatal. 2011 National Education Conference CHICA (Community and Hospital Infection Control Association). Toronto, Ontario. Presenter(s): Arjang M, Simor A, Smith A, Vearncombe M, Pinto R, **Rizoli S**.

5. 2011 Apr Clotting factor deficiencies and appropriate fresh frozen plasma use in trauma patients. Trauma Association of Canada Annual Scientific Meeting. Banff, Alberta. Presenter(s): Engels P, Rezende-Neto J, Pacher Hoffmann J, Tien H, Tremblay L, Beckett A, Paton-Gay D, **Rizoli S**.
6. 2011 Apr Effects of prehospital hypertonic saline resuscitation on coagulation and fibrinolysis in hypovolemic trauma patients. Trauma Association of Canada Annual Scientific Meeting. Banff, Alberta. Presenter(s): **Rizoli S**, Rhind S, Cushieri J, Junger W, Dubick M, Shiu M, Shek P, Bulger E.
7. 2011 Apr How important are routine laboratory and image tests in the late management of trauma patients? Trauma Association of Canada Annual Scientific Meeting. Banff, Alberta. Presenter(s): Rezende-Neto J, Vieira Jr J, Freitas S, **Rizoli S**.
8. 2011 Apr Hyperfibrinolysis is associated with increased mortality and transfusion requirements in trauma. Trauma Association of Canada Annual Scientific Meeting. Banff, Alberta. Presenter(s): Paton-Gay D, Scarpelini S, Tien H, Engels P, Beckett A, **Rizoli S**.
9. 2011 Apr Non-therapeutic trauma laparotomies: recent experiences in a Canadian Level 1 Trauma Centre. Trauma Association of Canada Annual Scientific Meeting. Banff, Alberta. Presenter(s): Paskar D, Al-Ali K, Speers V, Madani A, **Rizoli S**.
10. 2011 Apr Relationship between inflammatory cytokine release and outcome after hypertonic resuscitation in hypovolemic patients. Trauma Association of Canada Annual Scientific Meeting. Banff, Alberta. Presenter(s): Rhind S, **Rizoli S**, Junger W, Cushieri D, Hoyt D, Shiu M, Baker A, Shek P, Bulger E.
11. 2011 Apr Trauma formula-driven versus laboratory-guided transfusion study (TRFL STUDY) - an update. Trauma Association of Canada Annual Scientific Meeting. Banff, Alberta. Presenter(s): Nascimento B, Callum J, Tien H, Speers V, Lin Y, Rubinfeld G, **Rizoli S**.
12. 2011 Apr CT scan in the diagnosis of blunt traumatic diaphragmatic rupture. Trauma Association of Canada, Annual Scientific Meeting. Banff, Alberta. Presenter(s): Passos E, Nascimento B, Spencer F, Tien H, **Rizoli S**. (Poster).
13. 2011 Apr Kitting injuries: 211 cases provoked by abrasive coated threads used for kite fighting. Trauma Association of Canada, Annual Scientific Meeting. Banff, Alberta. Presenter(s): Rezende-Neto J, Ladeira R, Carreiro P, **Rizoli S**. (Poster).
14. 2011 Apr Microarray analysis of gene expression profiles in TBI patients: impact of prehospital fluid resuscitation. Trauma Association of Canada, Annual Scientific Meeting. Banff, Alberta. Presenter(s): Shiu M, Cushieri J, **Rizoli S**, Rhind S, Virtanen C, Junger W, Baker A, Bulger E. (Poster).
15. 2011 Apr Surgery or medical management in fulminant Clostridium Difficile colitis. Trauma Association of Canada, Annual Scientific Meeting. Banff, Alberta. Presenter(s): Arjang M, Madani A, Simor A, Smith A, **Rizoli S**. (Poster).
16. 2011 Apr The use of uncrossmatched blood for the identification of massively transfused trauma patients. Trauma Association of Canada, Annual Scientific Meeting. Banff, Alberta. Presenter(s): Nascimento B, Callum J, Tien H, **Rizoli S**. (Poster).
17. 2011 Apr Thromboelastography in trauma: what is the evidence? Trauma Association of Canada, Annual Scientific Meeting. Banff, Alberta. Presenter(s): Teodoro Da Luz L, **Rizoli S**, Nascimento B, Scarpelini S, Callum J. (Poster).

18. 2011 Jun 21 Prehospital hypertonic resuscitation modulates coagulation, fibrinolysis and inflammation in hemorrhagic shock patients. University of Toronto Critical Care Medicine Resident Day. Toronto, Ontario. Presenter(s): Shiu M, **Rizoli S**.
19. 2011 Jun 21 TEG in trauma: is there any evidence? A systemic review of the literature. University of Toronto, Critical Care Medicine Resident Day. Toronto, Ontario. Presenter(s): Da Luz LT, Nascimento B, **Rizoli S**. (Poster).
20. 2011 Jun 3 **Lecturer**. Coagulopathy in Trauma. Visiting Professor Day St. Michael's Hospital. Toronto, Ontario. Presenter(s): **Rizoli S**.

***Non-peer Reviewed Abstracts:***

1. Engels P, Rezende-Neto J, Pacher Hoffmann J, Tien H, Tremblay L, Beckett A, Paton-Gay D, **Rizoli S**. Clotting factor deficiencies and appropriate fresh frozen plasma use in trauma patients. Canadian Journal of Surgery. 2011: 54(suppl): pp S5-6. **Senior Responsible Investigator**.
2. Passos E, Nascimento B, Spencer F, Tien H, **Rizoli S**. CT scan in the diagnosis of blunt traumatic diaphragmatic rupture. Canadian Journal of Surgery. 2011: 54(suppl): pp S8. **Senior Responsible Investigator**.
3. **Rizoli S**, Rhind S, Cuschieri J, Junger W, Dubick M, Shiu M, Shek P, Bulger E. Effects of prehospital hypertonic saline resuscitation on coagulation and fibrinolysis in hypovolemic trauma patients. Canadian Journal of Surgery. 2011: 54(suppl): pp S25. **Principal Author**.
4. Rezende-Neto J, Vieira JR J, Freitas S, **Rizoli S**. How important are routine laboratory and image tests in the late management of trauma patients? Canadian Journal of Surgery. 2011: 54(suppl): pp S21. **Senior Responsible Investigator**.
5. Paton-Gay D, Scarpelini S, Tien H, Engels P, Beckett A, **Rizoli S**. Hyperfibrinolysis is associated with increased mortality and transfusion requirements in trauma. Canadian Journal of Surgery. 2011: 54(suppl): pp S19. **Senior Responsible Investigator**.
6. Rezende-Neto J, Ladeira R, Carreiro P, **Rizoli S**. Kitting injuries: 211 cases provoked by abrasive coated threads used for kite fighting. Canadian Journal of Surgery. 2011: 54(suppl): pp S22. **Senior Responsible Investigator**.
7. Shiu M, Cuschieri J, **Rizoli S**, Rhind S, Virtanen C, Junger W, Baker A, Bulger E. Microarray analysis of gene expression profiles in TBI patients: impact of prehospital fluid resuscitation. Canadian Journal of Surgery. 2011: 54(suppl): pp S13. **Coauthor or Collaborator**.
8. Paskar D, Al-Ali K, Speers V, Madani A, **Rizoli S**. Non-therapeutic trauma laparotomies: recent experiences in a Canadian Level 1 Trauma Centre. Canadian Journal of Surgery. 2011: 54(suppl): pp S10. **Senior Responsible Investigator**.
9. Rhind S, **Rizoli S**, Junger W, Cuschieri J, Hoyt D, Shiu M, Baker A, Shek P, Bulger E. Relationship between inflammatory cytokine release and outcome after hypertonic resuscitation in hypovolemic patients. Canadian Journal of Surgery. 2011: 54(suppl): pp S25. **Coauthor or Collaborator**.
10. Arjang M, Madani A, Simor A, Smith A, **Rizoli S**. Surgery or medical management in fulminant Clostridium Difficile colitis. Canadian Journal of Surgery. 2011: 54(suppl): pp S20. **Senior Responsible Investigator**.
11. Nascimento B, Callum J, Tien H, **Rizoli S**. The use of uncrossed matched blood for the identification of massively transfused trauma patients. Canadian Journal of Surgery. 2011: 54(suppl): pp S24. **Senior Responsible Investigator**.

12. Da Luz L, **Rizoli S**, Nascimento B, Scarpelini S, Callum J. Thromboelastography in trauma: what is the evidence? Canadian Journal of Surgery. 2011; 54(suppl): pp S23. **Coauthor or Collaborator**.
13. Nascimento B, Callum J, Tien H, Speers V, Lin Y, Rubinfeld G, **Rizoli S**. Trauma formula-driven versus laboratory-guided transfusion study (TRFL STUDY) - an update. Canadian Journal of Surgery. 2011; 54(suppl): pp S22. **Senior Responsible Investigator**.

***Presentations/Lectures:***

1. 2011 May 26 **Lecturer**. Hemotherapy of the traumatized patient: when? I Simposio Internacional de Trauma do Nordeste. Maceio, Brazil.
2. 2011 May 26 **Lecturer**. Trauma and technology. I Simposio Internacional de Trauma do Nordeste. Maceio, Brazil.
3. 2011 May 2 What is new in surgical bleeding? The Wisconsin Surgical Club. Toronto, Ontario. Presenter(s): The Wisconsin Surgical Club. May 2, 2011 - May 3, 2011.
4. 2011 Mar 25 **Visiting Professorship and Lecturer**.. Coagulopathy in trauma. II International Update Symposium on Surgery and Trauma. Brazilian College of Surgeons. Rio de Janeiro, Brazil.
5. 2011 Mar 24 **Visiting Professorship and Lecturer**.. Advances in the management of massive hemorrhage in trauma. II International Seminar on New Perspectives for Trauma Care in Major Disaster. Brazilian National Academy of Sciences. Rio de Janeiro, Brazil.
6. 2011 Jun 9 **Lecturer**. Massive transfusion open remarks and introductions. 2011 Massive Transfusion Consensus Conference. Toronto, Ontario. Jun 9, 2011 - Jun 11, 2011.
7. 2011 Jun 9 **Lecturer**. Overview and final comments. 2011 Massive Transfusion Consensus Conference. Toronto, Ontario. Jun 9, 2011 - Jun 11, 2011.
8. 2011 Jun 9 **Chair**. Session 1 moderator. 2011 Massive Transfusion Consensus Conference. Toronto, Ontario. Jun 9, 2011 - Jun 11, 2011.
9. 2011 Jun 9 **Chair**. Session 8 moderator. 2011 Massive Transfusion Consensus Conference. Toronto, Ontario. Jun 9, 2011 - Jun 11, 2011.
10. 2011 Apr 7 **Chair**. Oral Paper Session. Trauma Association of Canada Annual Scientific Meeting. Banff, Alberta.
11. 2011 Jun 3 **Visiting Professor and Lecturer**.. Coagulopathy in Trauma. Visiting Professor Day, St. Michael's Hospital. Toronto, Ontario.
12. 2011 May 6 **Chair**. 37th Gallie Day, Gallie-Bateman and McMurrich Research Presentation Session. Toronto, Ontario.

***Research Funding:***

1. 2009 May - present **Site Co-Investigator**. Age of blood evaluation (ABLE) trial in the resuscitation of critically ill patients. Canadian Institutes of Health Research (CIHR). PI: Lacroix, Jacques. Collaborators: Drs. Jeannie Callum; Robert Fowler (Site Co-Investigators). 4,050,189. [Clinical Trials].
2. 2009 May - present **Co-Principal Investigator**. Formula-driven versus laboratory-guided transfusion practices in bleeding trauma patients: a feasibility randomized controlled study. TRFL study. Military Health Services, Surgeon General

Canadian Forces. 350,000. [Grants].

3. 2008 Sep - present

**Principal Investigator.** Management of occult pneumothoraces in mechanically ventilated patients - pilot study. Physicians Services Incorporated Foundation (The) (PSI). 20,000. [Grants].

4. 2007 Jul - present

Co-Principal Investigator. Hypertonic modulation in Inflammation and Coagulation Following Injury. Defense Research and Development Canada / National Institutes of Health. NIH Grant number (1R01GM076101-01A1). Collaborators: Bulger E., Washington University, Seattle; Wolfgang Y., Harvard Medical School; Rhind S., Defense Research and Development Canada (Co-principal investigators). 1,312,610. [Grants]  
Defense Research and Development Canada - Can \$947,753.00  
NIH Grant number (1R01GM076101-01A1) - US \$386,336.00

Year I \$84,899.00; Year 2-2008-2009 \$82,352.00; Year 3-2009-2010 \$163,102.00.

Co-Investigator. Does an acute care emergency surgical service (ACCESS) improve Emergency Room congestion, patient flow, outcomes and satisfaction? Ontario Ministry of Health and Long-Term Care. 2008/2009 Alternative Funding Plan Phase III. PI: Tien, Homer. 100,000. [Grants].

5. 2011 - 2013

**Principal Investigator.** Catecholamines as outcome markers in traumatic brain injury (COMA). Physician Services Incorporated. [Clinical Trials].

6. 2004 Sep - 2015 Dec

Co-Investigator. Resuscitation outcomes consortium - from bench to bedside to curbside. National Institutes of Health / Canadian Institutes of Health Research (CIHR) / Heart and Stroke of Canada. PI: Slutsky, Dr. Arthur S. 8,000,000. [Grants]  
2004 to 2009 Can\$4,400,000.00; 2010 to 2016 Can\$3,600,000.00.

**Peer Reviewed Publications:**

1. Nascimento B, Rizoli S, **Rubenfeld G**, Lin Y, Callum J, Tien HC. Design and preliminary results of a pilot randomized controlled trial on a 1:1:1 transfusion strategy: the trauma formula-driven versus laboratory-guided study. *J Trauma*. 2011 Nov;71(5 Suppl 1):S418-26.
2. Carson SS, Kahn JM, Hough CL, Seeley EJ, White DB, Douglas IS, Cox CE, Caldwell E, Bangdiwala SI, Garrett JM, **Rubenfeld GD**; for the ProVent Investigators. A multicenter mortality prediction model for patients receiving prolonged mechanical ventilation. *Crit Care Med*. 2011 Nov 10.
3. Adhikari NK, **Rubenfeld GD**. Worldwide demand for critical care. *Curr Opin Crit Care*. 2011 Dec;17(6):620-5.
4. Parsons EC, Hough CL, Seymour CW, Cooke CR, **Rubenfeld GD**, Watkins TR; the NHLBI ARDS Network. Red blood cell transfusion and outcomes in patients with acute lung injury, sepsis and shock. *Crit Care*. 2011 Sep 21;15(5):R221.
5. Prasad M, Holmboe ES, Lipner RS, Hess BJ, Christie JD, Bellamy SL, **Rubenfeld GD**, Kahn JM. Clinical protocols and trainee knowledge about mechanical ventilation. *JAMA*. 2011 Sep 7;306(9):935-41.
6. Nascimento B, Rizoli S, **Rubenfeld G**, Fukushima R, Ahmed N, Nathens A, Lin Y, Callum J. Cryoprecipitate transfusion: assessing appropriateness and dosing in trauma. *Transfus Med*. 2011 Aug 18. doi: 10.1111/j.1365-3148.2011.01098.x.
7. Clermont G, Kong L, Weissfeld LA, Lave JR, **Rubenfeld GD**, Roberts MS, Connors AF Jr, Bernard GR, Thompson BT, Wheeler AP, Angus DC; for the NHLBI ARDS Clinical Trials Network. The Effect of Pulmonary Artery Catheter Use on Costs and Long-Term Outcomes of Acute Lung Injury. *PLoS One*. 2011;6(7):e22512. Epub 2011 Jul 21.
8. Kahn JM, Hill NS, Lilly CM, Angus DC, Jacobi J, **Rubenfeld GD**, Rothschild JM, Sales AE, Scales DC, Mathers JA. The research agenda in ICU telemedicine: a statement from the Critical Care Societies Collaborative. *Chest*. 2011 Jul;140(1):230-8. Review.
9. Kohn R, **Rubenfeld GD**, Levy MM, Ubel PA, Halpern SD. Rule of rescue or the good of the many? An analysis of physicians' and nurses' preferences for allocating ICU beds. *Intensive Care Med*. 2011 Jul;37(7):1210-7. Epub 2011 Jun 7
10. Burns KE, Chant C, Smith O, Cuthbertson B, Fowler R, Cook DJ, Kruger P, Webb S, Alhashemi J, Dominguez-Cherit G, Zala C, **Rubenfeld GD**, Marshall JC. A Canadian Critical Care Trials Group project in collaboration with the international forum for acute care trialists - Collaborative H1N1 Adjuvant Treatment pilot trial (CHAT): study protocol and design of a randomized controlled trial. *Trials*. 2011 Mar 9;12:70.
11. Dainty KN, Scales DC, Brooks SC, Needham DM, Dorian P, Ferguson N, **Rubenfeld G**, Wax R, Zwarenstein M, Thorpe K, Morrison LJ. A knowledge translation collaborative to improve the use of therapeutic hypothermia in post- cardiac arrest patients: protocol for a stepped wedge randomized trial. *Implement Sci*. 2011 Jan 14;6:4.

### ***Presentations/Lectures:***

1. **2011 Dec 2** Invited Speaker. ARDS Measuring the quality of intensive care. IX Pan American and Iberic Congress of Intensive and Critical Care. Cartagena, Columbia. Presenter(s): Rubenfeld, GD.
2. **2011 Nov 30** Invited Speaker. ARDS: 1. diagnosis and epidemiology. IX Pan American and Iberic Congress of Intensive and Critical Care. Cartagena, Columbia. Presenter(s): Rubenfeld, GD.
3. **2011 Nov 30** Invited Speaker. End of life care in the ICU. IX Pan American and Iberic Congress of Intensive and Critical Care. Cartagena, Columbia. Presenter(s): Rubenfeld, GD.
4. **2011 Nov 16** Moderator. End of Life Session. Critical Care Canada Forum. Toronto, Ontario. Moderator(s): Rubenfeld, GD.
5. **2011 Nov 15** Invited Speaker. Quality: Reporting, Changing & Rewarding High Quality: Do We Need More Public Reporting? Critical Care Canada Forum. Toronto, Ontario. Presenter(s): Rubenfeld, GD.
6. **2011 Nov 15** Invited Speaker. Infections in the ICU: CMV in the ICU, prevent, treat, or ignore? Critical Care Canada Forum. Toronto, Ontario. Presenter(s): Rubenfeld, GD.
7. **2011 Nov 14** Invited Speaker. WJ Sibbald Critical Care Systems Symposium - The Big Picture View: Do Specialized Units Improve Outcomes? Critical Care Canada Forum. Toronto, Ontario. Presenter(s): Rubenfeld, GD.
8. **2011 Oct 5** Invited Speaker. Current epidemiology. European Society of Intensive Care Medicine. Berlin, Germany. Presenter(s): Rubenfeld, GD.
9. **2011 Oct 4** Invited Chair. CHAIR IN SESSION - Acute lung injury monitoring (Poster Corner). European Society of Intensive Care Medicine. Berlin, Germany. Chair: Rubenfeld, GD.
10. **2011 Oct 4** Invited Speaker. Delirium and weaning. European Society of Intensive Care Medicine. Berlin, Germany. Presenter(s): Rubenfeld, GD.
11. **2011 Oct 3** Invited Chair. New insights into the pathophysiology of sepsis (Oral Presentations). European Society of Intensive Care Medicine. Berlin, Germany. Chair: Rubenfeld, GD.
12. **2011 Oct 1** Invited Speaker. POST GRADUATE COURSE - Session Title: Designing, conducting and publishing intensive care. A Bayesian Approach to interpreting clinical research. European Society of Intensive Care Medicine. Berlin, Germany. Presenter(s): Rubenfeld, GD.
13. **2011 Sept 30** Invited Speaker. POST GRADUATE COURSE - Session Title: Designing, conducting and publishing intensive care. Randomisation strategies and alternatives. European Society of Intensive Care Medicine. Berlin, Germany. Presenter(s): Rubenfeld, GD.
14. **2011 Sept 30** Invited Speaker. ARDS Meeting, What is a better definition? European Society of Intensive Care Medicine. Berlin, Germany. Presenter(s): Rubenfeld, GD.



15. **2011 Sept 30** Invited Chair. ARDS Meeting. European Society of Intensive Care Medicine. Berlin, Germany. Chair: Rubenfeld, GD.
16. **2011 May 17** Invited Speaker. The Consequences of Five Important Papers: From the author and the editor. American Thoracic Society Conference. Denver, Colorado. Commentary. Presenter(s): Rubenfeld, GD.
17. **2011 May 16** Invited Speaker. The Intensity of Intensive Care: Is more better? American Thoracic Society Conference. Denver, Colorado. Presenter(s): Rubenfeld, Gordon D.
18. **2011 May 15** Invited Speaker. Critical Care Young Academicians Working Group. American Thoracic Society Conference. Denver, Colorado. Presenter(s): Rubenfeld, Gordon D.
19. **2011 May 15** Facilitator: Clinical Research. American Thoracic Society Conference. Denver, Colorado. Presenter(s): Rubenfeld, GD.
20. **2011 Jun 25** Invited Speaker: Acute Lung Injury. The CME/CNE symposium – Baptist Health South Florida. Presenter: Rubenfeld, Gordon D.
21. **2011 Apr 7** Invited Speaker. Why We Agree on the Evidence but Disagree on the Medicine. 2011 Kern Visiting Professorship in Critical Care Medicine. Portland, OR, USA. Presenter: Rubenfeld, Gordon D.
22. **2011 May 13** Invited Speaker: ATS Fellows Track Symposium - Critical Care Delivery. American Thoracic Society Conference. Denver, Colorado. Presenter(s): Rubenfeld, Gordon D.
23. **2011 Mar 25** Invited Speaker: Evidence-based Guidelines are difficult to Apply - Standard Presentation. International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium. Presenter(s): Rubenfeld, Gordon D.
24. **2011 Mar 24** Invited Speaker: We need more Information - Standard Presentation. International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium. Presenter: Rubenfeld, Gordon D.
25. **2011 Mar 23** Invited Speaker: The Value of Surrogate Outcomes - Standard Presentation. International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium. Presenter: Rubenfeld, Gordon D.
26. **2011 Mar 23** Invited Speaker: How can we assess our performance? – Round Table Discussion. International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium. Presenter: Rubenfeld, Gordon D.
27. **2011 Mar 22** Invited Speaker: The Importance of CMV - Standard Presentation. International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium. Presenter: Rubenfeld, Gordon D.
28. **2011 Mar 22** Moderator: End of Life: Cultural Issues in decision-making. International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium. Moderator: Rubenfeld, Gordon D.
29. **2011 Mar 22** Moderator: Obstetric Emergencies. International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium. Moderator: Rubenfeld, Gordon D.

30. **2011 Jan 17** Invited Speaker. Pro: Intensivists Are Necessary. Society of Critical Care Medicine Conference (SCCM) Presenter(s): Rubenfeld, Gordon D.
31. **2011 Jan 17** Invited Speaker. What is New with Evidence Based Medicine? Society of Critical Care Medicine Conference (SCCM) Presenter(s): Rubenfeld, Gordon D.
32. **2011 Dec 9** Invited Speaker. End of Life Care: controversies and challenges. ED and Trauma Conference. Li Ka Shing Knowledge Institute here at St. Michael's Hospital. Toronto, Ontario. Presenter(s): Rubenfeld, GD.
33. **2011 Nov 13** Invited Speaker. SESSION 4 - THE GREAT ECMO DEBATE: Real doctors don't need ECMO for ARDS. CCCF/CCCS Resident's Day. Toronto, Ontario. Presenter(s): Rubenfeld, GD.
34. **2011 Jun 8** Invited Speaker. ARDS. Critical Care ICU Seminar Series, Sunnybrook Health Sciences Centre. Toronto, Ontario, Canada. Presenter(s): Rubenfeld, GD.
35. **2011 May 31** Invited Speaker. CMV in the ICU. Sunnybrook Health Sciences Centre, City Divisional Rounds, Toronto, Ontario. Presenter(s): Rubenfeld, GD.
36. **2011 Jan 9** Invited Speaker. Last Rights. Critical Care Medicine Grand Rounds. Sunnybrook Health Sciences Centre, Toronto, Ontario. Presenter(s): Rubenfeld, GD.

#### **Research Funding:**

1. Trauma System Development in Canada: Overcoming the challenges of geography through an evaluation of structure and process. **Canadian Institutes of Health Research (CIHR)**. *Team Grant: Strategic Teams in Applied Injury Research*. Co-Applicant. **\$400,000**. 04/2010 - 03/2015
2. Understanding Long-Term Mechanical Ventilation in Canada: A Programmatic Approach. **Canadian Institutes of Health Research (CIHR)**. *Partnerships for Health System Improvement (PHSI)*. Co-Applicant. **\$349,863**. 04/2011 - 03/2014.
3. A National Comparison of Intensity of End-of-Life Care in Canada: Defining Changing Patterns, Risk Factors and Targets for Intervention. **Canadian Institutes of Health Research (CIHR)**. *Operating Grant: Secondary Analysis of Databases Principal*. Co-Applicant. **\$99,208**. 10/2011 – 09/2013
4. Weaning and Variability Evaluation (WAVE). **Canadian Institutes of Health Research (CIHR)**. *Operating Grant*. Co-Applicant. **\$163,831**. 10/2010 – 09/2013
5. The RECOVER Program: Phase I Towards RECOVER - Outcomes and Needs Assessment in Survivors of Prolonged Mechanical Ventilation and Their Caregivers. **Canadian Institutes of Health Research (CIHR)**. *Operating Grant*. Co-Applicant. **\$222,260**. 10/2009 – 09/2013
6. A Randomized Phase II Trial of CMV Prevention in Acute Lung Injury. **National Institutes of Health (NIH) (USA)**. Co-Applicant. **\$1,240,314**. 06/2010 – 08/2013
7. Towards RECOVER - Evaluation of Clinical Outcomes, Patient and Caregiver Needs and the Biology of Muscle and Nerve Injury in Critically Ill Survivors of Prolonged Mechanical Ventilation. **Canadian Institutes of Health Research (CIHR)**. Co-Applicant. **\$704,367**. 03/2009 – 04/2013

8. Catecholamines as Outcome Markers in Traumatic Brain Injury Study - (COMA in TBI Study). **Physicians Services Incorporated Foundation (The) (PSI)**. *Health Research Grant*. Co-Applicant. **\$162,500**. 01/2011 – 12/2012
9. The PACT Study: The impact of a post arrest consult team on process and clinical outcomes in patients resuscitated from out-of-hospital cardiac arrest. **Heart and Stroke Foundation of Canada (HSFC)**. *Resuscitation and Knowledge Transfer and Exchange 2010*. Co-Applicant. **\$198,726**. 12/2012 – 11/2012
10. Improving Ventilator Management and Preventing Injury to Patients with ARF. National **Heart, Lung, and Blood Institute (NHLBI) (USA)**. Principal Applicant. **\$4,036,688**. 07/2001 – 06/2012
11. Transforming the care of patients with severe traumatic brain injury in Toronto. **Sunnybrook Health Sciences Centre (Toronto, ON)**. *AFP*. Co-Applicant. **499,060**. 05/2010 – 04/2012
12. Outcomes of Critically Ill Patients Presenting to Canadian Emergency **Departments Canadian Institutes of Health Research (CIHR)**. *Partnerships for Health System Improvement (PHSI)*. Co-Applicant. **\$82,063**. 04/2010 - 04/2012
13. Towards equity in access to trauma care: A mixed-methods approach to spatial analyses of existing trauma transfer networks. **Canadian Institutes of Health Research (CIHR)**. *Advancing Theoretical and Methodological Innovations in Heal*. Co-Applicant. **\$199,844**. 04/2012 – 03/2012
14. Validation of a Mortality Prediction Model for Prolonged Mechanical Ventilation. **National Heart, Lung, and Blood Institute (NHLBI) (USA)**. *NIH/NHLBI*. Co-Applicant. **\$423,156**. 09/2009 – 08/2011
15. Improving care to patients with acute respiratory failure. **National Institutes of Health (NIH) (USA)**. Principal Applicant. **\$500,000**. 09/2006 – 06/2011
16. A Feasibility Study Examining Referral to Community-Based Youth Violence Interventions for Youth Injured by Violence. **Canadian Institutes of Health Research (CIHR)**. *Catalyst Grant: Primary and Community-Based Healthcare*. Co-Applicant. **\$99,838**. 03/2010 – 02/2011
17. Multicenter Validation of a Mortality Prediction Model for Prolonged Mechanical Ventilation. **National Institute of Nursing Research (NINR)**. Co-Applicant. **\$459,169**. 07/2009 – 02/2011
18. Collaborative H1N1 Adjuvant Treatment (CHAT) Pilot Trial. **Canadian Institutes of Health Research (CIHR)**. Co-Applicant. **\$200,000**. 02/2010 – 01-2011

**Peer Reviewed Publications:**

1. **Scales DC.** Pneumonia in the ICU: A Lethal or VAPid Complication? Am J Respir Crit Care Med. 2011 Nov 15;184(10):1097-8.  
Role: Conceived article idea, wrote manuscript. **Principal Author.**
2. **Scales DC.** Partnering with health care payers to advance the science of quality improvement: lessons from the field. Am J Respir Crit Care Med. 2011 Nov 1;184(9):987-8.  
Role: Conceived article idea, wrote manuscript. **Principal Author.**
3. Turgeon AF, Lauzier F, Simard JF, **Scales DC**, Burns KE, Moore L, Zygun DA, Bernard F, Meade MO, Dung TC, Ratnapalan M, Todd S, Harlock J and Fergusson DA. Mortality associated with withdrawal of life-sustaining therapy for patients with severe traumatic brain injury: a Canadian multicentre cohort study. CMAJ. 2011 Oct 4;183(14):1581-8.  
Role: Contributed to study idea, developed study methods and analytical approach, contributed to analysis, contributed to manuscript. **Coauthor or Collaborator.**
4. Bell CM, Brener SS, Gunraj N, Huo C, Bierman AS, **Scales DC**, Bajcar J, Zwarenstein M and Urbach DR. Association of ICU or hospital admission with unintentional discontinuation of medications for chronic diseases. JAMA. 2011 Aug 24;306(8):840-7.  
Role: Contributed to study idea, developed study methods and analytical approach, contributed to analysis, contributed to manuscript. **Coauthor or Collaborator.**
5. Kahn JM, Hill NS, Lilly CM, Angus DC, Jacobi J, Rubenfeld GD, Rothschild JM, Sales AE, **Scales DC** and Mathers JA. The research agenda in ICU telemedicine: a statement from the critical care societies collaborative. Chest. 2011 Jul; 140(1):230-8. Review.  
Role: Contributed to study idea, developed study methods and analytical approach, contributed to analysis, contributed to manuscript. **Coauthor or Collaborator.**
6. Tien HC, Jung V, Pinto R, Mainprize T, **Scales DC** and Rizoli SB. Reducing time-to-treatment decreases mortality of trauma patients with acute subdural hematoma. Ann Surg. Ann Surg.2011 Jun;253(6):1178-83  
Role: Contributed to study idea, developed study methods and analytical approach, contributed to analysis, contributed to manuscript. **Coauthor or Collaborator.**
7. Keenan SP, Sinuff T, Burns KE, Muscedere J, Kutsogiannis J, Mehta S, Cook DJ, Ayas N, Adhikari NK, Hand L, **Scales DC**, Pagnotta R, Lazosky L, Rucker G, Dial S, Laupland K, Sanders K and Dodek P. Clinical practice guidelines for the use of noninvasive positive-pressure ventilation and noninvasive continuous positive airway pressure in the acute care setting. CMAJ. 2011 Feb 22; 183(3):E195-214.  
Role: Contributed to study idea, developed study methods and analytical approach, contributed to analysis, contributed to manuscript. **Coauthor or Collaborator.**
8. **Scales DC**, Dainty K, Hales B, Pinto R, Fowler RA, Adhikari NK and Zwarenstein M. A multifaceted intervention for quality improvement in a network of intensive care units: a cluster randomized trial. JAMA. 2011 Jan 26;305(4):363-72.  
Role: Conceived study idea, developed study methods and analytical approach, conducted analysis, wrote manuscript. **Principal Author.**
9. Dainty KN, **Scales DC**, Brooks SC, Needham DM, Dorian P, Ferguson N, Rubenfeld G, Wax R, Zwarenstein M, Thorpe K and Morrison LJ. A knowledge translation collaborative to improve the use of therapeutic hypothermia in post-cardiac arrest patients: protocol for a stepped wedge randomized trial. Implement Science. 2011 Jan 14;6:4.  
Role: Conceived study idea, developed study methods and analytical approach, conducted analysis, wrote manuscript. **Co-Principal Author.**

### ***Review Articles, Letters, and Editorials:***

1. Barrett KA and **Scales DC**. Considering the vulnerabilities of surrogate decision-makers when obtaining consent for critical care research. *Intensive Care Med.* 2012 Jan;38(1):4-6. Epub 2011 Nov 26.  
Role: Conceived article idea, wrote manuscript. **Senior Responsible Author.**
2. Tremblay LN and **Scales DC**. Ultrasound-guided tracheostomy - not for the many, but perhaps the few... or the one. *Crit Care.* 2011 Apr 6;15(2):147. **Principal Author.**

### ***Abstracts:***

1. 2011 Nov 14 Survival After Postarrest Therapeutic Hypothermia: Secondary Analysis of the Strategies for Postarrest Care (SPARC) Stepped-Wedge Trial. American Heart Association; Resuscitation Science Symposium. Orlando, Florida, United States. Presenter(s): Morrison LJ. Coinvestigators: Dorian P, Dainty KN, Brooks SC, Thorpe K, Zhan C, **Scales DC.**

### ***Presentations/Lectures:***

1. 2011 Dec **Facilitator.** Methods in Epidemiologic, Clinical, and Operations Research II. American Thoracic Society. Kusadasi, Turkey. Presenter(s): **Scales DC.** One week comprehensive course (40 hours).
2. 2011 Nov 16 **Moderator.** Withdrawing & Withholding. Critical Care Canada Forum/CCCS Residents Day. Toronto, Ontario, Canada. Presenter(s): **Scales DC**, Stewart T. (Continuing Education).
3. 2011 Nov 15 **Invited Speaker.** Pay for Performance -- Approaches of Professional Societies. Critical Care Canada Forum/CCCS Residents Day. Toronto, Ontario, Canada. Presenter(s): **Scales DC.** (Continuing Education).
4. 2011 Nov 14 **Moderator.** WJ Sibbald Critical Care Systems Symposium - The Big Picture View. Critical Care Canada Forum/CCCS Residents Day. Toronto, Ontario, Canada. Presenter(s): **Scales DC**, Fowler R. (Continuing Education).
5. 2011 May 16 **Invited Speaker.** What Have We Learned Since the Connors PA Catheter Study? American Thoracic Society. Denver, Colorado, United States. Presenter(s): **Scales DC.** (Continuing Education).
6. 2011 May 16 **Invited Speaker.** Is It Better to Wait? Early Versus Late Tracheostomy. American Thoracic Society. Denver, Colorado, United States. Presenter(s): **Scales DC.** (Continuing Education).
7. 2011 May 16 **Invited Speaker.** What to Look for in Clinical Studies of Lung Injury. American Thoracic Society. Denver, Colorado, United States. Presenter(s): **Scales DC.** (Continuing Education).
8. 2011 May 16 **Moderator.** The Intensity of Intensive Care: Is More Better? American Thoracic Society. Denver, Colorado, United States. (Continuing Education).
9. 2011 May 14 **Invited Speaker.** Tracheostomy Timing and Extubation Failure. American Thoracic Society. Denver, Colorado, United States. Presenter(s): **Scales DC.** (Continuing Education).
10. 2011 Mar **Visiting Professor.** "Don't just do it -- prove it! Studying System-level Interventions for Improving Quality of Critical Care". Pulmonary and Critical Care Grand Rounds.

University of Michigan. Ann Arbor, Michigan, United States. Presenter(s): **Scales DC**. (Continuing Education).

11. 2011 Mar **Visiting Professor**. "Studying System-Level Interventions for Improving Quality of Critical Care". Grand Rounds, Health Services and Delivery Group. Department of Veterans Affairs, Ann Arbor Health Care System. Ann Arbor, Michigan, United States. Presenter(s): **Scales DC**. (Continuing Education).
12. 2011 Jan 19 **Invited Speaker**. Late-Breaking Session. A multifaceted intervention for Quality Improvement in a Network of ICUs: A Cluster RCT. Society of Critical Care Medicine. San Diego, California, United States. Presenter(s): **Scales DC**. (Continuing Education).
13. 2011 Dec 6 **Invited Speaker**. Sunnybrook Research Rounds, Division of Cardiology, Schulich Heart Centre, Sunnybrook Health Sciences Centre. Toronto, Ontario, Canada. Presenter(s): **Scales DC**. (Continuing Education).
14. 2011 Dec 5 **Invited Speaker**. Outcomes research in critical illness: short and long term. MSC4001H: Foundations in Resuscitation Science Research. Toronto, Ontario, Canada. Presenter(s): **Scales DC**.
15. 2011 May 24 **Invited Speaker**. Studying Interventions for Improving Quality of Care. Course lecture for HAD5306, Clinical Epidemiology Program. Department of Health Policy, Management and Evaluation, University of Toronto. Toronto, Ontario, Canada. Presenter(s): **Scales DC**.

#### **Research Funding:**

1. 2011 Oct - 2015 Sep **Principal Investigator**. Initiation of Cooling by EMS to Promote the Adoption of in-hospital therapeutic hypothermia in Cardiac arrest Survivors -- ICE-PACS Randomized Controlled Trial. Canadian Institutes of Health Research (CIHR). Collaborators: Brooks SC, Cheskes S, Craig AM, Dainty KN, Darling S, Mamdani M, Morrison LJ, Perreira TA, Thorpe KE, Verbeek PR. 760,947 CAD. [Grants]  
*My specific contribution: I am the principal investigator on this grant; Responsible for conception, design, writing of grant manuscript, and implementation.*
2. 2011 Oct - 2013 Sep **Co-Investigator**. A National Comparison of Intensity of End-of-Life Care in Canada: Defining Changing Patterns, Risk Factors and Targets for Intervention. Canadian Institutes of Health Research (CIHR). Operating Grant: Secondary Analysis of Databases. PI: Fowler, Robert A. Collaborators: Kozak JF, Rockwood K, Heyland DK, Rubenfeld G, **Scales DC**, Stukel TA, Wunsch H. 99,208 CAD. [Grants]  
*My specific contribution: Contributed to conception, design, and writing of grant.*
3. 2010 Dec - 2012 Nov **Co-Investigator**. The impact of a Post Cardiac Arrest Consult Team (PACT) on process and clinical outcomes in patients resuscitated from out-of-hospital cardiac arrest. Heart and Stroke Foundation. PI: Brooks, Steven. Collaborators: Szadkowski LM, Morrison L, **Scales DC**, Rubenfeld G, Jeffs LP, Madan M, Gray S, Friedrich J, Fam N, Dorian P, Dainty KN, Crystal E, Chapman M. 198,722 CAD. [Grants]  
*My specific contribution: Contributed to conception, design, writing of grant manuscript, and implementation.*

4. 2010 Dec - 2012 Nov **Principal Investigator.** Premature Termination of Resuscitation in Survivors of Cardiac Arrest (PremaTOR). Heart and Stroke Foundation. Collaborators: Brooks SC, Chapman MG, Zwarenstein MF, Morrison LJ, Golan E, Dale C, Young B. 193,120 CAD. [Grants]  
*My specific contribution: I am the principal investigator on this grant; Responsible for conception, design, writing of grant manuscript, and implementation.*
5. 2010 Oct - 2013 Sep **Co-Investigator.** Weaning and Variability Evaluation (WAVE). Canadian Institutes of Health Research (CIHR). PI: Seely, Andrew. Collaborators: Ferguson ND, Fergusson DA, Hooper J, Lelouche F, Marshall JC, Maziak DE, McIntyre LL, Ramsay TO, Rubinfeld G, **Scales DC**, Wilkes P, Zarychanski R. 563,533 CAD. [Grants]  
*My specific contribution: Contributed to conception, design, and implementation.*
6. 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. Collaborators: Black SE, Davis D, Dorian P, Hutchison JS, Lavery J, Morrison LJ, Redelmeier DA, Rotstein OD, Sibbald W, Young Investigator: **Scales DC**. 3,100,000 CAD. [Grants]  
*My specific contribution: I am a Young Investigator on this grant, and my contribution will be directed at implementation and analysis of this study.*
7. 2009 Dec - 2015 Nov **Co-Investigator.** Resuscitation Outcomes Consortium (ROC) Regional Clinical Center-Toronto Regional Coordinating Centre. Canadian Institutes of Health Research (CIHR). Resuscitation Outcomes Consortium. PI: Morrison, Laurie. Collaborators: Craig A, Baker A, Slutsky A, Nathens A, **Scales DC**, Redelmeier D, Hutchison J, Spence J, Morrison L, Feldman M, Rotstein OD, Dorian P, Verbeek R, MacDonald R, Rizoli S, Cheskes S, Brooks S. 1,002,000 CAD. [Grants]  
*My specific contribution: I will contribute to conception, design, and implementation of subgroup studies; input into analysis of results; contribute to writing of study manuscripts.*
8. 2009 Oct - 2015 Oct **Co-Investigator.** Toronto regional resuscitation research out of hospital network. Heart and Stroke Foundation. Resuscitation Outcomes Consortium. PI: Morrison, Laurie. Collaborators: Craig A, Baker A, Slutsky A, Nathens A, **Scales DC**, Redelmeier D, Hutchison J, Spence J, Morrison L, Feldman M, Rotstein OD, Dorian P, Verbeek R, MacDonald R, Rizoli S, Cheskes S, Brooks S. 1,500,000 CAD. [Grants]  
*My specific contribution: I will contribute to conception, design, and implementation of subgroup studies; input into analysis of results; contribute to writing of study manuscripts.*
9. 2009 Jul - 2014 Jun **Principal Investigator.** The Impact of an Aging Population on the Delivery of Critical Care Services in Canada. Canadian Institutes of Health Research (CIHR). 300,000 CAD. [Grants]  
*My specific contribution: Conceived study idea, developed study methods, developed analytical approach, wrote grant proposal.*
10. 2009 Apr - 2011 Apr **Co-Investigator.** Towards RECOVER: Long-term Clinical Outcomes and Needs Assessment in ICU Survivors of Prolonged Mechanical Ventilation and their Caregivers. Ministry of Health Alternate Funding Plan (AFP)

Innovation Fund. PI: Herridge, Margaret S; Cameron, Jill I. Collaborators: Abbey SE, Adhikari NK, Batt JAE, Cook DJ, Dos Santos CC, Ferguson ND, Flannery JF, Fowler RA, Friedrich J, Leung G, Marshall JC, Meggison HE, Moody A, Mehta S, Rudkowski JC, Rubenfeld G, **Scales DC**, Slutsky AS. 196,000 CAD. [Grants]

*My specific contribution: I will contribute to conception, design, and implementation of subgroup studies; input into analysis of results; contribute to writing of study manuscripts.*

11. 2009 Mar - 2013 Feb **Co-Investigator**. Towards RECOVER: Long-term Clinical Outcomes and Needs Assessment in ICU Survivors of Prolonged Mechanical Ventilation and their Caregivers. Canadian Institutes of Health Research (CIHR). PI: Herridge, M; Cameron, J. Collaborators: Abbey SE, Adhikari NK, Batt JAE, Cook DJ, Dos Santos CC, Ferguson ND, Flannery JF, Fowler RA, Friedrich J, Leung G, Marshall JC, Matte AL, Meggison HE, Mehta S, Moody AR, Rubenfeld G, Rudkowski JC, **Scales DC**, Sinuff T, Slutsky AS, Tansey CM, Tomlinson GA. 654,368 CAD. [Grants]

*My specific contribution: I will contribute to conception, design, and implementation of subgroup studies; input into analysis of results; contribute to writing of study manuscripts.*



**Peer Reviewed Publications:**

1. Moga, M-A., Manlihot, C., Marwali, E.M., McCrindle, B.W., Van Arsdell, G.S., **Schwartz, S.M.** Hyperglycemia after pediatric cardiac surgery: Impact of age and residual lesions. *Crit Care Med* Feb;39(2):266-72, 2011 **SRA**
2. Clarizia, N.A., Manlihot, C., **Schwartz, S.M.**, Sivarajan, V.B., Maratta, R., Holtby, H.M., Gruenwald, C.E., Caldarone, C.A., Van Arsdell, G.S., McCrindle, B.W.: Improved Outcomes Associated With Intra-operative Steroid Use in High-Risk Pediatric Cardiac Surgery. *Ann Thorac Surg* Apr;91(4):1222-7, 2011. PubMed PMID: 21440149. **CA**
3. **Schwartz, S.M.**, Anand, K.J.S., Portman, M.A., Crow, S., Nelson, D.P., Zimmerman, J.J.: Endocrinopathies in the Cardiac ICU. *World Journal for Pediatric and Congenital Heart Surgery* 2(3) 400-410, 2011. **SRA**
4. Manlihot, C., Manjak, I.B., Brandao, L.R., Gruenwald, C.E., Chan, A.K., Yoon, H., Maratta, R., Clarizia, N.A., **Schwartz, S.M.**, Sivarajan, V.B., Holtby, H.M., Caldarone, C.A., Van Arsdell, G.S., McCrindle, B.W.: Risk, clinical features, and outcomes of thrombosis associated with pediatric cardiac surgery. *Circulation*. 2011 Oct 4;124(14):1511-9. Epub 2011 Sep 12. First published on September 12 2011 as doi:10.1161/CIRCULATIONAHA.110.006304. **CA**
5. Manlihot, C., McCrindle, B.W., Menjak, I.B., Yoon, H., Holtby, H.M., Brandao, L.R., Chan, A.K., **Schwartz, S.M.**, Sivarajan, V.B., Crawford-Lean, L., Foreman, C., Caldarone, C.A., Van Arsdell, G.S., Gruenwald, C.E.: Longer blood storage is associated with suboptimal outcomes in high-risk pediatric cardiac surgery. *Ann Thorac Surg* 2011. Nov 30 [Epub ahead of print.] **CA**

**In Press:**

1. Taylor, K.B., Lynch, J., Pehora, C., Holtby, H., **Schwartz, S.M.**: Cardiac Arrest Upon Induction of Anesthesia in Children with Cardiomyopathy: an Analysis of Incidence and Risk Factors. *Ped Anesth (In Press)*. **CA**
2. Manlihot, C., Brandao, L.R., Kwok, J., Kegel, S., Menjak, I.B., Carew, C.L., Chan, A.K., **Schwartz, S.M.**, Sivarajan, V.B., Caldarone, C.A., Van Arsdell, G.S., McCrindle, B.W. Thrombotic complications and thromboprophylaxis across all 3 stages of single ventricle heart palliation. *Journal of Pediatrics [In Press]*. **C**

**Book Chapters:**

1. Sivarajan, V.B., **Schwartz, S.M.**, Hoffman, J. Structure and Function of the Heart. In: Fuhman, B.P., Zimmerman, J.J. (eds): *Pediatric Critical Care*, Fourth edition. Philadelphia: Elsevier Saunders, 2011, pp 199-216. **SRA**

**Abstracts:**

1. Sivarajan, V., Caldarone, C., Manlihot, C., McCrindle, B.W., **Schwartz, S.M.**, Sivarajan, V.B. Somatic Growth following Surgical Palliation of Hypoplastic Left Heart Syndrome. Presented as an Oral Abstract at the 15<sup>th</sup> Annual Update on Pediatric and Congenital Cardiovascular Disease, Phoenix, Arizona, February 2011. **CA**
2. Sivarajan, V.B., Sivarajan, V., Vezmar, M., Manlihot, C., McCrindle, B.W., **Schwartz, S.M.**, Van Arsdell, G.S., Caldarone, C. Hybrid or Norwood: What is the Best Reconstructive Strategy for Hypoplastic Left Heart Syndrome? *Journal of the American College of Cardiology*. 2011 Apr

5;57(14) Supplement A:p 27. Accepted for Oral Presentation at the American College of Cardiology (ACC.11) 60<sup>th</sup> Annual Scientific Session & Expo and Innovation in Intervention: i2 Summit 2011, New Orleans, Louisiana, April 2011. **CA**

3. Alshehri, Saleh S., Shetty, R., Caldarone, Christopher A., Gruenwald, C., Manlhiot, C., McCrindle, Brian W., **Schwartz, Steven M.**, Van Arsdell, Glen S., Sivarajan, Venkatesan B. Neurological and Cardiac Functional Status After Extracorporeal Membrane Oxygenation. Presented as an oral abstract at the AHA Scientific Sessions 2011, Orlando, Florida, November 2011. **CA**
4. Tronccone, Michael J., Brandao, Leonardo R., Caldarone, Christopher A., Manlhiot, C., McCrindle, Brian W., **Schwartz, Steven M.**, Van Arsdell, Glen S., Venkatesan B. Hosp for Sick Children, Toronto, ON, Canada. Clinical Outcomes and Thromboembolic Complications Related to Recombinant Factor VII Activated Use for Refractory Medical Bleeding After Pediatric Cardiac Surgery. *Circulation*. 2011;124:A16765. Presented as an oral abstract at the AHA Scientific Sessions 2011, Orlando, Florida, USA. November 2011. **CA**
5. Floh, Alejandro A., Manlhiot, C., Clarizia, Nadia A., Moga, MA., Redington, Andrew N., McCrindle, Brian W., La Rotta, G., Khaikin, S., Caldarone, Christopher A., Van Arsdell, Glen S., **Schwartz, Steven M.** The Hospital for Sick Children, Toronto, ON, Canada, A Pro-Inflammatory, Hyperinsulin State, Not Hyperglycemia, is Associated with Adverse Outcomes After Pediatric Heart Surgery. *Circulation*. 2011;124:A13917. Presented as an oral abstract at the AHA Scientific Sessions 2011, Orlando, Florida, USA. November 2011. **CA**
6. Goldberg, C., Allen, K., Tabbutt, S., Atz, Andrew M., Bhatt, M., Clabby, M., Cooper, David S., Eghtesady, P., Frommelt, Peter C., Gruber, Peter J., Hill, Kevin D., Kaltman, Jonathan R., Laussen, Peter C., Lewis, Alan B., Lurito, Karen J., Minich, L.L., Ohye, Richard C., Schonbeck, J., **Schwartz, Steven M.**, Singh, Rakesh K., Ghanayem, Nancy S., and Pediatric Heart Network Investigators. Interstage Mortality after the Norwood Procedure: Results of the Multi-Center Single Ventricle Reconstruction Trial. *Circulation*. 2011;124:A12185. Presented as an oral abstract at the AHA Scientific Sessions 2011, Orlando, Florida, USA. November 2011. **CA**
7. Dipchand, A., Manlhiot, C., Mital, S., Van Arsdell, G., **Schwartz, Steven M.**, Caldarone, C., McCrindle Brian W., LABATT FAMILY HEART CENTRE, Hospital for Sick children, Toronto, ON, Canada. Infant Pre-Listing Probability of Survival Beyond the Early Post-Heart Transplantation Period. *Circulation*. 2011;124:A12586. Presented as an oral abstract at the AHA Scientific Sessions 2011, Orlando, Florida, USA. November 2011. **CA**

#### **Presentations/Lectures:**

1. **WFPICCS 6<sup>th</sup> World Congress on Pediatric Critical Care.** Invited Panel Member: Expert Panel Discussion: Controversies in ECLS. Bridging to Transplant or Recovery. Sydney, Australia. March 2011.
2. **WFPICCS 6<sup>th</sup> World Congress on Pediatric Critical Care.** Invited Speaker: Beyond Systolic Function: The Right Ventricle. Sydney, Australia. March 2011.
3. **WFPICCS 6<sup>th</sup> World Congress on Pediatric Critical Care.** Invited Panel Member: Expert Panel Discussion: Controversies in ECLS. The role of the cardiologist in ICU; Other Imaging Modalities. Sydney, Australia. March 2011.
4. **WFPICCS 6<sup>th</sup> World Congress on Pediatric Critical Care.** Moderator: Outcomes After Cardiac Surgery: How Are Out Patients Doing in 2011? Sydney, Australia. March 2011.
5. **ACTS – Transport Workshop.** Keynote Speaker: When to suspect cardiac disease in a neonate. SickKids Learning Institute, Toronto, Ontario, Canada. April 2011.

6. **Contemporary Questions in Congenital Heart Disease: Hypoplastic Left Heart Syndrome and Other Functionally Univentricular Heart Disease. The 5<sup>th</sup> Cardiac Symposium.** How we use bedside mass spectrometry in Toronto. Toronto, Ontario, Canada. June 2011.

***Research Funding:***

1. 2009-2012 NA 6685 Co-Investigator (HSFO) – The effect of remote ischemic preconditioning on clinical and genomic responses to open heart surgery in children. (Principal Investigators: Redington, AN; McCrindle, BW) - \$570,399
2. 2010-2015 104643 Co-Investigator (CIHR) – Clinical Assessment of Thrombosis in Children After Heart Surgery (CATCH) (Principal Investigator: McCrindle, BW) - \$1,514,330.
3. 2011-2016 1U10HL109777-01 Principal Investigators (McCrindle, BW; Schwartz, SM; Mital, S) – Pediatric Heart Network – The Hospital for Sick Children, Toronto (Co-Investigators: Benson, L; Brandao, L; Caldarone, C; Chan, A; Gruenwald, C; Holtby, H; Manlihot, C; Mertens, L; Russell, J; Sivarajan, B; Van Arsdell, G; Sananes, R) – Funds requested to the NIH NHLBI, amount 2011-2012 - \$1,503,793 US (5 years to 2016 \$7,518,965 US).
4. 2011-2014 NA 7183 Principal Investigator (HSFO) - Glucose Homeostasis and Cardiac Output After Paediatric Cardiac Surgery. \$195,019.
5. 2011-2013 Principal Investigator (Labatt Family Heart Centre Innovation Fund) - Impact of cardiopulmonary bypass and postoperative cardiac output on the development of postoperative acute kidney injury (AKI), as measured by a novel serum biomarker, neutrophil-gelatinase associated lipocalin (NGAL). \$24,000.

**Peer Reviewed Publications:**

1. Tuchscherer D, Z'graggen WJ, Passath C, Takala J, **Sinderby C**, Brander L. Neurally adjusted ventilatory assist in patients with critical illness-associated polyneuromyopathy. *Intensive Care Med.* 2011 Dec;37(12):1951-61.
2. Beck J, Reilly M, Grasselli G, Qui H, Slutsky AS, Dunn MS, **Sinderby CA**. Characterization of neural breathing pattern in spontaneously breathing preterm infants. *Pediatr Res.* 2011 Dec;70(6):607-13.
3. Beck J, **Sinderby C**. [Clinical application of neurally adjusted ventilatory assist]. *Zhonghua Nei Ke Za Zhi.* 2011 Jun;50(6):449-52.

**Book Chapters:**

1. **Sinderby C**, Beck J. "NAVA" Oxford Specialist Handbook Series, Advanced Respiratory Intensive Care, In Press 2011.
2. Beck J, **Sinderby C**. "Proportional Assist ventilation and Neurally Adjusted Ventilatory Assist". *Applied Technologies in Mechanical Ventilation*. Esquinas AM (ed): Applied Technologies in Pulmonary Medicine. Basel, Karger, 2011, pp 1–5
3. **Sinderby C**, Beck J. "Patient-ventilator Interactions" Jean-Louis Vincent & Jesse B. Hall (eds.), *Encyclopedia of Intensive Care Medicine*, Springer-Verlag Berlin Heidelberg 2011

**Abstracts:**

1. Lowson S, Rowley D, Caruso F, Clarke, Beck J, Sinderby C. Application of NAVA after a failed spontaneous breathing trial in patients initially treated with conventional ventilation. To be presented at the ATS Meeting May 2011
2. Liu L, Takahashi D, Sinderby C, Beck J. Continuous NAVA: The role of neural adjustment of expiratory pressure. To be presented at the ATS Meeting May 2011
3. Beck J, Liu L, Slutsky AS, Sinderby C. Efficiency of continuous NAVA, constant CPAP, and bi-level positive airway pressure delivered non-invasively. To be presented at the ATS Meeting May 2011
4. Takahashi D, Liu L, Beck J, Sinderby C. Neurally controlled lung protective ventilation by elimination of upper airway dead space. To be presented at the ATS Meeting May 2011

**Presentations/Lectures:**

1. **2011** "NAVA: Why and When?" DART Meeting, New York, NY USA, March 18, 2011
2. **2011** "Non-invasive NAVA", Maquet Industry sponsored symposium, Brussels, Belgium, March 21, 2011
3. **2011** "Spontaneous Breathing is Protective" International Symposium on Intensive Care and Emergency Medicine, Brussels, BE March 22, 2011
4. **2011** "NAVA with endo-tracheal through-flow" International Symposium on Intensive Care and Emergency Medicine, Brussels, BE March 23, 2011

5. **2011** "Non-invasive NAVA" International Symposium on Intensive Care and Emergency Medicine, Brussels,BE March 23, 2011
6. **2011** "NAVA" tutorial, International Symposium on Intensive Care and Emergency Medicine, Brussels,BE March 24
7. **2011** NAVA tutorial, University of Toronto Summer Series, August 17, 2011

**Peer Reviewed Publications:**

1. Furlan JC, **Singh J**, Hsieh J, Fehlings MG. Methodology of Systematic Reviews and Recommendations. J Neurotrauma. 2011; 28(8): 1335-9. **Coauthor or Collaborator.**
2. Ahn H, **Singh J**, Nathens A, Macdonald RD, Travers A, Tallon J, Fehlings M, Yee A. Pre-Hospital Care Management of a Potential Spinal Cord Injured Patient: A Systematic Review of the Literature and Evidence-Based Guidelines. J Neurotrauma. 2011;28(8): 1341-61. **Coauthor or Collaborator.**

**In Press:**

1. Katharine Xing, Srinivas Murthy, W C Liles and **Jeffrey M Singh**. Clinical Utility of Biomarkers of Endothelial Activation in Sepsis - A Systematic Review. Critical Care. In Press (Trainee publication, Internal Medicine Resident). **Senior Responsible Author.**

**Media Appearances:**

1. 2011 Dec 15 **Interview.** Ventilating Brain-Injured Patients. Advance for Respiratory Care and Sleep Medicine. Presenter(s): Author: Michael Gibbons. <http://respiratory-care-sleep-medicine.advanceweb.com/Features/Articles/Ventilating-Brain-Injured-Patients.aspx>.

**Abstracts:**

1. 2011 Jun 21 **Poster Presentation.** Venous Thromboembolism and Prophylaxis in the Critically Ill Patient with Liver Failure: A Retrospective Cohort Study. Interdepartmental Division of Critical Care Medicine. Toronto. Presenter(s): Dr. Timothy Paterson. Critical Care Medicine Day. (Trainee Presentation).

**Presentations/Lectures:**

1. 2011 Nov 16 **Invited Speaker.** Mechanical Ventilation in Brain Injury. Critical Care Canada Forum 2011. Toronto, Ontario, Canada. Presenter(s): Dr. **Jeffrey Singh.**
2. 2011 Nov 16 **Facilitator.** Neuro Critical Care II. Critical Care Canada Forum 2011. Toronto, Ontario, Canada.
3. 2011 Nov 14 **Facilitator.** Plenary RCT. Critical Care Canada Forum 2011. Toronto, Ontario, Canada.
4. 2011 May 14 **Invited Speaker.** Brain Injury and Increased ICP. American Thoracic Society Postgraduate Course on Mechanical Ventilation. Denver, Colorado, United States. Presenter(s): **Jeffrey M Singh.** (Continuing Education).
5. 2011 Mar 18 **Invited Speaker.** Preclinical Delivery of SCI Care. North American Clinical Trials Network Meeting. Ontario, Canada. Presenter(s): Dr. **Jeffrey Singh.**
6. 2011 Nov 28 **Invited Speaker.** Delirium in the ICU: There is nothing pleasant about being 'pleasantly confused'. Krembil Neuroscience Symposium. Toronto, Ontario, Canada. Presenter(s): **Jeffrey M Singh.** (Continuing Education).
7. 2011 May 25 **Speaker.** Quality Improvement in the TWH ICU: Pitfalls, Problems and Pinnacles. University Health Network - Department of Medicine Medical Grand Rounds. Toronto. Presenter(s): Dr. **Jeffrey Singh.**

**Research Funding:**

1. 2011 May - 2012 May **Co-Investigator.** A Prospective Evaluation of the Association between Psychoactive Medications and Delirium in Critically Ill Adults. Rx&D Pilot Research Grant. PI: Burry, Lisa. Collaborators: Louise Rose BN, MN, PhD Scott Kim, BSc  
David Williamson, MScPharm Marc Perreault, PharmD Dean Fergusson, PhD Marilyn Steinberg RN Hilary Rodrigues, BScPharm Virginia Fernandes, BSc, PharmD Orla Smith, RN, **MN**  
**Jeffrey Singh**, MD, FRCPC Sangeeta Mehta MD, FRCPC. 24,985 CAD. [Grants].
2. 2010 Sep - 2012 Sep **Co-Principal Investigator.** Innovative approaches to mechanical ventilation in spinal cord injured patients. Ontario Neurotrauma Foundation. Rapid Response - New Investigator. PI: **Singh, Jeff**. Collaborators: Spahija, Jadranka. 100,000 CAD. [Clinical Trials].
3. 2010 Jan - 2012 Sep **Principal Investigator.** "Exploration of gender discrepancy in outcomes and utilization of air medical transport". Foundation for Air-medical Research and Education. Collaborators: McDonald, RD. 16,000 USD. [Grants]  
*Principal Author / Senior Responsible Author..*

**Peer Reviewed Publications:**

1. **Sinuff T\***, Keenan SP\*, Burns KEA, Muscedere J, Kutsogiannis J, Mehta S, Cook DJ, Ayas N, Adhikari NKJ, Hand L, Scales DC, Pagnotta R, Lazosky L, Rocker G, Dial S, Laupland K, Sanders K, Dodek P, for the Canadian Critical Care Trials Group / Canadian Critical Care Society Noninvasive Ventilation Guidelines Group. Clinical practice guidelines for the use of noninvasive positive pressure ventilation and noninvasive continuous positive airway pressure in the acute care setting. CMAJ. 2011. 183;33: E195-E214.  
MY SPECIFIC CONTRIBUTION: Designed and led the conduct of the study, analyzed data, wrote first draft of the paper and revised subsequent drafts of the paper. **Co-First Author**.
2. **Sinuff T**. Noninvasive positive pressure ventilation for acute respiratory failure: What role is there for patients declining intubation or choosing palliative? Progress in Palliative Care. 2011;19:223-229  
MY SPECIFIC CONTRIBUTION: Designed and led the conduct of the study, analyzed data, wrote first draft of the paper and revised subsequent drafts of the paper. **Principal Author**.

**Non-peer Reviewed Abstracts:**

1. J. Muscedere, **T. Sinuff**, D.J. Cook, P. Dodek, S. Keenan, G. Wood, R. Tan, W. Anderson, M. Haupt, R. Boulai, M. Miletin, X. Jiang, D. Heyland. Active Observational Study Of The Adoption And Transfer Of Clinical Practice Guidelines Through Education For Ventilator Associated Pneumonia: The ABATE VAP Study. Am. J. Respir. Crit. Care Med. 2011; p.A3736. **Coauthor or Collaborator**.
2. M.S. Herridge, L.M. Chu, A.L. Matte, L. Chan, G.A. Tomlinson, N.D. Ferguson, S. Mehta, J. Friedrich, N. Adhikari, R. Fowler, D.J. Cook, J. Rudkowski, H. Meggison, S. Abbey, J. Batt, C. Dos Santos, J. Flannery, G. Leung, J. Marshall, A. Moody, G. Rubenfeld, D.C. Scales, **T. Sinuff**, A.S. Slutsky, J.I. Cameron. Long-Term Outcomes After Prolonged Mechanical Ventilation: The Towards Recover Study. Am. J. Respir. Crit. Care Med. 2011; p.A2380. **Coauthor or Collaborator**.
3. J.I. Cameron, L. Chan, A. Czerwonka, L.M. Chu, A.L. Matte, N.D. Ferguson, S. Mehta, J. Friedrich, N. Adhikari, J. Rudkowski, H. Meggison, S. Abbey, J. Batt, C. Dos Santos, J. Flannery, G. Leung, J. Marshall, A. Moody, G. Rubenfeld, D.C. Scales, R. Fowler, **T. Sinuff**, A.S. Slutsky, G.A. Tomlinson, M.S. Herridge. Long-Term Outcomes After Prolonged Mechanical Ventilation: Family Caregiver Outcomes From The Towards Recover Study. Am. J. Respir. Crit. Care Med. 2011;p.A3168. **Coauthor or Collaborator**.

**Presentations/Lectures:**

1. 2011 Oct 14 **Invited Speaker**. Noninvasive Ventilation Guidelines and Application for Patients with Acute Respiratory Failure. Canadian Society of Internal Medicine. Halifax, Nova Scotia, Canada. Presenter(s): **Sinuff T**. Workshop.
2. 2011 Oct 4 **Invited Speaker**. Barriers to Uptake of Best Practices - Using Central Line Infections (CLI) and Ventilator Associated Pneumonia (VAP) as Examples. Ontario Hospital Association. Toronto, Ontario, Canada. Presenter(s): **Sinuff T**. Conference on Quality Improvement and Performance Measurement in Critical Care.
3. 2011 Oct 13 **Invited Speaker**. NIV for ARF Workshop. CSIM Conference. Halifax, Nova Scotia, Canada. Presenter(s): **Sinuff T**.
4. 2011 Nov 3 **Invited Speaker**. NIV Guidelines for ARF. ORCS Education Day. Toronto, Ontario, Canada. Presenter(s): **Sinuff T**.



5. 2011 Jan **Invited Speaker.** ABATE Study Results. Department of Critical Care Medicine, Sunnybrook Health Sciences Centre. Toronto, Ontario, Canada. Presenter(s): **Sinuff, T.** Grand Rounds.

**Research Funding:**

1. 2011 Oct - 2012 Oct **Co-Investigator.** Clinical Practice Guidelines for Ventilator Associated Pneumonia. Canadian Institutes of Health Research (CIHR). Grant. PI: Muscedere, John. 99,079 CAD. [Grants].
2. 2011 Apr - 2014 Apr **Co-Investigator.** Advance Care Planning Evaluation in Hospitalized Elderly Patients: A multicenter, prospective study: The ACCEPT Study. Canadian Institutes of Health Research (CIHR). Operating Grant. PI: Heyland, Daren. 347,288 CAD. [Grants].
3. 2009 Mar - 2013 Mar **Co-Investigator.** The RECOVER Program: Phase I Towards RECOVER - Outcomes and Needs Assessment in Survivors of Prolonged Mechanical Ventilation and Their Caregivers. Canadian Institutes of Health Research (CIHR). PI: HERRIDGE, Margaret S; CAMERON, Jill I. Collaborators: ABBEY, Susan E; ADHIKARI, Neill K; BATT, Jane Andrea E; COOK, Deborah J; DOS SANTOS, Claudia C; FERGUSON, Niall D; FLANNERY, John F; FOWLER, Robert A; FRIEDRICH, Jan; LEUNG, General; MARSHALL, John C; MATTE, Andrea L; MEGGISON, Hilary E; MEHTA, Sangeeta; MOODY, Alan R; RUBENFELD, Gordon; RUDKOWSKI, Jill C; SCALES, Damon C; **SINUFF, Tasnim**; SLUTSKY, Arthur S; TANSEY, Catherine M; TOMLINSON, George A. 704,367 CAD. [Grants]  
*MY SPECIFIC CONTRIBUTION: Contributed to the writing of the methods section of grant and revisions to grant..*

**Peer Reviewed Publications:**

1. **Sivarajan VB**, Best D, Brizard CP, Shekerdemian LS, d'Udekem Y, Butt W. Duration of Resuscitation Prior to Rescue Extracorporeal Membrane Oxygenation (ECMO) Impacts Outcome in Children with Heart Disease. Intensive Care Med. 2011 May;37(5):853-60. Epub 2011 Mar 3.
2. Nadia A. Clarizia, BS, Cedric Manlhiot, BS, Steven M. Schwartz, MD, **V. Ben Sivarajan, MD**, Robert Maratta, BS, Helen M. Holtby, MB, Colleen E. Gruenwald, MHSc, Christopher A. Caldarone, MD, Glen S. Van Arsdell, MD, Brian W. McCrindle, MD: Improved Outcomes Associated With Intra-operative Steroid Use in High-Risk Pediatric Cardiac Surgery. Annals of Thoracic Surgery. 2011 Apr;91(4):1222-7. PubMed PMID: 21440149.
3. **Sivarajan VB**, Bohn D. Monitoring of Standard Hemodynamic Parameters: Heart Rate, systemic blood pressure, atrial pressure, pulse oximetry and end-tidal CO2 Pediatr Crit Care Med (PCICS Suppl) 2011 Jul:S2-S11.
4. Manlhiot C, Menjak IB, Brandao LR, Gruenwald CE, Schwartz SM, **Sivarajan VB**, Yoon H, Maratta R, Carew CL, McMullen JA, Clarizia NA, Holtby HM, Williams S, Caldarone CA, Van Arsdell GS, Chan AK, McCrindle BW. Risk, clinical features, and outcomes of thrombosis associated with pediatric cardiac surgery. Circulation. 2011 Oct 4;124(14):1511-9. Epub 2011 Sep 12.
5. Manlhiot C, McCrindle BW, Menjak IB, Yoon H, Holtby HM, Brandao LR, Chan AK, Schwartz SM, **Sivarajan VB**, Crawford-Lean L, Foreman C, Caldarone CA, Van Arsdell GS, Gruenwald CE. Longer blood storage is associated with suboptimal outcomes in high-risk pediatric cardiac surgery. Ann Thorac Surg 2011 Nov 30 [Epub ahead of print.]

**In Press:**

1. Manlhiot C, Brandao LR, Kwok J, Kegel S, Menjak IB, Carew CL, Chan AK, Schwartz SM, **Sivarajan VB**, Caldarone CA, Van Arsdell GS, McCrindle BW. Thrombotic complications and thromboprophylaxis across all 3 stages of single ventricle heart palliation. Journal of Pediatrics [In Press].

**Book Chapters:**

1. **Sivarajan VB**, Schwartz SM, Hoffman J. Chapter 19: Structure and Function of the Heart. In: Furhman, B. P., Zimmerman, J.J. (eds): Pediatric Critical Care, 4<sup>th</sup> edition, Philadelphia: Elsevier Saunders, 2011, pp 199-216.

**Abstracts:**

1. **Feb 2011** Somatic Growth following Surgical Palliation of Hypoplastic Left Heart Syndrome. Presented as an Oral Abstract on February 4, 2011 at the 15<sup>th</sup> Annual Update on Pediatric and Congenital Cardiovascular Disease. Phoenix, Arizona, USA. V. Sivarajan, C. Caldarone, C. Manlhiot, B. W. McCrindle, S. M. Schwartz, **V. B. Sivarajan**.
2. **Apr 2011** Hybrid or Norwood: What Is the Best Reconstructive Strategy for Hypoplastic Left Heart Syndrome? Journal of the American College of Cardiology. 2011 Apr 5;57(14) Supplement A:p 27. Presented at the American College of Cardiology (ACC.11) 60<sup>th</sup> Annual Scientific Session & Expo and Innovation in Intervention: i2 Summit 2011, April

2011. New Orleans, Louisiana, USA. **V.B. Sivarajan**, V. Sivarajan, M. Vezmar, C. Manlhiot, B. McCrindle, S.M. Schwartz, G. Van Arsdell, C. Caldarone.

3. **Sep 2011** (Insert title of abstract) Presented as a Poster Presentation at the Pediatric Cardiac Intensive Care Society European Conference & Annual Scientific Meeting of POCS (UK), Cambridge, United Kingdom. (Insert authors)
4. **Nov 2011** Neurological and Cardiac Functional Status After Extracorporeal Membrane Oxygenation in Children with Heart Disease. Presented as an oral abstract at the AHA Scientific Sessions 2011, Orlando, FLORIDA. Saleh S Alshehri, Rakshay Shetty, Christopher A Caldarone, Colleen Gruenwald, Cedric Manlhiot, Brian W. McCrindle, Steven M Schwartz, Glen S Van Arsdell, **Venkatesan B Sivarajan**, The Hosp for Sick Children, Toronto, ON, Canada.
5. **Nov 2011** Clinical Outcomes and Thromboembolic Complications Related to Recombinant Factor VII Activated Use for Refractory Medical Bleeding After Pediatric Cardiac Surgery. Presented as an oral abstract at the AHA Scientific Sessions 2011, Orlando, FLORIDA, USA. Michael J Troncone, Leonardo R. Brandao, Christopher A Caldarone, Cedric Manlhiot, Brian W McCrindle, Steven M Schwartz, Glen Van Arsdell, **VB Sivarajan**, Hosp for Sick Children, Toronto, ON, Canada.

***Presentations/Lectures:***

1. **Jun 2011** Debate of the day: RCTs in congenital heart surgery are not worth the effort. Session Chair: The 5<sup>th</sup> Cardiac Symposium: Hypoplastic Left Heart Syndrome and Other Functionally Univentricular Heart Disease. Toronto, CANADA
2. **Jun 2011** The Bob Freedom Lecture. Session Chair: The 5<sup>th</sup> Cardiac Symposium: Hypoplastic Left Heart Syndrome and Other Functionally Univentricular Heart Disease. Toronto, CANADA
3. **July 2011** Mechanical Ventilation: from Conventional to High Frequency. Plenum: PFCCS & Paediatric Congress, Santiago de Cali, COLUMBIA
4. **July 2011** Cardiopulmonary Interactions: Basic Concepts. Invited Speaker: PFCCS & Paediatric Congress, Santiago de Cali, COLUMBIA
5. **July 2011** ECMO: before, now, and beyond. Invited Speaker: PFCCS & Paediatric Congress, Santiago de Cali, COLUMBIA
6. **Nov 2011** Panel Discussion: End of life decision – Ethical Dilemmas. Invited Panelist: 13<sup>th</sup> National Conference of Pediatric Critical Care, Hyderabad, INDIA
7. **Nov 2011** Mixed Bag Session: Pediatric ECMO – Role in Developing Country: Invited Speaker: 13<sup>th</sup> National Conference of Pediatric Critical Care, Hyderabad, INDIA
8. **Nov 2011** Hemodynamic Session: Arrhythmia in Sick Children – Recognition and Management: Invited Speaker: 13<sup>th</sup> National Conference of Pediatric Critical Care, Hyderabad, INDIA
9. **Jan 4, 2011** Septation Defects (ASD/VSD), CCU Fellows Teaching.

10. **Feb 2, 2011** Approach to Common Pediatric Cardiac Problems from the perspective of a Community Paediatrician, Paediatric Resident Lectures.
11. **Feb 2, 2011** A Case-based Approach to the Critically Ill Neonate/Child with suspected Cardiovascular Disease, Paediatric Resident Lectures.
12. **Aug 2, 2011** Cardiopulmonary Interactions, CCU Fellows Teaching.
13. **Sep 13, 2011** RASCH and ARISTOTLE scores, CCU Fellows, Teaching.
14. **Oct 27, 2011** Temporal Hemodynamics and Regional Perfusion After Neonatal Heart Surgery in the Current Era. Acute Care Research Rounds.
15. **Nov 10, 2011** Clinical Outcomes and Thromboembolic complications Related to Recombinant Factor VII Activated Use for Refractory Medical Bleeding after Pediatric Cardiac Surgery. Acute Care Research Rounds.

**Research Funding:**

1. **Apr 2008-11** Heart Centre Innovation Fund
  - Amount: \$34,000
  - Study: Effects of Feeding on Splanchnic Blood Flow After Neonatal Cardiac Surgery: A Randomized Controlled Trial
  - Role: PI
2. **Jan 2009-12** Heart Centre Innovation Fund
  - Amount: \$6,300
  - Study: Energy Expenditure During Ventilation Weaning: A Randomized Controlled Trial Comparing Conventional Pressure Support CPAP versus Neurally Adjusted Ventilatory Adjustment (NAVA)
  - Role: PI
3. **June 2009-11** Heart Centre Innovation Fund
  - Amount: \$3,460
  - Study: Changes in Plasma Arginine and DMA in Neonates
  - Role: PI
4. **Sep 2011-16** NIH NHLBI Pediatric Heart Network
  - Amount: \$7,518,965
  - Study: Perform collaborative multi-institutional clinical studies aimed at improving the evidence base on which pediatric cardiology, and the team at SickKids has been a charter member since its inception 10 year ago.
  - Role: COI

**Peer Reviewed Publications:**

1. **Burns KEA, Adhikari NKJ, Slutsky AS, Guyatt GH, Villar J, Zhang H, Zhou Q, Cook DJ, Stewart TE, Meade MO:** Pressure and volume limited ventilation for the ventilatory management of patients with acute lung injury: A systematic review and meta-analysis. *PLoS ONE* 2011; 6(1): pp e14623. **C**
2. **Del Sorbo L, Slutsky AS:** Acute respiratory distress syndrome and multiple organ failure. *Current Opinion in Critical Care* 2011; 17: pp 1-6. **CPA**
3. **Dos Santos CC, Shan Y, Akram A, Slutsky AS, Haitsma JJ:** Neuroimmune regulation of ventilator-induced lung injury. *American Journal of Respiratory and Critical Care Medicine* 2011; 183: pp 471-482. **C**
4. **Chafe R, Born KB, Slutsky AS, Laupacis A:** Commentary: The rise of people power. *Nature* 2011; 472: pp 410-11. **C**
5. **Cypel M, Yeung JC, Liu M, Anraku M, Chen F, Karolak W, Sato M, Laratta J, Azad S, Madonik M, Chow CW, Chaparro C, Hutcheon M, Singer LG, Slutsky AS, Yasufuku K, de Perrot M, Pierre AF, Waddell TK, Keshavjee S:** Normothermic ex vivo lung perfusion in clinical lung transplantation. *New England Journal of Medicine* 2011; 364(15): pp 1431-1440. **C**
6. **Henzler D, Hochhausen N, Chankalal R, Xu Z, Whynot SC, Slutsky AS, Zhang H:** Physiologic and biologic characteristics of three experimental models of acute lung injury in rats. *Anesthesia and Analgesia* 2011; 112(5): pp 1139-1146. **C**
7. **Herridge MS, Tansey CM, Matte A, Tomlinson G, Diaz-Granados N, Cooper A, Guest CB, Mazer CD, Mehta S, Stewart TE, Kudlow P, Cook D, Slutsky AS, Cheung AM; Canadian Critical Care Trials Group:** Functional disability 5 years after acute respiratory distress syndrome. *New England Journal of Medicine* 2011; 364(14): pp 1293-304. **C**
8. **Matute-Bello G, Downey G, Moore BB, Groshong SD, Matthay MA, Slutsky AS, Kuebler WM, on behalf of the Acute Lung Injury in animals study group:** American Thoracic Society Documents: An official American Thoracic Society Workshop Report: Features and measurement of experimental acute lung injury in animals. *American Journal of Respiratory Cell Molecular Biology* 2011; 44: pp 725-738. **C**
9. **Colombo D, Cammarota G, Alemani M, Carenzo L, Barra F, Vaschetto R, Slutsky AS, Della Corte F, Navalesi P:** Efficacy of ventilator waveforms observation in detecting patient-ventilator asynchrony. *Critical Care Medicine* 2011; 39(1): pp 2452-57. **C**
10. **Goldenberg NM, Steinberg BE, Slutsky AS, Lee WL:** Broken barriers: A new take on sepsis pathogenesis. *Science Translational Medicine* 2011; 3(88): pp 1-6. **C**
11. **Villar J, Blanco J, Zhang H, Slutsky AS:** Ventilator-induced lung injury and sepsis: Two sides of the same coin? *Minerva Anesthesiology* 2011; 77(6): pp 647-53. **C**
12. **Villar J, Cabrera NE, Casula M, Valladares F, Flores C, Lopez-Aguilar J, Blanch L, Zhang H, Kacmarek RM, Slutsky AS:** WNT/beta-catenin signaling is modulated by mechanical ventilation in an experimental model of acute lung injury. *Intensive Care Medicine* 2011; 37(7): pp 1201-9. **C**
13. **Quinn KL, Henriques M, Tabuchi A, Bing H, Yang H, Cheng WE, Tole S, Yu H, Luo A, Charbonney E, Tullis E, Lazarus A, Robinson LA, Ni H, Peterson BR, Kuebler WM, Slutsky**

**AS, Zhang H:** Human neutrophil peptides mediate endothelial-monocyte interaction, foam cell formation, and platelet activation. *Arteriosclerosis, Thrombosis, and Vascular Biology* 2011; 31: pp 2070-79. **C**

14. **Villar J, Cabrera NE, Valladares F, Casula M, Flores C, Blanch L, Quilez ME, Santana-Rodriguez N, Kacmarek R, Slutsky AS:** Activation of the Wnt/b-Catenin signaling pathway by mechanical ventilation is associated with ventilator-induced pulmonary fibrosis in healthy lungs. *PLoS ONE* 2011; 6(9): pp e23914. **C**
15. **Kuiper JW, Plotz FB, Groeneveld ABJ, Haitsma JL, Jothy S, Vaschetto R, Zhang H, Slutsky AS:** High tidal volume mechanical ventilation-induced lung injury in rats is greater after acid instillation than after sepsis-induced acute lung injury, but does not increase systemic inflammation: an experimental study. *BMC Anesthesiology* 2011; 11: pp 26. **C**
16. **Fanelli V, Zhang H, Slutsky AS:** Year in review 2010: Critical Care - respiratory. *Critical Care* 2011; 15: pp 240. **SRI**

***Non Peer Reviewed Publications:***

1. **Hudson LD, Slutsky AS:** Acute Respiratory Failure. In: *Goldman's Cecil Medicine, 24th Edition* (Goldman L, Schaffer AI, eds). Elsevier Saunders, Philadelphia 2011: pp 629-38. **CPA**
2. **Slutsky AS, Hudson LD:** Mechanical Ventilation. In: *Goldman's Cecil Medicine, 24th edition* (Goldman L, Schaffer AI, eds). Elsevier Saunders, Philadelphia 2011: pp 638-45. **CPA**

***Presentations/Lectures:***

1. Society for Critical Care Medicine, San Diego, CA, Jan 14, 2011 - Jan 17, 2011. Should the lung be closed in ARDS?
2. University of California, San Diego, San Diego, CA, Jan 26, 2011. Medical Grand Rounds: Mechanical ventilation: A historical perspective.
3. 31st International Symposium on Intensive Care and Emergency Medicine, Brussels, Belgium, Mar 22, 2011 - Mar 25, 2011. (1) VILI: How to limit it? Some novel approaches, (2) VILI: Atelectrauma is important, (3) Mechanisms: Prone positioning in ARDS, (4) High frequency modes: When and how.
4. Keystone Symposium on Pathogenesis of Influenza: Virus-Host Interactions, Hong Kong, May 25, 2011. The Acute Respiratory Distress Syndrome (ARDS).
5. Chinese Intensive Care Society Meeting, Guangzhou, China, May 27, 2011 - May 28, 2011. (1) Mechanical ventilation: history and development, (2) Lung protection and mechanical ventilation.
6. ESICM/ATS (European Society of Intensive Care Medicine/American Thoracic Society) Consensus Conference on the Definition of ARDS, Berlin, Germany, Oct 3, 2011 - Oct 5, 2011. (1) Morbidity in ALI/ARDS, (2) Biomarkers and Genetics in ALI/ARDS.
7. Brazilian Congress of Intensive Care Medicine, Porto Alegre, Brazil, Nov 10, 2011 - Nov 11, 2011. (1) Mechanical Ventilation: High versus Low PEEP: How relevant is it for the outcome? (2) Systemic Effects of Mechanical Ventilation: How mechanical ventilation induces multiple organ failure, (3) Mechanical Ventilation: High frequency ventilation.
8. Critical Care Canada Forum, Toronto, Ontario, Nov 14, 2011 - Nov 16, 2011. (1) Organizing Member, (2) Settling (Only) for Best - Shaping Excellence ICU Care - Welcome Address, (3) AC Bryan Symposium: Understanding Va/Q.

9. IX Pan American and Iberic Critical Care Congress, Cartagena de Indias City, Columbia, Nov 28, 2011 - Dec 1, 2011. (1) Clinical Trials in ICU: Why so many negative results? (2) History of mechanical ventilation, (3) The use of PEEP in ARDS, (4) VILI: Ventilator-induced lung injury.

**Research Funding:**

1. Mechanisms of ventilator-induced pulmonary fibrosis and its therapy. **Slutsky AS:** Canadian Institutes of Health Research (CIHR) (\$808,658 2010 - 2015)
2. From Bench to Bedside to Curbside. Clinical Research Consortium to Improve Resuscitation Outcomes. **Morrison LJ,** Slutsky AS, Dorian P: National Institutes of Health (\$600,000) and funding partners: Heart and Stroke Foundation of Canada (\$1,500,000) and CIHR (1,000,000) (\$3,100,000 2010 - 2016)
3. Resuscitation Outcomes Consortium Core Training Grant: NIH (1,009,800), Heart & Stroke Foundation of Canada (1,500,000), and Canadian Institutes of Health Research (1,000,000). **Morrison LJ,** Nathens A, Cheskes S, Slutsky AS, Dorian P: National Institutes of Health and funding partners (\$35,098,000 2010 - 2016)
4. Gender Differences in Access to Post Arrest Care. **Morrison, LJ,** Slutsky AS: Heart and Stroke Foundation of Canada (HSFC) Program: Resuscitation and Knowledge Transfer and Exchange 2010 (\$200,000 2010 - 2012)

**Peer Reviewed Publications:**

1. Carli F, Kehlet H, Baldini G **Steel AC**, McRae K, Slinger P. Evidence basis for regional anesthesia in multidisciplinary fast-track surgical care pathways. **Regional Anesthesia and Pain Medicine** 2011; **36**: 63-72 **(CPA)**
2. Haas B, Gomez D, **Steel AC**, Nathens A. Ratio of units of red blood cells to fresh frozen plasma for severely injured patients undergoing massive transfusion (Protocol). **Cochrane Database of Systematic Reviews** 2011, Issue 3. Art. No.: CD009033. DOI: 10.1002/14651858.CD009033 **(CPA)**

**In Press:**

1. Russell T, **Steel AC**, Hawryluck L, Riazi S. Ecstasy-induced delayed rhabdomyolysis and neuroleptic malignant syndrome in a patient with a positive malignant hyperthermia genetic test. **Anaesthesia** . In Press. **(CPA)**
2. **Steel AC**. Pathophysiology of Acute Lung Injury. **Anesthesiology Clin** 2012. In press. **(PA)**

**Presentations/Lectures:**

1. Acute lung injury. Critical Care Response Team Education Program, Toronto General Hospital, Toronto. March 7th 2011.
2. Transfusion related acute lung injury. Society of Cardiovascular Anesthesiologists 16th Annual Update on Cardiopulmonary Bypass Meeting, March 6<sup>th</sup> – 11<sup>th</sup> 2011.
3. Perioperative shock – controversies in resuscitation. Society of Cardiovascular Anesthesiologists 16th Annual Update on Cardiopulmonary Bypass Meeting, Whistler, BC. March 6<sup>th</sup> – 11<sup>th</sup> 2011.
4. The rapid response system culture at UHN. Acute Resuscitation Symposium, University Health Network, Toronto General Hospital, Toronto, Ontario. March 31<sup>st</sup> 2011.
5. Management of the difficult airway – an anesthesiologist's perspective. The American Thoracic Society Annual Meeting, Denver, CA, US. May 17<sup>th</sup> 2011.
6. Building a business case. Management skills in intensive care – Advanced Training Course in Intensive Care (ATCIC) for the European Society of Intensive Care Medicine. European Society of Intensive Care Medicine 24<sup>th</sup> Annual Congress. Berlin, Germany. October 1<sup>st</sup> 2011.
7. Managing the difficult trainee. Management skills in intensive care – Advanced Training Course in Intensive Care (ATCIC) for the European Society of Intensive Care Medicine. European Society of Intensive Care Medicine 24<sup>th</sup> Annual Congress. Berlin, Germany. October 2<sup>nd</sup> 2011.
8. Ventilation Strategy. Visiting Professor Rounds, Kuwait Cancer Control Centre, Kuwait City, October 18<sup>th</sup> 2011.
9. Management of Shock. Visiting Professor Rounds, Kuwait Cancer Control Centre, Kuwait City, October 20<sup>th</sup> 2011.
10. Quality of Care in the Intensive Care Unit. Visiting Professor Rounds, Kuwait Cancer Control Centre, Kuwait City, October 25<sup>th</sup> 2011.



***Peer Reviewed Publications:***

1. Herridge MS, Tansey CM, Matte A, Tomlinson G, Diaz-Granados N, Cooper A, Guest CB, Mazer CD, Mehta S, **Stewart TE**, Kudlow P, Cook D, Slutsky AS, Cheung AM. Functional disability 5 years after acute respiratory distress syndrome. *N Engl J Med* 2011;364(14):1293-304. **Coauthor or Collaborator.**
2. Burns KE, Adhikari NK, Slutsky AS, Guyatt GH, Villar J, Zhang H, Zhou Q, Cook DJ, **Stewart TE**, Meade MO. Pressure and volume limited ventilation for the ventilatory management of patients with acute lung injury: a systematic review and meta-analysis. *PLoS One* 2011;Jan 28;6(1):e14623. **Coauthor or Collaborator.**

***In Press:***

1. Fan E, Checkley W, **Stewart TE**, Muscedere J, Lesur O, Granton JT, Freitag AP, Jacka M, Ferguson ND, Meade MO. Complications From Recruitment Maneuvers in Patients With Acute Lung Injury: Secondary Analysis from the Lung Open Ventilation Study. *Respir Care* 2012 May 14. In Press. **Coauthor or Collaborator.**
2. Meade MO, **Stewart TE**. Letter to the Editor. *JAMA* 2008. In Press.

***Presentations/Lectures:***

1. 2011 Apr **Chair.** ARDS - Current status of lung protection ventilation. 2nd Annual Saudi Critical Care Society International Critical Care Conference. Riyadh, Saudi Arabia.
2. 2011 Apr **Invited Speaker.** Leadership Essentials for the Clinician. 2nd Annual Saudi Critical Care Society International Critical Care Conference. Riyadh, Saudi Arabia.
3. 2011 Apr **Invited Speaker.** My Approach to the Difficult to Oxygenate Patient. 2nd Annual Saudi Critical Care Society International Critical Care Conference. Riyadh, Saudi Arabia.

**Peer Reviewed Publications:**

1. **LN Tremblay:** Radiation from diagnostic imaging in pediatric trauma - Friend or foe? Journal of Trauma: 2011: 70: pp 730-1. **PA**
2. **L.N. Tremblay, D. Scales:** Ultrasound-guided tracheostomy - not for the many, but perhaps the few'85 or the one. Critical Care: 2011: 15: pp 147. **PA**

**Abstracts:**

1. **Engels P, Rezende-neto J, Pacher Hoffmann J, Tien H, Tremblay L, Beckett A, Paton-Gay D, Rizoli S:** Clotting factor deficiencies and appropriate fresh frozen plasma use in trauma patients. Trauma Association of Canada, Banff, Alberta. Canadian Journal of Surgery 2011. **C**
2. **Rmgrld PT, Rezende-Neto JB, Pacher J, Tien H, Tremblay L, Beckett A, Paton-Gay JD, Rizoli SB:** Assessment of Clotting Factor Deficiencies and Appropriate Plasma Use in Trauma Patients. American Association for the Surgery of Trauma (AAST), Chicago, IL. Journal of Trauma 2011. **C**

**Presentations/Lectures:**

1. American Thoracic Society (State of the Art Course), San Diego, California, Mar 4, 2011. Managing Surgical Urgencies in the ICU.
2. American Thoracic Society, San Diego, California, Mar 4, 2011. Meet the Professor Session.
3. Trauma Association of Canada, Banff, Alberta, Apr 7, 2011. Challenging Trauma Cases.
4. Trauma Association of Canada, Banff, Alberta, Apr 8, 2011. Management Options for Complex Open Abdomens.
5. Canadian Association of General Surgeons (CAGS), London, Ontario, Sep 19, 2011. Surgical safety checklists improve outcomes and should be mandatory.
6. Trauma Nursing Conference 2011, Toronto, Ontario, Feb 9, 2011. Trauma Case Studies - Ask the Experts.
7. Trauma Nursing Conference 2011, Toronto, Ontario, Feb 9, 2011. What's New in the ICU?

**Research Funding:**

1. Improving interfacility transfers of trauma patients in southern Ontario using weekly telephone conferencing. **Nathens A; Tien H, L. Tremblay** Sunnybrook Physician Lead; S Rizoli, F Brenneman: AHSC AFP Innovation Fund. (\$100,000 2010 - 2011.)
2. Implementation & Assessment of a Novel Multidisciplinary e-Discharge Summary to Improve Efficiency, Satisfaction, and Safety of Transfer of Care for Complex Patients. **L.N. Tremblay, E. Etchells, P. Engels, K. Chan, L. Farquharson:** AHSC AFP Innovation Fund 2010-2011. (\$71,342 2011 - 2013.)

**Presentations/Lectures:**

1. 2011 May 26 **Invited Speaker**. BLS/ACLS 2010: An overview and implementation strategies. University of Chicago, Department of Medicine. Chicago, Illinois, United States.
2. 2011 Nov 19 **Invited Speaker**. Graduate Seminar Series for CPRS. St. Michael's Hospital. Toronto. Presenter(s): **Natalie Wong**. How to create/develop a research project for in-hospital cardiac arrests.

**Research Funding:**

1. 2011 Apr - 2012 Apr **Principal Investigator**. Basic Life Support (BLS) Training at SMH. AFP Innovations Funds. AFP. SMHAIF-040. Collaborators: Paul Dorian, Laurie Morrison, Patricia Houston, Teodor Grantchorov. 107,853 CAD. [Grants]  
*The primary objective of this innovation project is to improve first responder's response to in-hospital cardiac arrests with the ultimate goal of increasing survival rates from in-hospital cardiac arrests at St Michael's Hospital (SMH). This project will develop and test a new, more appropriate BLS training model and devise a strategy for ongoing implementation, evaluation and improvement..*
2. 2010 Jul - 2011 Jun **Principal Investigator**. Basic Life Support (BLS) Training at SMH. Continuing Education Research and Development Awards Committee. Continuing Education. Collaborators: Paul Dorian, Laurie Morrison, Patricia Houston, Teodor Grantchorov. 5,000 CAD. [Grants]  
*To improve first responder's response to in-hospital cardiac arrests immediately following training as well as at 3, 6, 9, and 12 month intervals post training. This project will develop and test a new, more appropriate BLS training model and devise a strategy for ongoing implementation, evaluation and improvement..*

**Peer Reviewed Publications:**

1. Kuiper JW, Plotz FB, Groeneveld AJ, Haitzma JJ, Jothy S, Vaschetto R, **Zhang H**, Slutsky AS. High tidal volume mechanical ventilation-induced lung injury in rats is greater after acid instillation than after sepsis-induced acute lung injury, but does not increase systemic inflammation: an experimental study. *BMC Anesthesiology* 2011;11:26
2. El Beheiry MH, Heximer SP, Voigtlaender-Bolz J, Mazer CD, Connelly KA, Wilson DF, Beattie WS, Tsui AK, **Zhang H**, Golam K, Hu T, Liu E, Lidington D, Bolz SS, Hare GM. Metoprolol impairs resistance artery function in mice. *Journal of Applied Physiology* 2011;111:1125-33
3. Quinn KL, Henriques M, Tabuchi A, Yang H, Cheng W-E, Tole S, Yu H, Luo A, Charbonney E, Tullis E, Lazarus A, Robinson LA, Ni H, Peterson BR, Kuebler WM, Slutsky AS, **Zhang H**. Human neutrophil peptides mediate endothelial-monocyte interaction, foam cell formation and platelet activation. *Arteriosclerosis, Thrombosis, and Vascular Biology* 2011;31:2070-9
4. Soltani N, Qiu H, Aleksic M, Glinka Y, Zhao F, Liu R, Li Y, Zhang N, Chakrabarti R, Ng T, Jin T, **Zhang H**, Lu W-Y, Feng Z-P, Prud'homme GJ, Wang Q. GABA exerts protective and regenerative effects on islet beta cells and reverses diabetes. *Proceedings of National Academy of Sciences* 2011;108:11692-7
5. Villar J, Blanco J, Zhang H, Slutsky AS. Ventilator-induced lung injury and sepsis: two sides of the same coin? *Minerva Anestesiologica* 2011;77:647-53
6. Henzler D, Hochhausen N, Chankalal R, Xu Z, Whynot SC, Slutsky AS, **Zhang H**. Physiologic and biologic characteristics of three experimental models of acute lung injury in rats. *Anesthesia and Analgesia* 2011;112:1139-1146
7. Villar J, Cabrera NE, Casula M, Valladares F, Flores C, López-Aguilar J, Blanch L, **Zhang H**, Kacmarek RM, Slutsky AS. WNT/ $\beta$ -catenin signaling is modulated by mechanical ventilation in an experimental model of acute lung injury. *Intensive Care Medicine* 2011;37:1201-9
8. Chiang C-H, Chuang C-H, Liu S-L, Lee T-S, Kou YR, **Zhang H**. Apocynin attenuates ventilator-induced lung injury in an isolated and perfused rat lung model. *Intensive Care Medicine* 2011;37:1360-7
9. Aikawa P, **Zhang H**, Barbas CSV, Pazetti R, Correia C, Mauad T, Silva E, Sannomiya P, Poli-de-Figueiredo LF, Nakagawa NK. The effects of low-tidal volume and pentoxifylline on intestinal blood flow and leukocyte-endothelial interactions in mechanically ventilated rats. *Respiratory Care* 2011 Respir Care. 2011;56:1942-9
10. Cheng K-C, Chen C-M, Tan C-K, Chen H-M, Lu C-L, **Zhang H**. Methylprednisolone reduces the rates of postextubation stridor and reintubation associated with attenuated cytokine responses in critically ill patients. *Minerva Anestesiologica* 2011;77:503-509
11. Burns KE, Adhikari NK, Slutsky AS, Guyatt GH, Villar J, **Zhang H**, Zhou Q, Cook DJ, Stewart TE, Meade MO. Pressure and volume limited ventilation for the ventilatory management of patients with acute lung injury: a systematic review and meta-analysis. *PLoS One* 2011;6:e14623
12. Han B, Haitzma JJ, Zhang Y, Bai X, Rubacha M, Keshavjee S, **Zhang H**, Liu M. Long pentraxin PTX3 deficiency worsens LPS-induced acute lung injury. *Intensive Care Medicine* 2011;37:334-42
13. Spieth PM, **Zhang H**. Analyzing lung crackle sounds: stethoscopes and beyond. *Intensive Care Medicine* 2011;37:1238-9

14. Fanelli V, Spieth P, **Zhang H**. Forced oscillation technique: an alternative tool to define the optimal PEEP? *Intensive Care Medicine* 2011;37:1235-7
15. Antonelli M, Azoulay E, Bonten M, Chastre J, Citerio G, Conti G, De Backer D, Gerlach H, Hedenstierna G, Joannidis M, Macrae D, Mancebo J, Maggiore SM, Mebazaa A, Preiser JC, Pugin J, Wernerman J, **Zhang H**. Year in review in *Intensive Care Medicine* 2010: III. ARDS and ALI, mechanical ventilation, noninvasive ventilation, weaning, endotracheal intubation, lung ultrasound and paediatrics. *Intensive Care Medicine* 2011;37:394-410
16. Antonelli M, Azoulay E, Bonten M, Chastre J, Citerio G, Conti G, De Backer D, Gerlach H, Hedenstierna G, Joannidis M, Macrae D, Mancebo J, Maggiore SM, Mebazaa A, Preiser JC, Pugin J, Wernerman J, **Zhang H**. Year in review in *Intensive Care Medicine* 2010: II. Pneumonia and infections, cardiovascular and haemodynamics, organization, education, haematology, nutrition, ethics and miscellanea. *Intensive Care Medicine* 2011;37:196-213
17. Antonelli M, Azoulay E, Bonten M, Chastre J, Citerio G, Conti G, De Backer D, Gerlach H, Hedenstierna G, Joannidis M, Macrae D, Mancebo J, Maggiore SM, Mebazaa A, Preiser JC, Pugin J, Wernerman J, **Zhang H**. Year in review in *Intensive Care Medicine* 2010: I. Acute renal failure, outcome, risk assessment and ICU performance, sepsis, neuro intensive care and experimentals. *Intensive Care Medicine* 2011;37:19-34.

**Presentations/Lectures:**

1. Mechanical stress induced lung fibrosis by epithelial-mesenchymal transition (EMT). International Symposium on Lung Development, Injury Repair, and Regeneration. Guangzhou, China, August 6-8, 2011
2. How to write a research grant? *Visiting Professorship Lecture*, National Key Laboratory of Respiratory Diseases, Guangzhou Medical College, Guangzhou, China, August 4-5, 2011

**Research Funding:**

1. CIHR Operating Grant, Mechanisms of human neutrophil peptides in lung inflammation. 2011.10-2016.9, \$828,620