

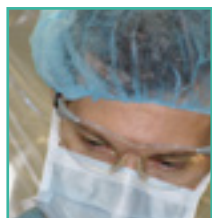


DEPARTMENT
OF ANESTHESIA
AND PERIOPERATIVE
MEDICINE

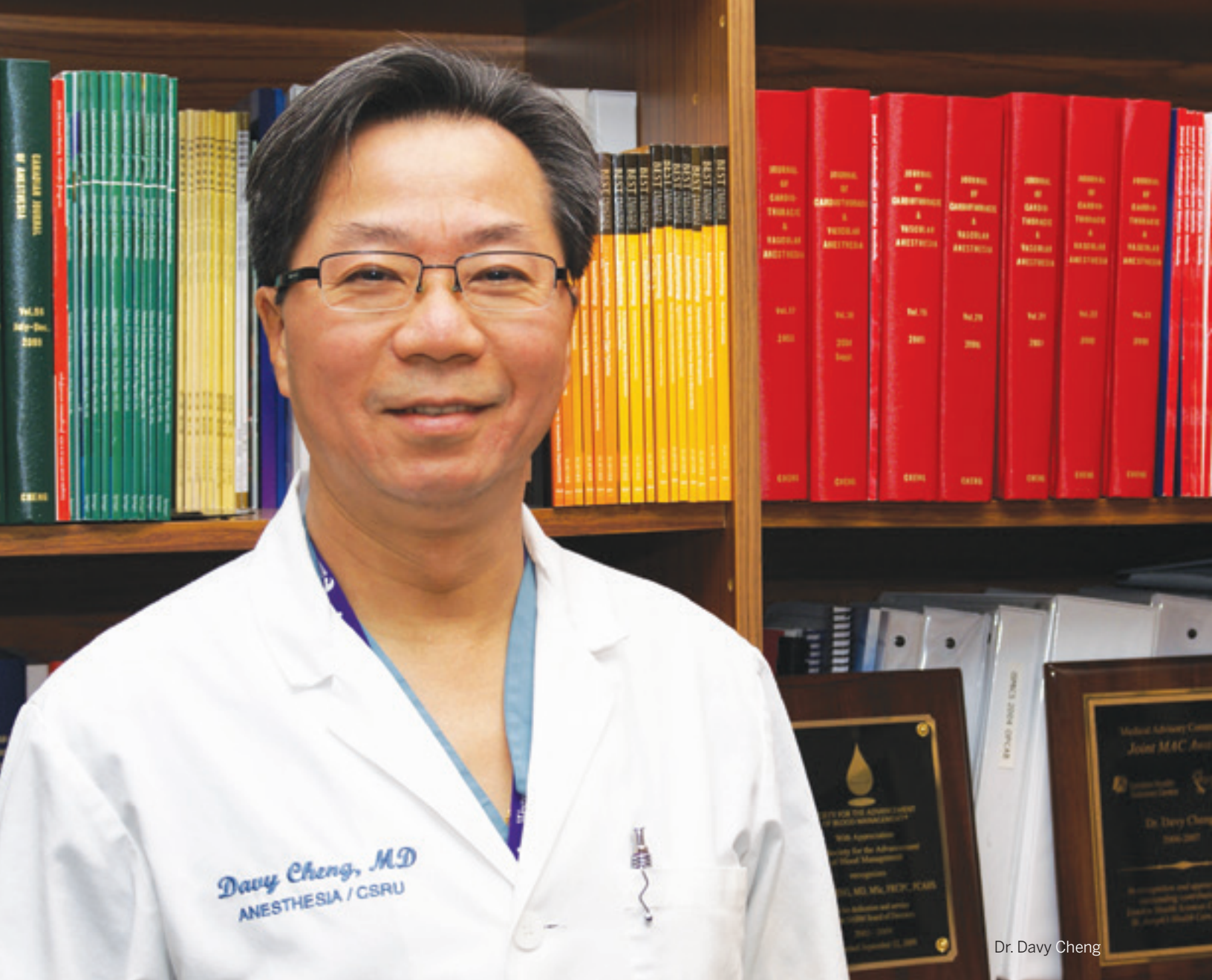
ANNUAL REPORT 2011/12



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Dr. Davy Cheng

MESSAGE FROM THE DEPARTMENT CHAIR

Dr. Davy Cheng

The Department of Anesthesia & Perioperative Medicine (Department) of the Schulich School of Medicine & Dentistry, Western University provides clinical support to over 40 operating rooms per day at the London Teaching Hospitals (London Health Sciences Centre – University Hospital and Victoria Hospital, and St Joseph's Health Care London). We also provide the spectrum of medical care from conducting preoperative anesthesia assessment to performing the most advanced life-supporting techniques in all perioperative settings such as ambulatory surgery,

subspecialty surgery, obstetrics, pediatric care, out-of-OR interventional procedures (cardiology, neurology, electric convulsion therapy), acute and chronic pain management, blood conservation management, post-anesthetic care unit, cardiac surgery recovery unit, intensive care units and palliative medicine in acute care. Our 80 faculty, 46 residents and 12 clinical fellows are committed to patient-centered quality care.

Our Department is amongst the top five academic anesthesiology departments in Canada and has an international reputation for academic excellence in Research and Education. The Cardiac Anesthesia

Program continues to be among the leading research programs in the clinical advancement of minimally invasive and robotic cardiac surgery internationally. The Comprehensive Pain Program continues to be a leading multidisciplinary research and clinical program, and has been instrumental in establishing Pain as subspecialty at the Royal College of Physicians and Surgeons in Canada. The Evidence-Based Perioperative Clinical Outcomes Research (EPiCOR) Program has established our Department and Western University as an international and national evidence-based knowledge translation centre with high impact to health

THE LEADERSHIP OF OUR FACULTY IS RECOGNIZED NATIONALLY AND INTERNATIONALLY.

care decision-making and patient care. This has led to the recent establishment of the MEDICI (Medical Evidence, Decision Integrity, and Clinical Impact) Centre in London by the Schulich School of Medicine and Dentistry, London Teaching Hospitals and the Lawson Health Research Institute.

The Department provides clinical training and didactic teaching to undergraduate (UGE) and postgraduate (PGE) trainees in anesthesia and allied health care fields both at Western University and outreach community programs in Southwestern Ontario. The Anesthesia Simulation Program at CSTAR (Canadian Surgical Technologies & Advanced Robotics) led by Anesthesia provides training for UGE, PGE and allied health professionals in critical event management

and opportunities for education research in this area. The Department is well known for its clinical and research excellence in cardiac anesthesia, neuroanesthesia, transplantation, critical care, perioperative blood management, pain medicine, and knowledge translation in evidence-based perioperative medicine. The Department has been attracting clinical/research fellows and visiting scholars from around the world (Australia, New Zealand, UK, USA, Germany, Singapore, Korea, Japan, China, Thailand, Columbia, Egypt and Saudi Arabia) for training in anesthesia and perioperative medicine, as well as critical care medicine.

The leadership of our faculty is recognized nationally and internationally. They have been awarded the Canadian Anesthesiologists' Society CAS Gold Medal (Wojciech Dobkowski), CAS Research Recognition Awards (John Murkin, Davy Cheng), CAS John Bradley Young Educator Award (Jeff Granton), CAS David Sheridan Research Awards (Daniel Bainbridge, Ronit Lavi), Member Appreciation Award of the Canadian Standard's Association (Steven Dain), YWCA Women of Distinction Award (Su Ganapathy). They have been inducted as Fellow of the Royal College of Anaesthetists in Ireland (John Murkin), the Canadian Academy of Health Sciences (Davy Cheng), and honored with an Outstanding Contribution Award for Chinese Anesthesiology in China (Davy Cheng). They have been elected as Canadian Board Member in the International Anesthesia Research Society (Davy Cheng), NIH Protocol Review Committee (John Murkin), Chair Royal College of Surgeons and Physicians of Canada (RCSPC) Anesthesiology Examination Board (Sandra Katsiris), President of the Association of Canadian University Departments of Anesthesia (Davy Cheng), CAS Research Committee Chair (Neal Badner), OMA Anesthesia Chair (James Watson), and LHIN Critical Care Lead (Michael Sharpe). They have been appointed Chair of the Regional Advisory Committee of the RCPSC (John Fuller), Member of the Canadian Task Force Addressing Tertiary Pain Clinic Wait time and leading the establishment of Pain Specialty Certification at the RCPSC (Pat Morley-Forster). They have been invited to present and to submit white papers to the Canadian Parliamentary Committee on Palliative and Compassionate Care (Valerie Schulz) and on Health Technology Assessment (Janet Martin).



Dr. Adrian Vethanayagam

Faculty Recruitment & Promotion:

Congratulations to Dr. Shalini Dhir, Dr. Philip Jones and Dr. Tim Turkstra who were promoted to the rank of Associate Professor with Continuing Appointment in the Provost stream, effective July 1, 2011.

Our Department is pleased to welcome five of our recent Residents who joined the Department early in the 2011-12 academic year. Effective July 1, 2011, Dr. Andreas Antoniou and Dr. Ida Bruni started their careers, providing training in Critical Event Simulation Program. Both have completed a one year Fellowship in our Department's Simulation Program and will enable expansion of this valuable education experience for residents, medical students and other health care professionals. Dr. Vanessa Fantillo also joined our Department on July 1, 2011 as a full time anesthesiologist following a one year combined Fellowship in Pediatric Anesthesia at Sick Kids in Toronto and here in London. Dr. Fantillo's focus in pediatric anesthesia and future collaboration with Department of Pediatrics will result in better patient outcomes at the Children's Hospital in London. Dr. Collin Clarke returned in September 2011 from a one year Fellowship in Chronic Pain Management at Duke University in North Carolina, USA. Dr. Clarke provides innovative chronic pain patient care in our Pain Clinic at SJHC,

and is continuing to expand his research in this area. In October 2011, Dr. Kristine Marmai began as a full time anesthesiologist focusing on Obstetric Anesthesia. She completed a one year Fellowship in our Department in Obstetric Anesthesia and will be part of the obstetric group working in the new consolidated obstetric facilities at Victoria Hospital which were completed in June 2011. In March 2012, Dr. Anita Cave joined our Department following completion of a cardiac anesthesia clinical research fellowship at Cornell University, New York Presbyterian Hospital in New York. She completed medical school at University of Ottawa and her residency training at Dalhousie in Halifax, Nova Scotia. While I look back on the continuing successes of our Department in exemplary clinical deliverables and quality of care, expanded depth and breathe of our education in undergraduate and postgraduate education, the high impact multidisciplinary research, and the significant administrative contributions at the hospitals, University, OMA and MOHLTC, I wholeheartedly want to congratulate all those whose contributions made this possible. We continue to strive to be good physicians in treating the disease well, but also to be great physicians in treating the patient with the disease well.

DEPARTMENT ORGANIZATION

Faculty Leadership and Administration

Department Committees and Roles, 2011-2012

Davy Cheng, Chair/Chief

Lois Hayter, Administrative Officer

William Sischeck, St. Josephs Health Care London (SJHC) Site Chief, and City-wide Scheduling Coordinator

Christopher Harle, University Hospital (UH) Site Chief

George Nicolaou, Victoria Hospital (VH) Site Chief

Administrative and Program Support Staff

Jamie Allaer

Julie Anderson

Ola Bienkowski

Kathy Bilton

Linda Gibson

Lynn Hinchcliffe,

Kari Hunter

Brie McConnell

Jessica Moodie

Cathy Pollard

Marigo Portokalis-Valeriotte

Val Rapson

Linda Szabo

Marilyn Twiddy

Christina White

Cathy Worsfold

Departmental Council

Davy Cheng (Chair)

Kevin Armstrong

Michael Currin (Elected Rep.)

Jeff Granton

Christopher Harle

Ivan Iglesias

Philip Jones (Elected Rep.)

Sandra Katsiris (Elected Rep.)

John Murkin

George Nicolaou

Ravi Taneja

William Sischeck

Academic Affairs Committee

Kevin Armstrong (Chair)

Neal Badner

Daniel Bainbridge

Geoff Bellingham

Davy Cheng

Sandra Katsiris

James Watson

Research Committee

John Murkin (Chair)

Neal Badner

Daniel Bainbridge

Davy Cheng

Su Ganapathy

Philip Jones

Ronit Lavi

Janet Martin

Craig Railton

Anesthesia Quality Assurance

Ian Herrick, Director

Geoff Bellingham (SJHC)

Indu Singh (SJHC)

Steven Dain (UH)

Michelle Gros (VH)

Christopher Harle (Site Chief Rep.)

Ronit Lavi (UH)

Craig Railton (VH)

Rebecca Ashcroft (Anesthesia Resident)

Magdalena Terlecki

Anne Marie McIlmoyle (Director, Perioperative Services, SJHC)

Silvie Crawford (VP, Patient Centred Care, LHSC)

Marigo Portokalis-Valeriotte

Equipment Committee

Jason Hoogstra, Chair

Tim Turkstra (UH)

Pod Armstrong (SJHC)

AAPP FMC

Philip Jones

Wojciech Dobkowski

Davy Cheng

Chris Harle

Kevin Teague

Ian McConachie

Lois Hayter

Sandra Silverthorn

Undergraduate

Ivan Iglesias, Director

Pravin Batohi, SJHC Coordinator

Michelle Gros, VH Coordinator

Peter Mack, UH Coordinator

Postgraduate

Jeff Granton, Program Director

Davy Cheng, Chair of

Department of Anesthesia and Perioperative Medicine

Sandra Katsiris, Associate

Program Director

Ryan Smith, Chief Resident

Rosemary Craen, Site Coordinator - University

Hospital

Pod Armstrong, Site Coordinator - St. Joseph's Hospital

Rooney Gverzdys, Site

Coordinator - Victoria Hospital

Indu Singh, Resident Research Coordinator

Richard Cherry, Simulation and Information Technology Director

Mark Soderman, Community (St. Thomas) and SWOMEN

Ed Roberts, Community

(Windsor) and SWOMEN



Dr. Richard Cherry and Dr. Andreas Antoniou

Jennifer Landry, Resident
Representative
Farah Manji, Resident
Representative
Melissa Brockerville, Enhanced
Skills Representative
Linda Szabo, Administrator

Fellowship

Miguel Arango, Director
Richard Cherry, Simulation
Pat Morley-Forster, Chronic
Pain

Rosemary Craen,
Neuroanesthesia
Wojciech Dobkowski, Liver
Transplant
Sugantha Ganapathy,
Regional Anesthesia
George Nicolaou, Thoracic
and Vascular Anesthesia
Indu Singh, Obstetric
Anesthesia
Ravi Taneja, Cardiac
Anesthesia

Journal Club Conveners

Philip Jones
Timothy Turkstra

CLINICAL ACADEMIC PROGRAMS

Acute Pain Service

Dr. Kevin Armstrong, *Co-Director with*
Dr. Sugantha Ganapathy

The following is a list of activities from July 2011 to June 2012 as they relate to the acute pain service and regional anesthesia services at Western University's Department of Anesthesia and Perioperative Medicine.

After a trial of electronically generated Acute Pain Service (APS) orders at St. Joseph's Health Care London which occurred in 2010 and in preparation for Healthcare Undergoing Optimization (HUGO), Computer Order Entry (CPOE) and the electronic patient record, a similar trial was begun in early 2012. Initial APS orders for those placed on a PCA or Epidural, where having an order-set generated electronically and printed in the PACU. Feedback has generally been positive from nursing, pharmacy, ward clerks and physicians. The challenges we have encountered will help us move forward by providing insight into the creation, maintenance and use of electronic orders. There continues to be a need for a system wide adoption of resources as we move toward CPOE. It is hoped that HUGO will significantly help in this regard.

Along the lines of the electronic environment, we have made requests to access data within the Electronic Patient Record (EPR). The intention is to facilitate research, as well as quality improvement work using this data. The timeline for this request is unknown, but we hope that as the corporation moves towards its goals of e-health this will occur in the near future.

The APS website, available at <http://www.lhsc.on.ca/priv/pain/algorithm.htm> continues to be updated and improved. This website primarily maintained by Cindy Carnegie, is an attempt to make information related to regional anesthesia and pain management readily available to clinicians throughout the city.

Nurse Practitioners dedicated to the acute pain service (APS) began their training in January of 2012. Training involved clinical rotations in the OR, pre-admission, the block room and APS rounds as well as classroom sessions in Toronto. The addition of these members to the APS team is expected in 2013.

A number of collaborative efforts have been made with the Department of Anatomy. One such collaboration, with James Turgeon (MSc Candidate) and Dr. Tim Wilson (Assistant Professor) included an evaluation of a 3-D model of the brachial plexus. Nineteen anesthesia residents assisted with this evaluation. The results were presented at American Association of Anatomists meeting in April 2012. It is expected that completed work will be submitted towards the end of 2012.

During this year's Annual Meeting of the Canadian Anesthesiologist's Society, a number of regional anesthesia physicians from Western University took part in presentations and leading workshops.

The introduction of a block room at University Hospital (UH) has continued. The model is based on the St. Joseph's model of a block room. We continue to be challenged in the provision of regional anesthesia and analgesia to appropriate patients at UH. Dr. Christopher Harle has played a significant role in making the clinical initiative a positive one. Dr. Peter Mack, and the newly appointed Dr. Jonathon Brookes and the Regional Anesthesia group will work towards making this a feasible model of care.

A Comprehensive Pain Management Program (CPMP) has been proposed for the city. The goal is to integrate human resources and expertise from Acute Pain, Chronic Pain, Palliative Care and Regional Anesthesia. This may require changes to the current structure of care delivery at all sites. The addition of the Nurse Practitioners will aid in this transition.

Faculty Academic Outreach

Armstrong, Kevin

Annual Southwestern Ontario Airway Workshop: London, ON. 2011 Nov 26. Workshop Demonstrator.

Brookes, Jonathan

- American Society of Regional Anesthesia and Pain Medicine (ASRA): 10th Annual Meeting and Pain Meeting and Workshop. New Orleans, Louisiana. 2011 Nov.
 - *Presenter:* Cadaveric Examination of Ultrasound-Guided Regional Nerve Blocks.
 - *Presenter:* Comparison of TAP Block With Epidural Analgesia for Postoperative Pain in Patients Undergoing Abdominal Surgery: A Randomized Open-Label Study.
 - *Presenter:* Creation of a Digital Atlas for Ultrasound-Guided Regional Nerve Blocks.

The Acute Pain and Regional Anesthesia team were heavily involved in the Canadian Anesthesiologists' Society Annual Meeting, held in Quebec City, QC. For more details, please see p.75.

Anesthesia Assistants' Program

Dr. James Watson, Director

The past year has continued to build on the success of the Anesthesia Care Team and we have continued with the development of this program. Anesthesia Assistants (AA's) have been integrated into the work routines of the Department with the cooperation of the entire Department. This has allowed us to reliably provide service for some of the key wait time initiatives such as cataract surgery. In the cataract suite we use a model of care where one consultant supervises two Anesthesia Assistants. Other AAs assist in the block room or monitor patients after major regional blockade or provide special assistance in the operating room for more complex cases.

Care of patients outside the OR such as pediatric imaging and procedures, neuroradiology or electrophysiology labs have all benefited from having consistent, reliable assistance in these challenging environments.

In September 2008, Fanshawe College in London initiated a training program for Anesthesia Assistants. The fourth class began in September. The Department of Anesthesia and Perioperative Medicine has been involved in the design of this program and has provided a significant amount of classroom and operating room instruction. During the Basic Program, run from September to December, most teaching is provided by Fanshawe College instructors affiliated with the long-established Respiratory Therapy Department. For the Advanced Program or second semester which runs from January to April most of the lectures and workshops are physician directed. Many of the senior anesthesia residents participate in teaching these courses and workshops. Residents and the participating faculty members found this to be a rewarding training experience. Enrollment has begun for next year's class.

The role of Anesthesia Assistants is gaining a national presence and has been recently adopted by the Canadian Anesthesiologists' Society. Currently, we are developing new models of care in areas where the Department has not had the human resources to provide coverage. This includes endoscopy and obstetrics with expanded invasive radiology. We have participated in provincial teams in association with the Ministry of Health and Long Term Care (MOHLTC) to further develop and define the roles within the Anesthesia Care Team (ACT). Review of the application of the ACT model has demonstrated a cost effective, safe and accepted model of care. We have received funding from the Ministry of Health that extends the ACT program further. We will continue to explore ways to improve patient safety, efficiency and improve the working conditions for anesthesiologists.





ACCTTS (Anesthesia and Critical Care Teaching Through Simulation)

Dr. Richard Cherry, Director

In 2011- 2012 ACCTTS continued to mature into an effective and established education enterprise. The last academic year was highlighted by further expansion of our simulation based teaching, new innovative research in team based simulation training and greater opportunities for our faculty to disseminate our knowledge of simulation techniques at the national and international level.

ACCTTS, as over the last seven years, continues to provide high quality, highly realistic simulation scenarios and facilitated debriefing sessions to a wide variety of undergraduate and postgraduate trainees. Again, in this past year, our teaching activities have increased in number and diversity. The mainstays of our activities continue to serve anesthesia and critical residents. Once again, our total simulation learner instruction hours increased this year to approximately 1600 hours. We also passed a landmark 100 simulation sessions for anesthesia residents and simulation continues to be a highly regarded asset in our residency training program. To ensure ongoing quality, we have introduced the DASH (Debriefing Assessment for Simulation in Healthcare) as an objective instrument to evaluate simulation-instructor performance.

ACCTTS members have also been instrumental in the delivery of simulation curriculum for postgraduates in other departments such as the high fidelity simulation activities for surgery PGY1s. Additionally, we are involved in developing a collaborative, international course with Otolaryngology to be delivered in the fall of 2012. The skills and expertise of this group continues to be a resource to other departments embarking on simulation-based curriculum.

At the undergraduate level, the Meds 3 Clerkship Anesthesia Bootcamp continues to enhance the two week anesthesia rotation with an intensive and directed introduction to anesthesia in the operating room environment. Students have consistently provided positive evaluations of this experience. Resident instructors have been integrated into this program more extensively in the last year. ACCTTS faculty have also enjoyed providing simulation experiences for undergraduate medical and nursing students during CSTAR's Inter-Professional Education Summer School.

We were pleased to have Dr. Rodrigo Rubio as our simulation fellow this year. Dr. Rubio quickly became a valuable asset to our simulation team. Upon completion of his fellowship Dr. Rubio returned to Mexico City and has taken on key roles: Director Research Committee of the Mexican Society For Simulation and Chairman Education and Certification Committee of the Latin-American Society of Simulation. We anticipate that we will continue to have fruitful collaboration with Dr. Rubio and other simulation societies in the Americas and abroad. Presently we have filled our two fellowship positions until the end of July 2014

Our faculty enjoyed a productive year in both research and grant application.

- Many exciting research projects advanced in 2011-2012 and were presented at a variety of local, national and international meetings. Highlights include:
- Educating anesthesia residents to obtain and document informed consent for epidural labor analgesia: does simulation play a role? Antoniou A, Marmai K, Cherry RA, Singh S, Jones PM (Poster Discussion: CERI Research Symposium, SOAP SanDiego, CAS Quebec)
- Problem Solving In Interdisciplinary Teams: Cherry R, Lingard L, Seijts G, Oliviera F, Rostas B . Data collection was completed in this novel study that examines the behaviours of an interdisciplinary team of business and medical students in a high stakes, high stress, ethical



Dr. Richard Cherry, Simulation Lab

simulation scenario. (Concept presentation: CERI Research Symposium)

- Breaching the fiction contract: Is participant realism affected by more experience in simulation training? Rubio R, Cherry R. (Concept presentation: CERI Research Symposium)
- Successful grant applications were obtained for the following projects
- Women's Development Council - Multidisciplinary Crisis Resource Management Training using In-Situ High Fidelity Simulation. Crumley T, Antoniou A, Cherry R \$31,600
- Ministry of Economic Development and Innovation – Ontario Research Fund - Developing Simulation Based Training For Surgeons Schlachta et. al., including Cherry R, Lingard L (Curriculum and Culture Core) \$ 3.2 M

Workshops delivered by ACCTTS faculty were accepted for presentation at both the Canadian Simulation Summit later this year and at the International Meeting of Simulation in Healthcare (IMSH) in Orlando FL, in January 2013. Workshop acceptance at IMSH is a competitive peer reviewed process with well over nine hundred applicants and this acceptance is a testament to the quality of faculty.

In the upcoming year we hope to improve our program with the capital acquisition of new simulation mannequins. As our residency program also undergoes accreditation this year, we are hopeful that ACCTTS will prove to be a strong aspect of our department's contribution to quality training.

Cardiac Anesthesia

Dr. Daniel Bainbridge, *Director*

The cardiac subspecialty group consists of 19 members having lost two to retirement or relocation but gaining a total of two new members. Volumes of cases remain essentially the same at roughly 1300 cases per year. Two new echocardiography machines were acquired bringing the total number of Philips iE33 machines to three, and replacing the old and out-dated Sonos 5500 units. The goal for next year will be to complete the transition to digital storage using the hospital based storage system Xcelera. We continue to have excellent results with concerns to fellows completing their perioperative TEE exam, again having two fellows successfully complete the exam this year. The cardiac database has now expanded to include Cardiac Surgery Recovery Unit (CSRU) outcomes, added to the TEE reporting and Euroscore report which were previously being completed, and should now permit both enhanced CQI and research projects.

Faculty Academic Outreach

Bainbridge, Daniel

The Asian Society of Cardiothoracic Anesthesia (ACA), 9th Annual Meeting. Taipei, Taiwan. 2011 Oct 8-10.

- *Invited Lecturer:* 3-D TEE
- *Invited Lecturer:* Examination of the Aorta
- *Invited Lecturer:* Basic Echocardiography Exam

Cheng, Davy

- Refer to Presentations, p. 73

WE UNDERSTAND THAT
EACH INDIVIDUAL'S
EXPERIENCE OF PAIN
IS UNIQUE, AFFECTING
THEIR RELATIONSHIPS
AND WORK-LIFE IN A
COMPLEX MANNER.

Chronic Pain Program

Dr. Pat Morley-Forster, *Director*

Clinical Care:

In 2011-2012, the outpatient Pain Clinic received 1771 referrals, and almost 5000 patient visits of which 1102 were new referrals. The medical faculty consists of five anesthesiologists, four physiatrists, and one neurologist. Additional health disciplines involved with the team are a psychologist, two RNs, one RPN, a pharmacist and a social worker. Although we bring different training and perspectives to our assessments, we are united in a common value as stated in our Strategic Plan: "We understand that each individual's experience of pain is unique, affecting their relationships and work-life in a complex manner".

Managing the wait list for new referrals continues to be our major clinical challenge. The triage nurse faced an increased number of referrals in the fall of 2011 with the untimely death of Dr. David

Boyd, at University Hospital. We are working on the development of patient care pathways for specific chronic pain syndromes (eg. peripheral neuropathic pain, post-herpetic neuralgia, complex regional pain, failed back surgery, fibromyalgia and post-surgery pain syndromes) and a clear discharge process to define when care is being returned to the family doctor.

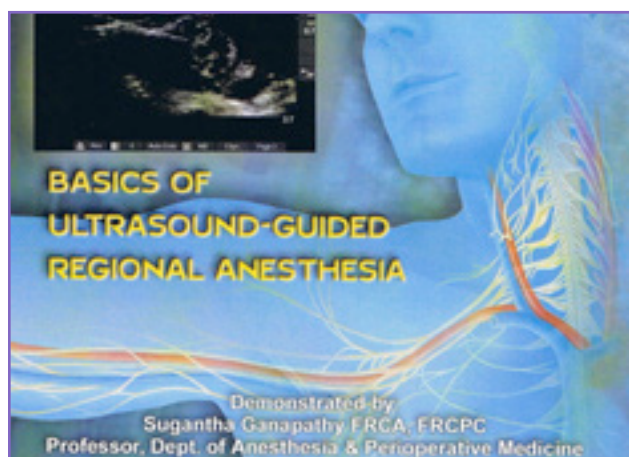
In May 2012, two Strategic Planning Sessions for the Outpatient Chronic Pain Clinic were held. Our two areas of focus for research and clinical care will be:

1. Neuropathic Pain
2. Interventional Treatments for Back Pain

Education:

Anesthesia residents rotate through the Pain Clinic for one block. We also offer Physiatry residents a three month rotation as part of their training requirement. Pain Management continues to be a popular selective with Family Medicine, and Psychiatry.

In March 2012, the Pain Clinic Faculty collaborated to give a three day conference entitled: "A Balanced Approach to Pain Management." The venue was the In-Medic Pain Management Clinic, a community pain clinic on Adelaide Street. There were almost forty registrants, most of whom were from South Western Ontario but one anesthesiologist came from Sydney, Nova Scotia. We plan to hold these conferences bi-annually.



The first Patient Education Day was held at SJHC on June 8, 2012 and approximately 60 patients attended. Speakers were Dr. Pat Morley-Forster, Dr. Heather Getty, Cathy Lowery RN, and Donna Tierney and Tammy Rice from Physiotherapy and Occupational Therapy. Feedback was very positive and the plan is to offer three Education Days annually.

In 2011-2012 we were fortunate to have the services of an excellent Chronic Pain Fellow, Wilson Tay, from Singapore. He worked extensively with the neurosurgeons, Dr. Andrew Parrent and Dr. Keith McDougall to train in insertion of Spinal Cord Stimulators, a skill he will utilize in Singapore. Another fellow, Maan Kataan, an anesthesiologist from Saudi Arabia, trained under the neurologist, Dr. Dwight Moulin in the field of Neuropathic Pain diagnosis and management.

Interdisciplinary Pain Rounds (MAINPORT – accredited) was held on the fourth Thursday of each month, and featured invited speakers with national and international reputations. As well as the email list, announcements are posted on www.londonpain.ca, and in the Schulich School of Medicine and Dentistry's weekly electronic newsletter.

"Breakfast and Learn" sessions for all Pain Clinic staff are held on the fourth Friday every month, with the In-Medic Pain Management Clinic staff also attending.

One of the main educational goals highlighted in the updated Strategic Plan 2012-2014 is to become an accredited training program for the new Royal College Subspecialty in Pain Medicine which should be starting in July 2014.

The other main educational goal we are working towards is to increase teaching hours in Year 4 of the medical undergraduate curriculum to 36 hours by 2014 as requested by the Schulich School of Medicine Curriculum Committee.

Research:

Over the next four years, our goal is to increase research output in our two areas of focus - neuropathic pain, and interventional procedures for back pain.

Completed Projects: The Neuropathic Pain Database (NePDAT) study:

This multicenter two year cohort study to investigate the long-term outcome of management of neuropathic pain using standard pharmacologic guidelines was finally completed in December 2011. Total enrolment was 798 patients. It will be submitted for publication by the end of 2012.

Dr. Dwight Moulin, Principle Investigator (PI) Dr. Pat Morley-Forster, Co-Investigator (CI)

Completed Projects: Plasma concentration of ketamine and norketamine in patients receiving topical ketamine 10% gel for chronic neuropathic pain.

Dr. Raj Manikandan (Fellow), Dr. Pat Morley-Forster, Supervisor

Ongoing Projects:

IV Lidocaine for Neuropathic Pain: This is a crossover trial comparing intravenous lidocaine to intravenous benadryl as the active placebo with follow-up over six weeks in each study phase. Enrolment by Dr. Dwight Moulin (PI), Pat Morley-Forster (CI)

Near-infrared Spectroscopic Measurement of Tissue Oxygen Saturation and the Vascular Occlusion test in Complex Regional Pain Syndrome: Dr. Geoff Bellingham (PI). This is a comparison of tissue oxygen saturation after a 3 minute vascular occlusion test as measured by NIRS in upper limbs affected by CRPS vs those of normal volunteers.

Methadone vs Morphine for Neuropathic Pain: This is a multi-centre CIHR-funded RCT to compare the efficacy of oral methadone vs morphine in the management of chronic neuropathic pain. One

OVER THE NEXT
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BACK PAIN.

barrier to its implementation is that Health Canada methadone- prescribing regulations vary among provinces.

Faculty Academic Outreach**Bellingham, Geoff**

- InMedic Pain Management Centre and St. Joseph's Health Care London: A Balanced Approach to Pain Management. 2012 Mar 23-25. Workshop Demonstrator and Lecturer.
- Ultrasound-Guided Intervention (hands on workshop): SI Joint Injections, Piriformis Syndrome, S/CN, TAP, Facet.
- International Ultrasound for Regional Anesthesia, 9th Annual Symposium. Toronto, ON. 2012 June 22-24. Facilitator: Chronic Pain Block Workshop.



Dr. Michelle Gros

- McMaster University: Canadian Interventional Pain Course. Hamilton, ON. 2012 Mar 30-31. Workshop Facilitator.
- Schulich School of Medicine and Dentistry, Western University.
- CSTAR Summer Surgery School. 2012 June. Invited Lecturer: Treatment of Acute Postoperative Pain [Lecture].
- Orthopedic Surgery Grand Rounds. 2012 May. Invited Lecturer: Novel Therapeutics and Multimodal Analgesia for Postoperative Orthopedic Pain. [Lecture].
- Second Canadian Spasticity Group: Resident Training Program. London, ON. 2011 Nov 13. Facilitator: Ultrasound Workshop.

Clarke, Collin

- InMedic Pain Management Centre and St. Joseph's Health Care London: A Balanced Approach to Pain Management. 2012 Mar 23-25. Invited Lecturer.
 - Complex Regional Pain Syndrome (CRPS) [Lecture].
 - Intervention for Spinal Pain [Lecture].
- South Western Ontario Perioperative Nursing Conference. 2012 May. Invited Lecturer: Anesthesia in the PACU [Lecture].

Morley-Forster, Patricia

- Department of Anesthesia and Perioperative Medicine: Resident Half-Day Seminars, Western University. London, ON. 2011 Sep 09. Invited Lecturer: Physical Medicine and Rehabilitation: A Seminar on Neurophysiology of Chronic Pain; Pharmacology of Analgesics; and Case Discussions.
- InMedic Pain Management Centre and St. Joseph's Health Care London: A Balanced Approach to Pain Management. 2012 Mar 23-25. *Conference Co-Organizer and Lecturer.*

- Case Discussion – How to Utilize NOUGG Guidelines in Your Practice [Lecture].
- Chronic Abdominal/Pelvic Pain [Lecture].
- Neurobiology of Chronic Pain Factors Influencing Transition from Acute to Chronic Pain [Lecture].
- London Smoking Cessation Group. 2011 Oct. London, ON. Chair.
- Ontario Medical Association Annual Meeting: Section on Chronic Pain. Toronto, ON. 2012 May 4. Invited Speaker: Intravenous Lidocaine Infusion for Chronic Neuropathic Pain [Lecture].
- Schulich School of Medicine and Dentistry: Postgraduate Education. London, ON. Seminar Leader.
 - Anesthesia Residents: Assessment and Management of the Chronic Pain Patient [Seminar].
 - Physical Medicine and Rehabilitation Residents: Neurophysiology of Pain [Seminar].
- St. Joseph's Health Care London. London, ON.
 - Academic Half Day for Family Medicine Residents. 2011 Aug 24. Invited Lecturer: Pharmacologic Management of Chronic Pain [Lecture].
 - Annual Workshop on Neuropathic Pain for Family Physicians. 2011 Nov. Invited Speaker.
 - Interdisciplinary Pain Rounds. 2011 Dec 01. Invited Lecturer: Chronic Pelvic Pain – An Approach to Diagnosis and Treatment [Lecture].
 - Patient Education Day: Effective Pain Self-Management. 2012 June 8. Invited Speaker: What is Chronic Pain? [Lecture].

Ower, Katherine

Department of Anesthesia and Perioperative Medicine: Resident Half-Day Seminars, Western University. London, ON. 2011 Sep 09. Invited Lecturer: Physical Medicine and Rehabilitation: A Seminar on Neurophysiology of Chronic Pain; Pharmacology of Analgesics; and Case Discussions

InMedic Pain Management Centre and St. Joseph's Health Care London: A Balanced Approach to Pain Management. 2012 Mar 23-25. Invited Lecturer: Infusion Techniques [Lecture].

Critical Care and the Cardiac Surgery Recovery Unit

Dr. Ron Butler, Director

The Cardiac Surgery Recovery Unit (CSRU) is a 14 bed level 3 critical care unit that specializes in the care of the post-operative cardiac surgery patient. The CSRU is under the leadership of the Critical Care Program and is one of three teaching adult critical care units in London. Each year we care for over 1300 patients that undergo cardiac surgery including: coronary bypass, valve replacements, heart transplantation, minimally invasive and robotic cardiac surgery. This unit has state of the art equipment to meet the complex needs and fast track recovery of our cardiac surgical patients. The CSRU is staffed by critical care physicians with backgrounds that include cardiac anesthesiology, critical care medicine, and cardiac surgery. The trainees consist of anesthesia and cardiac surgery residents, cardiology residents, critical care residents, and cardiac anesthesia fellows. Fellowship opportunities are available within the unit as well. An Advanced Practice Nurse also works within the CSRU and provides a key link between the CSRU and Cardiac Surgery ward. The CSRU provides excellent experience in postoperative cardiac surgery care both clinically and academically.

Faculty Academic Outreach**Granton, Jeff**

Canadian Critical Care Society

Canadian Critical Care Forum 2012. Toronto, ON. 2012 May. Organizer and Course Co-Chair.

Critical Care Residents Day. Toronto, ON. 2011 Nov 13. Organizer. Bellingham, Dion and Vethanayagam

Herrick, Ian

- Central Line Infection Audit 2009-10. Dr. Railton, LHSC Central Line Committee. November 2011.
- Performance metrics and patient outcomes impacting anesthesia care. Dr. Herrick, Association of Canadian University Departments of Anesthesia (ACUDA) Annual Meeting. June 2012
- PACU Complication Codes and Anesthesia. Dr. Herrick, LHSC PACU staff forums – January and June 2012.



EPiCOR (Evidence Based Perioperative Clinical Outcomes Research) and MEDICI (Medical Evidence, Decision Integrity, Clinical Impact) Groups

Dr. Janet Martin, Director

EPiCOR Members: Davy Cheng, Janet Martin, and Daniel Bainbridge

The Evidence Based Perioperative Clinical Outcomes Research (EPiCOR) Group is a multidisciplinary collaboration between Perioperative Medicine & Anesthesia, Surgery, Pharmacy, Medicine, and Pharmacology whose mandate is to provide comprehensive systematic reviews, meta-analyses, and health technology

assessments of new and existing technologies including medical devices and equipment, surgical and other interventional procedures, drugs and diagnostic techniques in order to inform important perioperative clinical and economic questions with best available evidence.

Our goal is to identify, synthesize, and translate best evidence into decisions for policy and everyday practice, and to collaborate with others in this mission locally, nationally, and internationally.

The EPiCOR Group has completed research in the following areas:

Perioperative Supportive Care

- Patient Controlled versus Nurse Controlled Analgesia
- NSAIDs versus Non-NSAID Multimodal Analgesia
- Cox-2 Selective Perioperative Analgesia
- Amiodarone Perioperatively
- Postoperative Nausea and Vomiting
- Perioperative Gastric Acid Suppression
- Levosimendan for Prevention of Arrhythmia and Death
- Dexmedetomidine for Prolonged ICU Sedation

Blood Conservation

- Antifibrinolytics
- Synthetic Colloids versus Albumin
- IV Irons
- Perioperative Erythropoietics
- Ultrafiltration
- Miniaturized Circuits
- Cell Saver

Minimally Invasive Surgical Methods

- Off-Pump versus On-Pump Coronary Artery Bypass Surgery
- Endovascular versus Open Vein Harvest for CABG (EVH)

- Video-Assisted Thoracic Surgery (VATS)
- Thoracic endovascular Aortic Repair versus Conventional Open Repair (TEVAR)
- Minimally invasive versus conventional mitral valve surgery (MI-MVS)
- Transcatheter Aortic Valve Intervention

Innovative Surgical & Imaging Techniques

- Stentless Valves versus Conventional Valves for Aortic Valve Replacement
- Multislice CT, MRI, TEE/TTE Ultrasound, versus Angiography for Aortic Dissection
- Surgical AF Ablation (MAZE and related procedures)

International Collaboration:

In addition, EPiCOR has collaborated with other international groups to perform evidence-based systematic reviews and consensus statements. These forums provide a unique opportunity to teach surgeons, anesthesiologists and related healthcare personnel about evidence-based decision-making, meta-analysis and systematic review. The following areas have been addressed by consensus conferences led by EPiCOR:

- Off-Pump Coronary Artery Bypass Surgery (OPCAB)
- Endovascular Vein Harvest (EVH)
- Video-Assisted Thoracic Surgery for Lung Cancer (VATS)
- Transmyocardial Revascularization (TMR)
- Stentless Aortic Valves (SAV)
- Ablation of Atrial Fibrillation (AFL)
- Thoracic Endovascular Aortic Repair (TEVAR)
- Minimally invasive mitral valve repair (MI-MVS)
- Perioperative Colloids (HES, Albumin, Gelatins)
- Blood Management – Drugs, Devices, & Procedures

In 2011 with the support of the Schulich School of Medicine and Dentistry (SSMD), London Health Sciences Centre (LHSC) and Lawson Research,

we are establishing a MEDICI Centre (Medical Evidence, Decision Integrity, Clinical Impact) to be the first hospital-based, evidence-based health technology assessment program in Ontario. This program will seek to involve other hospitals and the Ministry of Health and Long-term Care (MOHLTC) to build network capacity to answer high priority healthcare questions in a timely, transparent and accountable manner. Evidence-based Decision Making and Health Technology Assessment (HTA) workshops and courses at the Schulich School of Medicine and Dentistry and cross-faculty within Western, will be established and likewise, a network with an international consortium of universities to provide an International MSc (HTA) program. The Network will generate new hypotheses for innovative research in applied decision-making and knowledge translation techniques to address key evidence gaps and translation gaps related to the constant tension between available technologies and resources in healthcare.

Faculty Academic Outreach

Martin, Janet

- 7th Biennial Cardiopulmonary Bypass Conference. Kuching, Malaysia. 2012 June. Invited Speaker.
 - Colloids vs Crystalloids: Evidence-Based Review for Surgery and Critical Care [Lecture].
 - How to Interpret Meta-Analysis [Lecture].
- Health Technology Assessment International Symposium (HTAi). Bilbao, Spain. 2012 July. Lecturer: Treasure or Token, Citizen Involvement in Technology Assessment and Policy Setting.
- International Anesthesia Research Society (IARS): Annual Meeting. Boston, MA. 2012 May. Workshop Leader. Evidence-Based Medicine [Workshop].
- Ontario Ministry of Health and Long Term Care. Toronto, ON. 2012 May. Invited Speaker: Anatomy of Decision-Making and a Post-Mortem of Policy-Making: Assessing Multiple Criteria with Validity, Relevance, Consistency and Transparency. Know4Go [Lecture].

- St. Joseph's Health Care London and London Health Sciences Centre Drugs and Therapeutics Committee Meeting. London, ON. 2012 May. Invited Speaker.
 - Dexmedetomidine: A Series of Meta-Analyses to Inform Decision Making in the ICU [Lecture].
 - Ketamine: A Meta-analysis and Metaregression to Inform Decision Making for Perioperative Use [Lecture].
- University of Toronto, special presentation for the International MSc (HTA) students. Toronto, ON. 2012 May. Invited Lecturer: Health Technology Assessment at the Pace of Decision Making [Lecture].

Cheng, Davy

- Refer to Presentations, p. 73

Neuroanesthesia

Dr. Miguel Arango, Director

The Neuroanesthesia Program has had another successful year in 2011-2012. Between July 1, 2011 and June 30, 2012, University Hospital had a total of 1213 Neuro cases and Victoria Hospital had 226.

The program had 2 neuroanesthesia fellows and 10 residents completed a neuroanesthesia rotation.

Our goal is to provide advanced training to those individuals (residents/fellows) who either plan to enter academic anesthesiology with an emphasis in neurosurgical anesthesia or those who wish to practice in a setting that has a large number of neurosurgical procedures. Trainees gain knowledge not just through case experience, but also through an organized teaching program. The Neuroanesthesia program is designed to gain expertise in the following areas.

Clinical:

London Health Sciences Centre is a national referral centre for the management of patients with cerebral aneurysms and arteriovenous malformations. In

recent years, it has been discovered that surgery for Intractable Epilepsy has valuable therapeutic potential and this has resulted in epilepsy surgery becoming one of the “fastest growth areas” in neurosurgery. Patients are done awake but sedated so that their speech and motor areas of the brain can be mapped prior to surgical excision.

Stereotactic Surgery is used for diagnostic biopsies, management of chronic pain and movement disorders, and the management of intractable epilepsy. Each of these requires different anesthetic approaches.

In addition to the above “special areas”, residents/fellows will be exposed to a wide variety of the more usual neurosurgical procedures, including endoscopic neurosurgery, craniotomies for tumors and hemifascial spasm, carotid endarterectomy, and spinal instrumentation.

Residents/Fellows will also have the opportunity to learn how to use Transcranial Doppler, Cerebral Oximetry, Evoked Potential and EEG monitoring during surgery.

Non-Anesthesia Experience:

Residents/Fellows will spend a brief period on the epilepsy service to have a better understanding of the total management of patients with epilepsy and to learn much more about the reading, use and potential of EEG monitoring.

As well, a similar brief period will be offered in the Neuroradiology Department to learn more about the indications and uses of diagnostic and interventional neuroradiology and to become much more facile with the interpretation of CT scans, MRI, etc.

Research/Academic Activities:

The Department offers a variety of research opportunities.

It is our expectation that each fellow will complete at least one research project taking it from conception through to completion. In addition, each fellow is expected to write at least one review

RESIDENTS/FELLOWS WILL ALSO HAVE THE OPPORTUNITY TO LEARN HOW TO USE TRANSCRANIAL DOPPLER, CEREBRAL OXIMETRY, EVOKED POTENTIAL AND EEG MONITORING DURING SURGERY.

article/book chapter. Further participation in research and writing activities is always welcomed and encouraged.

Under supervision, fellows will also review manuscripts submitted to a variety of anesthesia journals, abstracts submitted to anesthesia scientific meetings, and grant applications. These activities together with the research activities outlined above will provide fellows with an excellent insider's view of the entire research process.

We held our annual Fellows Research Day on December 3, 2011. Our Neuroanesthesia fellow, Radhakrishnan Muthuchellappan, presented his research project “Gastric volume assessment using ultrasonography”. He went on to apply for a departmental internal research fund with Dr. Rosemary Craen and was awarded funding for his study “Gastric volume assessment with 2D & 3D Ultrasound - A Feasibility Study”. The study is still ongoing.



Dr. Sandra Katsiris

Obstetric Anesthesia

Dr. Sandra Katsiris, *Director*

This past year marked completion of a full year of occupancy for the Obstetrical Anesthesia Program at Western University, in the new Grace Donnelly Women's and Children's Health Pavilion, at London Health Sciences Centre, Victoria Hospital. This new, large, functional space is a welcomed change from the previous locations of obstetrical services at Western. The labour/birthing rooms are quite large and allow for excellent patient management for labour analgesia. In addition, the centrally located cesarean section operating rooms allow for quick transport of patients for operative delivery. The adjacent locations of the antenatal ward, neonatal intensive care unit, and post-partum ward, have significantly improved timeliness and transitioning of patient care. The Obstetrical Anesthesia Subspecialty group has been able to cooperatively focus their efforts on patient care, teaching, and research, with routinely dedicated time spent in the Obstetrical Care Unit.

The volume of deliveries for the city was approximately 6000 this past year, consistent with the prior year, and slightly below the number anticipated for our consolidated site. Approximately 60% of the deliveries were high-risk. The epidural rate was similar to last year at approximately 75%, and the cesarean section rate was slightly less than previous years at 22%. Approximately 90% of cesarean sections continue to be completed under regional anesthesia.

The core resident rotations through the Obstetrical Unit were fully subscribed again this year. Consolidation of services has allowed us to assign two residents to Obstetrical Anesthesia rotations at one time. In addition to core Western trainees, there were a number of residents from other institutions that chose to come to London for elective experience in obstetrical anesthesia. Dr. Indu Singh has been coordinating these rotations. As in past years, obstetrical anesthesia was a common theme in trainee presentations at regional, national and international meetings.

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MANAGEMENT FOR
LABOUR ANALGESIA.

The Obstetrical Anesthesia Fellowship Program included Dr. Kamal Kumar and Dr. Patricia Kolesnechenko as clinical fellows this past year. Dr. Kumar will stay with us for an additional year of fellowship training, and Dr. Cristiana Miron will be our new fellow for 2012-2013.

Palliative Medicine

Dr. Valerie Schulz, *Director*

Palliative Medicine has been active in the Department of Anesthesia & Perioperative Medicine. This past year has seen the advancement of both Anesthesia and Palliative Medicine with clinical practice in critical care and dialysis, as well as academic contributions advancing health care. These contributions include a publication and research funding which ranked first in our category for CIHR funding and AMOSO AFP Innovation Funding.

The recently published study, "Being a Hospice Volunteer Influenced Medical Students Comfort with Death and Dying," represents the educational initiative of integrating an opportunity for experiential learning for medical students who become trained hospice volunteers. The grants demonstrate national leadership for a multi-site, multi-province research endeavour: Palliative Care on the Heart Failure Team – Mapping Patient and Provider Experiences and Expectations to Inform Guideline Implementation. This research is being accomplished through collaboration with the Centre for Education Research and Innovation (CERI), Cardiology and Centre for Family Medicine Studies.

In addition, the overlap between palliative care and anesthesia is being explored at a national level through membership participation on the Advisory Committee in Palliative Medicine at the Royal College of Physicians & Surgeons of Canada. This work could only have been accomplished through the support of the Department of Anesthesia & Perioperative Medicine.

Faculty Academic Outreach

Schulz, Valerie

Critical Care Forum. Toronto, ON. 2012 Nov 14.

Presenter: Development of a Canadian Survey of Mobilization of Critically Ill Patients in Intensive Care Units: Current Knowledge, Perspectives and Practices [Abstract].

Presenter: Development of a Prompts Template to Support Critical Care Board Rounds in the Management of Complex Critically Ill Patients [Abstract].

Presenter: Implementing Routine Delirium Screening and Initial Management in the Critical Care Setting [Abstract].

Presenter: Instituting Change in Clinical Practice: A Quality Improvement Initiative in Critical Care Delirium Assessment (Phase III) [Abstract].



Pediatric Anesthesia

Dr. Mohamad Ahmad, *Director*

The pediatric anesthesia program in 2011/12 has been generally running well with expansion of academic and clinical services.

The clinical part of our program has expanded. We have added an additional seven hours per week of sedated MRI time to help improve our waiting list. We have also added a half-day of pediatric endoscopy. The pediatric preadmission clinic is now consistently staffed by an anesthesiologist from the pediatric group. We have achieved the same consistency with neonatal anesthesia care.

This has allowed us to improve our clinical skills and meet a standard similar to other pediatric hospitals across the country. We appreciate the support of our colleagues across the city in this effort.

Continuing a trend over the past four or five years, our surgeons are increasingly asking us to provide regional analgesia. The addition of a second ultrasound machine with a neonatal transducer has assisted us in this effort. New techniques have included catheter-based paravertebral, lower limb and brachial plexus blocks. We have also improved our vascular access skills. We continue to provide inservices to pediatric ward nursing staff on a regular basis and will soon include regional anesthesia.

On the academic side, we have had a number of successes. Three residents have been successfully matched to pediatric anesthesia fellowships commencing in July of 2013, and the residents' increasingly positive feedback regarding our pediatric anesthesia rotation has been quite rewarding for our group.

Dr. Helen Holtby, Clinical Director of Cardiac Anesthesia at the Hospital for Sick Children, Toronto, gave a talk on congenital heart disease on September 21. She also met with our residents to discuss the Fontan operation. We hope to continue having yearly city-wide grand rounds on a pediatric topic in the future.

Drs. Fantillo, Al-Areibi and Morrell initiated Thursday morning pediatric teaching rounds at Victoria Hospital. These were very well received by the residents.

Our goals for the next year include:

- Recruitment of another fellowship-trained pediatric anesthesiologist.
- Developing a vision and strategic plan for pediatric perioperative services with our surgical and medical colleagues.
- Preparing for the next external review.

SINCE ITS INTRODUCTION
IN 2002, THE PROGRAM
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REQUIRING A BLOOD
TRANSFUSION.

Perioperative Blood Conservation

Dr. Fiona E. Ralley, Director

The purpose of the Perioperative Blood Conservation Program (PBCP) is to assist patients who will be having surgery to decrease or completely avoid the need for blood transfusion.



Dr. Indu Singh

This multidisciplinary team uses a “blood management” approach trying to get patients well faster. Interventions included augmentation of preoperative hemoglobin levels with the use of preoperative erythropoietin, with either oral or intravenous iron, intraoperative acute normovolemic hemodilution with component splitting, use of cell salvage and the use of intraoperative tranexamic acid in both orthopedic and cardiac surgical procedures. The program now also assesses and manages all patients refusing blood products, either for religious or ideological reasons, who are undergoing a surgical procedure with a possibility of significant blood loss.

Since its introduction in 2002, the program has grown in size and breadth so that today it is an integral part of the preoperative assessment of surgical patients undergoing orthopedic, cardiac, and vascular procedures where blood lost may lead to the possibility of requiring a blood transfusion. With the streamlining of some of the patient management pathways this year, it is expected that during the next 12 months this program will be able to expand to include all patients undergoing a surgical procedure associated with the likelihood of moderate to severe blood loss. In addition, a pilot project where patients scheduled for an arthroplasty procedure were reviewed at the orthopedic clinic up to 3 months prior to their surgical data has led to a reduction in the need for some preoperative interventions such as intravenous iron. It is anticipated that in the near future the patient’s laboratory data from this clinic visit will be sent directly to the PBCP nurses, electronically, to help speed up their assessment for the need for any blood management interventions. That way all patients seen in the arthroplasty clinic will be assessed in a timely manner. Once this process is in place it will be offered to other services if interested.

Surgical transfusion data reports on overall transfusion rate, transfusion trigger and discharge hemoglobin, preoperative hemoglobin and transfusion rates and highest transfusion rate procedure for each surgical service continue to be sent biannually. An emphasis this year has been

on the education of medical personnel to order red blood cells one unit at a time. It is hoped that the introduction of electronic ordering of all blood products will improve this endeavour. The Medical Advisory Committee (MAC) now receives quarterly reports on the rate of one vs. two unit transfusion for each major surgical service. Although services at University Hospital are progressing well in this area further education is required for those services at Victoria Hospital.

Members of the PBCP have continued to be very active academically in the field of Blood Conservation/Management, which is very topical at the moment. Presentations have included lectures at the conference of the American Academy of Orthopedic Surgeons, 56th Annual Ontario Anesthesia Meeting, Canadian Society for Transfusion Medicine (CSTM) Annual Meeting and 29th Annual Can-Am Clinical Anesthesia Conference. Dr. Ralley has been re-elected to sit on the board of directors for the Society for the Advancement of Blood Management (SABM), in which many members of the PBCP are also very active. As in past years, residents from both anesthesia and orthopedic specialties have been encouraged to participate in the ongoing research of the program using our extensive transfusion database and have presented their research projects at several meetings. This year manuscripts on “The use of FFP in the Cardiac Surgical Recovery Unit” and “Comparing the Safety of Intravenous Iron Dextran Versus Sucrose in Non-Hemodialysis Adult Patients” have been submitted for publication.

In summary, the PBCP is an active, thriving program that brings together many different specialties to use their combined expertise to promote the idea of “bloodless surgery”. Initially only restricted to the care of patients undergoing orthopedic, cardiac or vascular procedures, experience in these areas now allows us to expand into other surgical services. As always, the program is always looking for new members and encourages anyone with an interest in blood conservation to contact any of the current members.

Thoracic and Vascular

Dr. George Nicolaou, *Director and Fellowship Coordinator*

The academic Thoracic and Vascular Anesthesia Program continues to thrive and grow at an exponential rate in the Department of Anesthesia and Perioperative Medicine at Western University. Located at Victoria Hospital, it is an extremely busy program covering all types of complex elective and emergency cases, with the exception of lung transplantation.

Vascular surgery operates five times a week, and thoracic surgery five times a week. We have monthly morbidity, mortality and multi-disciplinary rounds with our surgical colleagues to assure quality control and to keep up on current events.

The majority of vascular and thoracic patients coming through our institution have multiple co-existing diseases including severe cardiorespiratory compromise. These patients have an extensive preoperative evaluation by anesthesia and/or internal medicine, cardiology and respirology. We have developed a multi-disciplinary perioperative high-risk clinic for optimization and follow up of these patients. The Thoracic and Vascular Surgical Programs have their own postoperative step-down monitored units with invasive monitoring capabilities.

THORACIC SURGERY

The robotic and Video-Assisted Thoracic Surgical programs (VATS) are well developed at our institution and currently account for 80% of cases, the remainder being open thoracotomies or investigative procedures. On average, per year, we perform 300 major pulmonary resections and 80 esophagectomies. We have the largest experience with esophagectomies and VATS procedures in Canada. To enhance our clinical experience and improve our teaching program, we have developed an advanced VATS surgery and Anesthesia workshop using a pig model. Here, consultants can enhance their skills in fiberoptic bronchoscopy and

management of one lung ventilation. The pediatric thoracic anesthesia program is evolving with the recruitment of a pediatric thoracic surgeon. Pediatric thoracic procedures include investigative, video-assisted and open procedures. Alongside this, is the adult and pediatric regional Anesthesia and acute pain program, allowing for excellent perioperative pain management. The majority of our adult and pediatric patients receive thoracic epidurals or paravertebral blocks for postoperative pain management.

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VASCULAR SURGERY

The Vascular Division of Surgery at Victoria Hospital has and continues to be a pioneer in endovascular stenting of abdominal and thoracic aneurysms and claims one of the largest series in North America. Ruptured abdominal and thoracic aneurysms that have favourable anatomy are repaired by the endovascular route at our institution. The Thoraco-Abdominal Aneurysm Program is well developed and these aneurysms are now generally repaired using endovascular branched stents. The thoraco-abdominal aneurysms that cannot be repaired by using endovascular stents are repaired utilizing partial left heart bypass. Recently, we have started repairing aortic arch aneurysms via the endovascular route. We use rapid ventricular pacing to optimize surgical conditions before stent deployment. On average per year, we perform 150 open abdominal aneurysm repairs, 35 endovascular thoracic, 150 endovascular abdominal and 10 endovascular thoraco-abdominal aneurysm repairs. Preliminary results, of one of our studies, have shown that spinal oximetry detects decreases in spinal cord blood flow early, allowing for the early initiation of preventive treatment spinal cord protection strategies. We presented our results on spinal cord protection strategies at the 2012 International Forum of Cardiovascular Anesthesia in China.

TRANSESOPHAGEAL ECHOCARDIOGRAPHY (TEE)

Our Transesophageal Echocardiography Program is well developed with formal teaching, and multi-disciplinary weekly rounds. We have also acquired a new TEE machine with 3D capabilities. TEE is specifically available for management of thoracic aneurysm stenting and for adjunctive management of the vascular patient with associated cardiac disease.

RESEARCH PROJECTS IN PROGRESS

- Role of continuous positive airway pressure and positive end-expiratory pressure on PaO₂ during one-lung ventilation utilizing lung

protective ventilation strategies

- Treatment modalities for spinal cord protection
- Use of near-infrared spectroscopy for monitoring spinal cord perfusion in endovascular repair of thoracic aortic aneurysms
- Biochemical markers of spinal cord ischemia in patients undergoing thoracic aortic endovascular repair

RESIDENTS' TRAINING

Our Residency Program includes two, four-week blocks of subspecialty training in vascular and thoracic anesthesia. Educational objectives are clearly outlined and monitored through daily assessments. Reading material is provided and residents are encouraged to partake in clinical research. At the beginning and the end of their rotations, the residents have an MCQ examination to assess improvement during their rotation. An oral examination is also administered at the end of the rotation.

FELLOWSHIP PROGRAM

Our Fellowship Program is well established with ongoing clinical research opportunities, in collaboration with our surgical colleagues. The program is one year in duration. Each week, the fellow will work two days independently in the operating room, one day in vascular and one day in thoracic with a consultant. The fifth day is for academic and research projects. The fellows are encouraged to attend x-ray rounds, thoracic/vascular rounds, fiberoptic bronchoscopy clinics and transesophageal rounds. Reading material is provided and fellows are encouraged to go to another centre for two weeks to broaden their experience. The Fellowship Program is extremely flexible, and is designed to accommodate the individual fellow's needs.



Dr. Craig Railton

SIMULATION

We have begun integrating our subspecialty training (fellows and residents) with simulation modules. This has met with great success with trainees and instructors alike. This environment allows for better preparation in this clinically diverse population. We continue to develop in this frontier of enhanced learning.

SUMMARY

Overall, the Thoracic and Vascular Program at Victoria Hospital is a very busy program with an incredible variety of interesting and complex cases. It is constantly evolving to keep up with medical and technological advances so as to ensure that patients receive the most optimal perioperative care currently available. The program offers excellent opportunities for fellows to become proficient in adult and pediatric thoracic/vascular Anesthesia and transesophageal echocardiography, both in a clinical and research setting. It is designed to meet the individual's needs, along with the best exposure to the available clinical caseload.

Transplant (Liver)

Dr. Achal Dhir, *Director*

The Liver Transplantation Program, which was established more than twenty years ago, continues to provide excellent clinical services in this challenging field. At present, the group consists of five highly experienced and motivated consultants: Dr. Achal Dhir, Dr. Wojciech Dobkowski, Dr. Christopher Harle, Dr. Fiona Ralley and Dr. Anthony Vannelli along with two international fellows.

This year, the group provided services for 60 liver transplantations including 11 critically ill recipients from the ICU. The livers came from 54 brain dead donors while 6 were donations after cardiac death. During same period, the group also provided services to 75 major liver resections along with several major hepato-biliary surgeries. The group is also involved with assessing patients in the preoperative period for optimization before they

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are listed. We also attend regular M & M rounds conducted by the surgical group as well as Bon-Mots rounds.

The Liver Transplantation group also runs a successful fellowship program with 2 fellows. The fellows, apart from getting great clinical training, are also involved with research and academic activities. The group meets every month when the fellows, under the guidance of a consultant, present, and discuss PBLDs and journal articles.

Research projects:

1. Infusion of ketamine and Lidocaine for pain management after major liver resection. We have already enrolled 50 patients.
2. Extended donor criteria and orthotopic liver transplantation – an outcome study of the Canadian system. The study has finished and the manuscript is being written.



3. Liver transplantation in patients with grade 4 encephalopathy: differences between fulminant and acute on chronic hepatic failure. The data collection is over and now is being reviewed for statistical analysis.

Awards:

1. The 'Extended Criteria Donor' project was presented by Dr. Raviraj Raveendran, a Clinical Fellow in our program, was awarded the best paper for Fellows Annual Research Day.
2. Dr. Raviraj Raveendran also won the 'Young Scientist' award in International Liver Transplant Society (ILTS) annual conference in San Francisco.

Other academic activities:

For the last 6 years, the group has been successfully organizing the 'Transplant symposium' or 'Case discussions' during annual Canadian Anesthesiologists Society conferences. The case discussion for the June 2012 conference was based on Post-transplant patient for non-transplant surgery.

The group has established the Transplant web site, which is expected to be running soon.

Faculty Academic Outreach

Dhir, Achal

- All Indian Institute of Medical Sciences (AIIMS). New Delhi, India. 2012 Feb 12. Invited Lecturer: Role of TEE in Anesthesia for Patients Undergoing Non-cardiac Surgery [Lecture].
- Canadian Anesthesiologists' Society Annual Meeting. Quebec City, Quebec. 2012 June 17.
- Invited Speaker: My 2nd Case for Hip Replacement in 3 Years Post Liver Transplant – what to do? [Lecture].
- Symposium Organizer. Transplant Case Discussion.
- Dr. RML Hospital. New Delhi, India. 2011 Aug 17-19. Visiting Professor.
- Indications of Intraoperative TEE [Lecture].
- Role of TEE in Ischemic MR [Lecture].
- Indian Association of Cardiovascular Thoracic Anesthesiologists (IACTA). New Delhi, India. 2012. Invited Lecturer: Post Aprotinin and Fibrinolytic Dilemma [Lecture].

HOSPITAL SITE REPORTS

Clinical Leadership

Dr. Bill Sischek, *Department Clinical Coordinator*

The past year has seen a period of growth in the human resources of the Department with the addition of several new consultant staff. Following successful completion of fellowship training Drs. Andreas Antoniou, Jonathan Brookes, Ida Bruni, Anita Cave, Collin Clarke, Vanessa Fantillo and Kristine Marmai all joined the Department in 2011-12. The welcomed addition of our new staff continues to enhance the range of clinical and research expertise within the Department.

We continue to see a growth in clinical services with the addition of Endoscopy suite coverage at St. Joseph's Health Care. We have been asked to extend that service into the LHSC, particularly at University Hospital, and it is one of our intermediate range goals to do so as personnel numbers allow. The anticipated renovations of the OR suites at Victoria Hospital are currently underway, while eventually entailing more OR's, may lighten the workload there in the interim, allowing us to explore that opportunity. The Department continues to actively recruit new staff of the appropriate calibre and training to meet the many needs of the system we service.

The Comprehensive Pain Management Program (CPMP) start is awaiting the arrival of the two nurse practitioners in Pain Anesthesia who were recruited by LHSC earlier this year, Heather Whittle and Charlotte McCallum. Their involvement is seen as key to the successful launch of the CPMP in 2012-13 by the leadership of the program. We anticipate the academic activity as well as clinical care being facilitated by their addition to the current staff of the Acute Pain and Chronic Pain Services.

This year sees the retirement of Dr. Maria Batorowicz, a long time clinician in the city. Her contribution over the years have been greatly

appreciated and her day to day involvement in the department will be greatly missed.

St. Joseph's Health Care London

Dr. Bill Sischek, *Site Chief*

St. Joseph's Health Care London is a site that continues to evolve and develop as a unique ambulatory care centre within the London hospital system. Its role as an ambulatory care surgical centre (in addition to its medical clinics) is augmented by the 31 bed inpatient unit which serves to care for its short term stay patients. This allows the Department's Acute Pain Service to provide analgesic service and care to many of the patients admitted postoperatively. In addition, the Chronic Pain program grew this year with the addition of Dr. Collin Clarke who returned to the Department following fellowship training at Duke University. He was trained in new interventional pain management techniques which he has introduced into his practice here in London. The department also saw Dr. Jonathan Brookes, a former fellow, join us as a member of the Regional Anesthesia program. Jonathan brought with him expertise in regional anesthesia gained during his fellowship in addition to his previous post-graduate training in the UK.

2011 saw the introduction of anesthetic care for endoscopy patients at SJHC. The initiation of this service is helping to improve the safety profile of endoscopy of both the upper and lower gastrointestinal tract. Following the first few months of service, Anesthesia Assistants were introduced into the unit to help care for some of these patients. Their presence marks a successful expansion of the Anesthesia Care Team concept at SJHC.

2012 is expected to bring many physical changes to the SJHC site, including reconstruction of a significant portion of the Hospital. The new construction will eventually include office space



University Hospital, London, Ontario

for the department in a new building, facing onto Grosvenor Street.

While the renovations are ongoing, the department will be temporarily housed in quarters on the 6th floor for the duration of the construction. The evolution of the St. Joseph's Health Care site continues!

University Hospital, London Health Sciences Centre

Dr. Chris Harle, *Site Chief*

The University Hospital is a major quaternary referral center and teaching facility within the University of Western Ontario. Our faculty is part of a city-wide academic anesthesiology department

with an outstanding commitment to clinical excellence, research and teaching. We provide anesthesia for cardiac surgery, neurosurgery, general surgery, orthopedic surgery, sports medicine, plastic surgery, urological surgery, maxillofacial surgery and ear nose and throat surgery. We are a major regional referral center for transplantation, and we provide anesthesia for cardiac transplantation, liver transplantation and kidney transplantation. We are actively involved in the provision of anesthetic support for procedures in the interventional radiology suite, the interventional cardiology suites and the electrophysiology labs. We have a strong departmental presence in critical care with faculty members working in both the medical and surgical critical care unit as well as the cardiac surgery

recovery unit. We provide ongoing support for a busy pre-admission clinic and we have an active regional anesthesia program and an evolving comprehensive pain management program. We also support a perioperative trans-esophageal echocardiography service.

The Department of Anesthesia and Perioperative Medicine is actively involved in developing and supporting new and innovative surgical approaches to complex disease processes. In particular we are involved in implantable cardiac support programs, novel surgical approaches to aortic valve diseases as well as robotic surgery for cardiac, hepatobiliary, renal and head and neck surgery.

We have academic programs in cardiac anesthesia, neuro anesthesia, regional anesthesia and anesthesia for liver transplantation, based at this site.

At present we have 16 fully functional operating rooms, including a state of the art minimally invasive surgical suite. We have one of the first hybrid cardiac surgical facilities in Canada and have the first North American robotic arm neuro-angiography equipped operating room.

We train Residents and Fellows in Cardiac Anesthesia, Perioperative Trans Esophageal Echocardiography, Neuro-Anesthesia, Acute Pain Management, Regional Anesthesia, Airway Management and Liver Transplantation. We also train residents at all levels of training in general anesthesia both from within our own residency program and from other disciplines.

The University Hospital has embraced the Anesthesia Care Team model and are grateful for the support and assistance we receive from our Anesthesia Assistant colleagues who help us in the Operating Rooms, the Block Room and in our out of Operating Room anesthesia locations enhancing patient care, safety and adding sustainability to our work patterns.

We are excited to welcome two nurse practitioners in anesthesia to our department and we look

forward to the contribution these individuals will be making to our perioperative comprehensive pain management program and to promote and support research and quality assurance in our practice.

The University Hospital site is the base for many ongoing and proposed research projects, and our Faculty is actively involved in a wide range of research projects including many prestigiously funded projects.

Victoria Hospital, London Health Sciences Centre

Dr. George Nicolaou, Site Chief

The Department of Anesthesia and Perioperative Medicine at Victoria Hospital, provides clinical service for vascular, thoracic, orthopedic (trauma and spine), plastic (including craniofacial), ENT, urologic, oncologic, general surgical and pediatric (ENT, general, urologic, neurosurgical and plastic) surgery. We also have a well-established acute and chronic pain service. In addition, we provide anesthetic services for 'out-of-OR' procedures such as endoscopy/colonoscopy, MRIs, CT scans, interventional radiology, diagnostic/therapeutic lumbar punctures, bone marrow aspirates, kidney biopsies, bronchoscopies and any other 'out-of-OR' procedure that might require sedation. Victoria Hospital also provides anesthesia services for all obstetrical patients in the City of London. The site's emphasis is the clinical teaching of residents, medical students, fellows and allied health professionals. This includes the use of a well-established anesthesia simulator program.

ANESTHESIA RESOURCES

As a result of ongoing reconstruction at Victoria Hospital, Dr. Cheng and I have been able to secure new and expansive office space for the Anesthesiologists. We have modernized this new space with increased computer access, an up to date library, and a formal classroom/team room that utilizes 'smart-board' technology.



Department Site Chiefs: L to R :

Dr. George Nicolaou (Victoria Hospital); Dr. William Sischeck (St. Joseph's Health Care, London); Dr. Chris Harle (University Hospital).

THORACIC/VASCULAR ANESTHESIA

Both subspecialties have flourished and remain popular as resident rotations and as fellowship training programs. Vascular surgery here has become a world leader in the endovascular management of thoracic aortic disease. Thoracic surgery has also become a world leader and boasts one of the largest series in Video Assisted Thoracic Surgical (VATS) procedures. Several recent clinical research projects in these subspecialties have been completed, and others involving VATS and pressure-limited one-lung ventilation are underway. With respect to vascular anesthesia, our preliminary results have shown that spinal oximetry detects decreases in spinal cord blood flow early, allowing for the early initiation of preventive treatment spinal cord protection strategies. A previous project led to a change in the postoperative epidural analgesia solution utilized.

PEDIATRIC ANESTHESIA

This division is under the guidance of Program Director, Dr. Mohamad Ahmad, with input from members of the Pediatric Anesthesia Subspecialty Group. We currently support three dedicated pediatric surgery operating rooms on a daily basis. In addition, we are increasing our involvement in 'out-of-OR' settings which include endoscopy/colonoscopy, MRIs, CT scans, interventional radiology, diagnostic / therapeutic lumbar punctures, bone marrow aspirates and any other procedure that is amenable to sedation. We have also implemented a 'Parental Presence at Induction' Program in conjunction with the Hospital's 'Child Life Program', and have expanded pediatric preoperative assessment and postoperative pain management services. Pain management for pediatric patients with epidurals on the ward is both offered and supported. Residents and interested staff continue to participate in the nationwide telemedicine conferences hosted by the Hospital for Sick Children in Toronto.

OBSTETRICAL ANESTHESIA

Dr. Sandra Katsiris, the citywide Obstetrical Anesthesia Director, has successfully introduced a citywide standardized obstetrical anesthesia care approach including standardized epidural solutions, PCA, PCEA and postoperative pain management. With the consolidation of all obstetrical services in London at the Victoria Hospital, the volume of births in this level 3 unit is expected to increase to over 6,000 deliveries per year. This makes Victoria Hospital the second busiest obstetrical unit in the province.

SIMULATION

The Simulation Program continues to thrive under the guidance of Dr. Richard Cherry. The program continues to deliver simulation-based crisis management training to anesthesia and critical care residents, as well as expanding the program to include more undergraduate medical students and surgical residents. Research collaboration is gaining momentum along with the general awareness and interest in healthcare simulation.

ANESTHESIA ASSISTANT PROGRAM

Our Anesthesia Assistants Program has been a great success and has been well received by all disciplines. It has allowed us to increase our 'out-of-OR' commitments for all procedures that require sedation. This has led to an increase in patient safety and satisfaction, more efficient use of resources allowing for an increased utilization of our services. The Anesthesia Assistant program has been beneficial for all, is well supported and continues to expand.

ACUTE AND CHRONIC PAIN

Our Pain Program is well-established and continues to expand. We are recruiting new nurse practitioners to help with all aspects of pain including research. Our Interventional Pain Management Program is well under way and has expanded to include pediatric patients.

EDUCATION PROGRAMS

Postgraduate Education Report

Dr. Jeff Granton, *Program Director*

The past academic year has been another successful one for the Anesthesia Residency Training at the Schulich School of Medicine and Dentistry. Our program in 2011-12 included forty four residents in the Royal College of Physicians and Surgeons program and three residents in the Family Medicine/Anesthesia Enhanced Skills Program. We are also very proud to continue the training of Physician Assistants from the Canadian Forces.

THE CLINICAL
SERVICES AT LONDON
HEALTH SCIENCES
CENTRE AND ST.
JOSEPH'S HEALTH
CARE LONDON SPAN
THE SPECTRUM OF
PRIMARY TO TERTIARY
SURGICAL AND
MEDICAL CARE.



Dr. Geoff Bellingham

The clinical services at London Health Sciences Centre and St. Joseph's Health Care London span the spectrum of primary to tertiary surgical and medical care. This gives our anesthesia trainees the opportunity to participate in a wide array of operative and non-operative patient care encounters that are required to become a well-rounded anesthesiologist. Specialty rotations offered to residents include:

- Acute Pain Management
- Airway Anesthesia
- Cardiac Anesthesia and Postoperative Care
- Chronic Pain Management
- Critical Care
- Neuroanesthesia
- Obstetrical Anesthesia
- Palliative Medicine
- Pediatric Anesthesia
- Perioperative Medicine
- Regional Anesthesia
- Thoracic Anesthesia
- Transplant Medicine
- Vascular Anesthesia

Changes to the structure of the clinical services in London has strengthened our ability to offer quality education. In particular, the consolidation of obstetric and all pediatric services to Victoria Hospital has improved our capacity to offer focused teaching and experience in these areas. Rounds specifically dedicated to obstetrical and pediatric anesthesia are now regularly scheduled.

Simulation and training in Crisis Resource Management continues to be a strength of the Anesthesia Training Program at Schulich. Residents routinely undertake full days of simulation based training, allowing them to get exposure to situations and themes that, once practiced in the simulator, will allow them to better approach these challenges in a clinical setting. In the end this will enhance their education and patient safety.

Our focus on research and having residents learn how to perform and evaluate research, is increasing in its importance, both at the Schulich School of Medicine and Dentistry and also nationally. This past year was another successful year for our residents in research.

Resident presentations at Midwest Anesthesia Residents Conference (MARC):

- Dr. J. Racine. The case that broke my heart: Takotsubo cardiomyopathy

Resident abstracts presented at Canadian Anesthesiologists' Society annual meeting as poster displays:

- Dr. J. Racine. The case that broke my heart: Takotsubo cardiomyopathy
- Dr. M. McFarling. Cricothyroid membrane assessment feasibility by US.
- Dr. R. Smith. Peripheral Tissue Oxygenation Saturation (StO₂) Monitoring & the Vascular Occlusion Test in Cardiac Surgery. **Submitted for publication.**
- Drs. S. Lee & J. Landry. The effectiveness of a perioperative smoking cessation program: a

randomized clinical trial. **Also presented at Ambulatory section of CAS.**

- Dr. J. Riddell. Intraoperative TEE, isoproterenol, & teamwork in the surgical correction of HOCM: a case report.

The McMaster- Western Anesthesia Resident Research Day:

This annual event was hosted by Western's Department of Anesthesia and Perioperative Medicine on June 12, 2012.

An all-day forum, residents from both universities presented their research. Residents were encouraged to ask questions of their peer presenters to further their knowledge of the subject as well as examine research methods & biostatistics of the projects presented. Prizes were awarded to the top presentations.

The guest speaker was Dr. Viren Naik. (Vice Chair Education & Associate Professor, Department of Anesthesiology, University of Ottawa). He spoke about competency based medical education and lifelong learning in his lecture: "See one, do one, teach one...but not on my Mom!"

Resident presentations at Mc-Master- Western Anesthesia Resident Research Day:

- Drs. S. Lee & J. Landry. The effectiveness of a perioperative smoking cessation program: a randomized clinical trial. Awarded 1st prize.
- Drs. A. Hegazy & M. Banasch. Gastric volume assessment using 2D & 3D US: a feasibility study.
- Dr. J. Riddell. The anesthetic management of a patient having surgical correction of HOCM: a case report.
- Dr. S. Morrison. The anesthetic management of a patient having excision of a massive goiter: a case report & literature review.

A special thanks to all the members of the Anesthesia PGE Committee (noted below) for their dedication to improving the training of our Anesthesia Residents. An extra special thank you to Linda Szabo, for her tireless work as the program's administrator.

Jeff Granton – Program Director

Davy Cheng – Chair of Department of Anesthesia and Perioperative Medicine

Sandra Katsiris – Associate Program Director

Ryan Smith – Chief Resident

Rosemary Craen – Site Coordinator - University Hospital

Pod Armstrong – Site Coordinator - St. Joseph's Health Care London

Rooney Gverzdys – Site Coordinator - Victoria Hospital

Indu Singh – Resident Research Coordinator

Richard Cherry – Simulation and Information Technology Director

Mark Soderman – Community (St. Thomas) and SWOMEN

Ed Roberts – Community (Windsor) and SWOMEN

Jennifer Landry – Resident Representative

Farah Manji – Resident Representative

Melissa Brockerville – Enhanced Skills Representative

Linda Szabo – Administrator

2011/2012 Residents

Al-Ghazaly, Samer

Ashcroft, Rebecca

Banasch, Matthew

Bebbington, Fraser

Brockerville, Melissa

Cheung, Roderick

Chin, Melissa

Constantinescu, Corina

Cusano, Fiorenzo

Dion, Joanna

Gauthier, Andre

Hegazy, Ahmed

Jasudavisius, Amanda

Kazem, Tarek

Kolesnichenko, Patricia

Kuszewski, Peter

Landry, Jennifer

Lee, Susan

Lin, Bill

Lougheed, Sean

Ludwig, Nathan

Manji, Farah

McFarling, Matthew

McKeown, Kevin

Miron, Christina

Morrison, Stephen

Nandra, Sukhjeen

Pariser, Michael

Patel, Sanjay

Philips, Colin

Quach, Thomas

Racine, Jennifer

Riddell, James

Schindel, Mark

Schwartz, Amanda

Smallwood, Jennifer

Smith, Ryan

Sommerfreund, David

Stalder, Marc

Taam, Lindsay

Thornton, Alistair

Vergel De Dios, Jennifer

Vethanayagam, Adrian

Wakely, Laura

Walia, Gautam

Zhou, Ray

Fellowship Program

Dr. Miguel Arango, *Director*

Jamie Allaer, Administrator

Fellowships in cardiac, neurosurgical, transplantation, regional, obstetrics, pain management, and vascular & thoracic anesthesia are offered each year at the London Health Sciences Centre and St. Joseph's Health Care London. Fellowships are usually 12 months in duration.

Programs are individualized to meet the goals of successful applicants. Generally, clinical experience is the focus along with improvement in clinical research. Fellows spend approximately four days per week in clinical activities with one day per week protected for non-clinical activities, and participation in night call schedule (from home). Fellows are also encouraged to be actively involved in resident, medical student and nursing education, didactic lectures and to participate in anesthesia rounds and specialty conferences. Applications are usually considered 12 - 18 months prior to the start date.

2011/2012 Fellows

Dr. Jon Brookes -
Regional

Dr. Matthew Chiew -
Regional

Dr. Shao Chuan Fu -
Research

Dr. Tim Hall - Transplant

Dr. Mohamed Ismail -
Cardiac

Dr. Angela Patricia
Kolesnichenko -
Obstetric

Dr. Kamal Kumar -
Obstetric

Dr. Parshotam Lal
Gautam - Transplant

Dr. Radhakrishnan
Muthuchellappan -
Neuro

Dr. Rodrigo Rubio -
Simulation

Dr. Rosemary Snaith -
Vascular/Thoracic

Dr. Danielle Stothart -
General

Dr. Wilson Tay - Chronic
Pain

Dr. Hesham Youssef -
General

Dr. Rujin Zhang -
Research

Continuing Medical Education Report

Dr. Ian Herrick, *Director*

Under the auspices of the Continuing Professional Development Office at the Schulich School of Medicine and Dentistry, the Department of Anesthesia and Perioperative Medicine Continuing Medical Education Program supports a variety of high quality continuing education events aimed at practicing anesthesiologists and affiliated health care professionals. Current activities include departmental rounds (held as monthly city-wide forums across the London hospitals); weekly site rounds (held at each hospital site and designed to address issues and topics of local interest) and subspecialty rounds and seminars (organized to meet the educational needs of subspecialty groups e.g., cardiac anesthesia, neuroanesthesia, obstetrical anesthesia, etc).

In addition, the CME Program hosts several lectureships and accredits local, national or international conferences and workshops supported by the Department and organized by its members. This year we were pleased to welcome Dr. Beverley Orser – internationally recognized for her contributions to our understanding of the mechanisms of anesthesia and as an advocate for patient safety – to celebrate Anesthesia Day and Dr. Andres Lozano – an internationally distinguished academic neurosurgeon in the field of functional neurosurgery – as our Aiken Lecturer, held jointly with Neurosurgery.

City-wide CME activity for 2011-12 includes:

CITY-WIDE ROUNDS – 2011/2012

September 21, 2011

Speaker:

Dr. Helen Holtby, MD, FRCPC
Director of Cardiovascular Anesthesia
The Hospital for Sick Children
Assistant Professor, The Dept. of Anesthesia
The University of Toronto

Talk: Anesthetic Considerations in Congenital Heart Disease

February 15, 2012

Quality Assurance Committee Update

Speaker:

Dr. Geoff Bellingham

Dr. Rebecca Ashcroft

Talk: Results and Recommendations for a City-Wide Anesthesia Consultation Re-Audit

Speaker:

Dr. Craig Railton

Talk: Central Line Infections originating in the OR – An audit and recommendations

March 21, 2012

Speaker:

Dr. G. Bryan Young

Dr. Ryan Smith

Talk: Prognosis after Cardiac Arrest

April 25, 2012

Speaker:

Dr. Achal Dhir

Talk: TEE for Non-Cardiac Surgery

June 20, 2012

Quality Assurance Committee Update

Speakers:

Dr. Joanna Dion

Dr. Adrian Vethanayagam

Dr. Geoff Bellingham

Talk: Perioperative Temperature Management – LHSC Experience with Hypothermia

Speakers:

Dr. Susan Lee

Dr. Jen Landry

Talk: The effectiveness of a Perioperative Smoking Cessation Program: An RCT

PERIOPERATIVE ROUNDS – 2011/2012

October 19, 2011

Speaker:

Marlene Van Laethem, Clinical Ethicist

Adjunct Professor, Dept. of Physical Medicine &

Rehabilitation

Schulich School of Medicine & Dentistry

Talk: When the plan changes Intra-operatively: Surgeons and Patients Perspectives

January 18, 2012

Speaker:

Ms. AnneMarie McIlmoyl, Director, Perioperative Services

Dr. Stephen Paulter

Ms. Karen Perkin, VP, SJH & CNE

Dr. Doug Ross

Dr. Bill Sischek

Talk: Can my patient have surgery at SJHC

World Anesthesia Day Lecture – October 12, 2011

Speaker:

Dr. Beverly Orser, MD, PhD, FRCPC

Professor of Physiology & Anesthesia

University of Toronto

Canada Research Chair in Anesthesia

Talks:

1. Anesthesiologists as Leaders in Patient Safety
2. Resident Lecture: Molecules, MAC and Memory

Aitken Lecture – November 23, 2011

Speaker:

Dr. Andres Lozano, MD, PhD, FRCSC, FRCS

Professor & Chairman, Dan Family Chair in Neurosurgery

RR Tasker Chair in Functional Neurosurgery

Canadian Research Chair in Neuroscience (Tier I)

University of Toronto

Division of Neurosurgery

Toronto Western Hospital

Talks:

1. History of Surgery for Psychiatric Disorders
2. Emerging Applications for Deep Brain Stimulation

Airway Workshop – November 26, 2011

Speaker:

Dr. Gregory Peachey, McMaster University, Hamilton, ON

Talks:

1. Clinical Cases – Difficult Airways
2. Simulation in Education on Airway Management

Speaker:

Dr. David Wong, University of Toronto

Talk: Improving Success in Fiber optic Intubation

Speakers:

Dr. Chris Harle and Dr. Ivan Iglesias

Talk: A Review of Recent Airway Literature

Quality Assurance

Dr. Ian Herrick, Director

The Department of Anesthesia and Perioperative Medicine has an established tradition of high quality care. Complementing the key role of the individual practitioner in the provision of quality care, the Department has an established quality assurance framework centred on a multidisciplinary Quality Assurance Committee with the following mandate:

Assist Chief/Chair and Site Chiefs with monitoring and promoting high quality anesthesia care. Selectively monitor and/or respond to opportunities to enhance the quality and safety of care.

Provide a forum for the ad-hoc systematic review of critical incidents and events impacting anesthesia care.

Support education by encouraging the engagement of department members and trainees in projects to assess and enhance quality care.

Support research activities aligned with the objectives of the departmental QA framework and 'learnings' derived from local research initiatives with relevance to the quality or safety of anesthesia care.

The Committee met quarterly and was supported administratively by Ms. Marigo Portokalis. Data management was provided by Dr. S. Subramanian and Dr. M. Terlecki.

COMPLEMENTING THE KEY ROLE OF THE INDIVIDUAL PRACTITIONER IN THE PROVISION OF QUALITY CARE, THE DEPARTMENT HAS AN ESTABLISHED QUALITY ASSURANCE FRAMEWORK CENTRED ON A MULTIDISCIPLINARY QUALITY ASSURANCE COMMITTEE

The Quality Assurance Committee:

- Ian Herrick, Director
- Geoff Bellingham, St. Joseph's Health Care London (SJHC)
- Indu Singh, SJHC
- Steven Dain, University Hospital (UH)
- Ronit Lavi, UH
- Michelle Gros, Victoria Hospital (VH)
- Christopher Harle, Site Chief Representative
- Craig Railton, VH
- Rebecca Ashcroft, Anesthesia Resident
- Magdalena Terlecki

- Anne Marie McIlmoyle, SJHC Perioperative Services
- Silvie Crawford, Vice President of Patient-Centered Care, London Health Sciences Centre
- Marigo Portokalis-Valeriotte

Highlights for 2011-12

Clinical Audit:

With multidisciplinary representation from the London Hospitals the Quality Committee provides, 1) ongoing clinical audit activity for a panel of perioperative indicators and events related to anesthetic care, 2) clinical care screening using established 'trigger tool' methodology, 3) a structured review process for screening activity and perioperative critical events involving anesthetic care.

Work was completed this year on a revised panel of clinical indicators developed collaboratively with the Post Anesthetic Care Unit (PACU) staff and implemented at LHSC in February and March 2012. The panel represents a significant adjustment and refinement of the clinical indicators tracked by the PACU. Presentations were conducted with PACU staff at Victoria Hospital and University Hospital to discuss the new indicators and how they are used to audit care.

This year, the Quality Committee reviewed recent recommendations developed jointly by the Anesthesia Quality Institute (US) and the American Society of Anesthesiologists regarding Anesthesia Quality Indicators. The recommendations present an opportunity to establish some standard performance indicators of specific relevance to anesthesiology. Our compliance with the proposed indicator panel was felt to be high in the areas deemed relevant to Canadian practice. The Committee proposed to work with Medical Informatics and Perioperative Care Administration over the coming months to enhance compliance in relevant areas and where suitable metrics are available.

Research:

The Quality Assurance Committee supported several projects in 2011-12.

Dr. Geoff Bellingham and Dr. Rebecca Ashcroft undertook to audit (2010-11) and re-audit (2011-12) preoperative consultation quality. Results were initially presented to the department in June 2011. Re-audit results were presented in February 2012 and reflected a dramatic shift in the use of dictation from 35% to 80% over the six month interval accompanied by enhanced content and legibility. The availability and use of dictation and transcription templates were also explored.

Dr. Railton and Dr. Al Alreibi performed an extensive audit of central line infections (CLI) associated with anesthesia practice. The review focused on central line infections identified in the critical care units and involving patients who had lines placed in the operating room. The results reported a very low incidence of CLI arising from lines placed in the operating rooms. Recommendations promoted the use of the best practices for central line insertion and were shared with department members, the LHSC Central Line Committee and hospital administration.

Drs. Bellingham, Dion and Vethanayagam reviewed temperature management and the incidence of perioperative hypothermia arising during operative procedures performed at LHSC. Retrospective data from 2010-11 was supplemented with a prospectively collected audit in 2012. The project was conducted in collaboration with Nursing Leadership in the Post Anesthetic Care Unit (PACU). Recommendations included high risk populations of perioperative patients at LHSC and opportunities to enhance current efforts to manage temperature in the perioperative environment.

Dr. Gros convened a workgroup to review the perioperative management of patients with Obstructive Sleep Apnea (OSA) at LHSC. The panel members included Drs. Gros, Badner, Fuller, Fantillo, Thornton, Snaith and Herrick. The SJHC policy for the perioperative management

of patients with OSA was used as a framework for discussion. A literature review and survey of peer hospital practices was conducted. Work is ongoing.

Education:

Committee reports 2011-12:

City-wide grand rounds

- Consultation Quality - Re-Audit Results. Drs. Bellingham and Ashcroft
- Central Line Infections originating in the OR. Dr. Railton
- Perioperative Temperature Management – LHSC Experience with Hypothermia. Drs. Bellingham, Dion and Vethanayagam

Other venues

- Central Line Infection Audit 2009-10. Dr. Railton, LHSC Central Line Committee. November 2011.
- Performance metrics and patient outcomes impacting anesthesia care. Dr. Herrick, Association of Canadian University Departments of Anesthesia (ACUDA) Annual Meeting. June 2012
- PACU Complication Codes and Anesthesia. Dr. Herrick, LHSC PACU staff forums – January and June 2012.

FACULTY AWARDS & RECOGNITION

2011 MAC Award recipients

Dr. John Fuller receives the Joint MAC Chairs' Award: The Joint Medical Advisory Committee (MAC) awards recognizes individuals for their commitment to the vision and mission of LHSC and St. Joseph's Health Care London, their leadership, integrity and the motivation they provide to their peers. http://www.londonhospitals.ca/departments/medical_affairs/whats_new/whats_new.php.

Champion, Lois

- Schulich School of Medicine and Dentistry: 2011 Student Support Team Mentorship Award
- Western University: 2011 University Students' Council (USC) Teaching Honour Roll, Award of Excellence. Awarded for excellence in teaching in Undergraduate Medical Education.

Teacher of the Year Awards: Department of Anesthesia and Perioperative Medicine (Western); Schulich School of Medicine and Dentistry

Fellow Teacher of the Year

- 2011-2012: Su Ganapathy
- 2010-2011: Richard Cherry
- 2009- 2010: Achal Dhir

Postgraduate Teacher of the Year

- 2011 – 2012: Arif Al-Arebi
- 2010 – 2011: Arif Al-Arebi
- 2009 – 2010: Arif Al-Arebi

Undergraduate Teacher of the Year

- 2011 – 2012: Collin Clarke
- 2010 – 2011: Pravin Batohiw
- 2009 – 2010: Geoff Bellingham



PUBLICATIONS

Peer-Reviewed Journal Articles

- Adams C, **Bainbridge D**, Goela A, Ross I, Kiaii B. Assessing the immediate and sustained effectiveness of circular epicardial surgical ligation of the left atrial appendage. J Card Surg 2012 Mar;27(2):270-273.
- Adams C, Guo LR, **Jones PM**, **Harle C**, Brown JW, Gammie JS, et al. Automated coring and apical connector insertion device for aortic valve bypass surgery. Ann Thorac Surg 2012 Jan;93(1):290-293.
- Amao R, Zornow MH, Cowan RM, **Cheng DC**, Morte JB, Allard MW. Use of sugammadex in patients with a history of pulmonary disease. J Clin Anesth 2012 Jun;24(4):289-297.
- Azari P, Lindsay DR, Briones D, **Clarke C**, et al. Efficacy and Safety of Ketamine in Patients with Complex Regional Pain Syndrome: a Systematic Review. CNS Drugs 2012 Mar 1; 26 (3): 215-28.
- Azari P, Lu Y, **Clarke CF**, Collins T, et al. Pathophysiology of the Spreading of Complex Regional Pain Syndrome Revisited: A Case Report. Neuromodulation. 2011 Sep; 14 (5): 428 – 31.
- Bellingham GA**, Bhatia A, Chan CW, Peng PW. Randomized controlled trial comparing pudendal nerve block under ultrasound and fluoroscopic guidance. Reg Anesth Pain Med 2012 May-Jun;37(3):262-266.

7. **Cave AL**, Skubas NJ. Mitral Regurgitation in Acute Aortic Insufficiency. *J Cardiothorac Vasc Anesth* 2012 Jan 4.
8. Cho DS, Linte C, Chen EC, **Bainbridge D**, Wedlake C, Moore J, et al. Predicting target vessel location on robot-assisted coronary artery bypass graft using CT to ultrasound registration. *Med Phys* 2012 Mar;39(3):1579-1587.
9. **Dhir S**, Tureanu L, Bouzari A, **Masood A**, Francispragasam M, **Ganapathy S**. Reduction in sodium content of local anesthetics for peripheral nerve blocks: a comparative evaluation of saline with 5% dextrose--a randomized controlled double-blind study. *Anesth Analg* 2012 Jun;114(6):1359-1364.
10. Falk V, **Cheng DC**, **Martin J**, Diegeler A, Folliguet TA, Nifong LW, et al. Minimally invasive versus open mitral valve surgery: a consensus statement of the international society of minimally invasive coronary surgery (ISMICS) 2010. *Innovations (Phila)* 2011 Mar;6(2):66-76.
11. Goldberg A, Pautler SE, **Harle C**, Dennis A, Rachinsky I, **Dhir A**, et al. Giant cystic pheochromocytoma containing high concentrations of catecholamines and metanephrines. *J Clin Endocrinol Metab* 2011 Aug;96(8):2308-2309.
12. Greenspoon J, Barkun A, Bardou M, Chiba N, Leontiadis GI, Marshall JK, **Martin J**; International Consensus Upper Gastrointestinal Bleeding Conference Group, et al. Management of patients with nonvariceal upper gastrointestinal bleeding. *Clin Gastroenterol Hepatol* 2012 Mar;10(3):234-239.
13. Guiraudon GM, Jones DL, **Bainbridge D**, Cohen L, Lecompte Y, Hidden-Lucet F, et al. Hybrid Access to Atria via the Guiraudon Universal Cardiac Introducer for Arrhythmia Ablation After Total Cavopulmonary Derivation. *Innovations (Phila)* 2012 May;7(3):217-222.
14. Hall R, Chisholm R, **Cheng D**, Murphy M, Campbell D. Drug shortages in anesthesia and perioperative medicine: Canada needs a better supply system. *Can J Anaesth* 2012 Jul;59(7):629-635.
15. Healey JS, Merchant R, Simpson C, Tang T, Beardsall M, Tung S, **Ralley F**, et al. Society position statement : Canadian Cardiovascular Society/Canadian Anesthesiologists' Society/Canadian Heart Rhythm Society joint position statement on the perioperative management of patients with implanted pacemakers, defibrillators, and neurostimulating devices. *Can J Anaesth* 2012 Apr;59(4):394-407.
16. Healey JS, Merchant R, Simpson C, Tang T, Beardsall M, Tung S, **Ralley F**, et al. Canadian Cardiovascular Society/Canadian Anesthesiologists' Society/Canadian Heart Rhythm Society joint position statement on the perioperative management of patients with implanted pacemakers, defibrillators, and neurostimulating devices. *Can J Cardiol* 2012 Mar-Apr;28(2):141-151.
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18. Jones DJ, Barkun AN, Lu Y, Enns R, Sinclair P, Martel M, **Martin J**; International Consensus Upper Gastrointestinal Bleeding Conference Group, et al. Conflicts of interest ethics: silencing expertise in the development of international clinical practice guidelines. *Ann Intern Med* 2012 Jun 5;156(11):809-16, W-283.
19. **Jones PM**, **Bainbridge D**, **Dobkowski W**, **Harle CC**, **Murkin JM**, Fernandes PS, et al. Comparison of MAX-ACT and K-ACT values when using bivalirudin anticoagulation during minimally invasive hybrid off-pump coronary artery bypass graft surgery. *J Cardiothorac Vasc Anesth* 2011 Jun;25(3):415-418.

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21. Kumbharathi RB, **Taneja R**, Mehra R, Quantz MA, Guo LR, **Bainbridge DT**. Evaluation of tricuspid and pulmonary valves using epicardial and transesophageal echocardiography--a comparative study. *J Cardiothorac Vasc Anesth* 2012 Feb;26(1):32-38.
22. Kurrek MM, Cobourn C, Wojtasik Z, Kiss A, **Dain SL**. Morbidity in patients with or at high risk for obstructive sleep apnea after ambulatory laparoscopic gastric banding. *Obes Surg* 2011 Oct;21(10):1494-1498.
23. Lang P, Seslija P, Chu MW, **Bainbridge D**, Guiraudon GM, Jones DL, et al. US-fluoroscopy registration for transcatheter aortic valve implantation. *IEEE Trans Biomed Eng* 2012 May;59(5):1444-1453.
24. **Lavi R**, Ankri R, Sinyakov M, Eichler M, Friedmann H, Shainberg A, et al. The plasma membrane is involved in the visible light-tissue interaction. *Photomed Laser Surg* 2012 Jan;30(1):14-19.
25. **Lavi R, Cheng D**. Pro: Continuous Cardiac Output and SvO₂ Monitoring Should Be Routine During Off-Pump Coronary Artery Bypass Graft Surgery. *J Cardiothorac Vasc Anesth* 2012 May 23.
26. **Lavi R**, Lavi S. Melatonin and myocardial protection. *Int J Cardiol* 2011 Jul 15;150(2):207.
27. **Lavi R**, Lavi S. Remote ischaemic conditioning before exercise: are we there yet? *Heart* 2011 Aug;97(16):1284-1285.
28. **Lavi R**, Lavi S. Remote ischemic conditioning--the unknown. *Int J Cardiol* 2011 Jul 1;150(1):96.
29. Linte CA, Cho DS, Wedlake C, Moore J, Chen E, **Bainbridge D**, et al. Investigating Perioperative Heart Migration During Robot-Assisted Coronary Artery Bypass Grafting Interventions. *Innovations (Phila)* 2011 Sep;6(5):323-330.
30. Low Y, **Clarke CF**, Huh BK. Opioid-induced Hyperalgesia: A Review of Epidemiology, Mechanisms and Management. *Singapore Med J*. 2012 May; 53 (5): 357-60.
31. Mannheim D, Herrmann J, Bonetti PO, **Lavi R**, Lerman LO, Lerman A. Simvastatin preserves diastolic function in experimental hypercholesterolemia independently of its lipid lowering effect. *Atherosclerosis* 2011 Jun;216(2):283-291.
32. Merchant R, Chartrand D, **Dain S**, Dobson J, Kurrek M, LeDez K, et al. Guidelines to the Practice of Anesthesia Revised Edition 2012. *Can J Anaesth* 2012 Jan;59(1):63-102.
33. Nagpal AD, Manji F, Lenssen L, **Schulz V**, Novick RJ, Kao R. Cheyne-Stokes respiration due to chronic heart failure abates with coronary artery revascularization. *Can J Cardiol* 2012 Mar-Apr;28(2):245.e9-245.e11.
34. Newman MF, Ferguson TB, White JA, Ambrosio G, Koglin J, Nussmeier NA, **Cheng D**; RED Steering Committee and Investigators, et al. Effect of adenosine-regulating agent acadesine on morbidity and mortality associated with coronary artery bypass grafting: the RED-CABG randomized controlled trial. *JAMA* 2012 Jul 11;308(2):157-164.
35. Owen DG, **Clarke CF**, Bureau Y, **Ganapathy S**, Prato FS, St Lawrence KS. Measuring the neural response to continuous intramuscular infusion of hypertonic saline by perfusion MRI. *J Magn Reson Imaging* 2012 Mar;35(3):669-677.
36. Pink LR, Smith AJ, Peng PW, Galonski MJ, Tumber PS, Evans D, **Bellingham G**, et al. Intake assessment of problematic use of medications in a chronic noncancer pain clinic. *Pain Res Manag* 2012 Jul-Aug;17(4):276-280.
37. **Ralley F**, Berta D. Assessment of Anaemia in the Elective Orthopedic Surgical

Patient. OrthopedicsOne Articles. In: OrthopedicsOne - The Orthopedic Knowledge Network. Created Dec 01, 2011 12:49. Last modified Jul 11, 2012 08:19 ver.8. Retrieved 2012-11-01, from <http://www.orthopedicsone.com/x/WANxB>.

38. Roy D, **Ralley FE**. Anesthetic management of a patient with dynamic left ventricular outflow tract obstruction with systolic anterior movement of the mitral valve undergoing redo-orthotopic liver transplantation. *J Cardiothorac Vasc Anesth* 2012 Apr;26(2):274-276.
39. Shah K, Pirie S, Compton L, McAlister V, **Church B**, Kao R. Utilization profile of the trauma intensive care unit at the Role 3 Multinational Medical Unit at Kandahar Airfield between May 1 and Oct. 15, 2009. *Can J Surg* 2011 Dec;54(6):S130-4.
40. **Turkstra TP**, Smitheram AK, Alabdulhadi O, Youssef H, **Jones PM**. The Flex-Tip tracheal tube does not reduce the incidence of postoperative sore throat: a randomized controlled trial. *Can J Anaesth* 2011 Dec;58(12):1090-1096.
41. Wang L, **Taneja R**, Razavi HM, Law C, Gillis C, Mehta S. Specific role of neutrophil inducible nitric oxide synthase in murine sepsis-induced lung injury in vivo. *Shock* 2012 May;37(5):539-547.
42. Young GB, **Sharpe MD**. Donation after cardiac death: enter the neurologist. *Lancet Neurol* 2012 May;11(5):385-386.
43. Zats GM, Arora H, **Lavi R**, Yufit D, Benisvy L. H-bonding and steric effects on the properties of phenolate and phenoxy radical complexes of Cu(II). *Dalton Trans* 2012 Jan 7;41(1):47-49.
44. Zats GM, Arora H, **Lavi R**, Yufit D, Benisvy L. Phenolate and phenoxy radical complexes of Cu(II) and Co(III), bearing a new redox active N,O-phenol-pyrazole ligand. *Dalton Trans* 2011 Nov 7;40(41):10889-10896.

Books and Books Chapters

1. **Clarke CF**, Azari P, Huh B. Complications Associated with Head and Neck Blocks, Upper Extremity Blocks, Lower Extremity Blocks and Differential Diagnostic Blocks. In: Ranson M, Pope J, Deer T, eds. *Reducing Risks and Complications of Interventional Pain Procedures*. Philadelphia: Elsevier/Saunders; 2012.
2. **Cheng D, Granton J**. Heart Transplantation and Subsequent Non-Cardiac Surgery. In: Yao FS, ed. *Yao and Artuio's: Problem Oriented Patient Management*. 7th ed. Philadelphia, Lippincott Williams and Wilkins; 2012.
3. **McConachie I**, editor. *Controversies in Obstetric Anesthesia and Analgesia*. United Kingdom: Cambridge University Press; 2012.
 - **Singh S, Dhir A, Lavi R**. Cardiac Disease in Pregnancy [Chapter 2]. 16-37.
 - **Gauthier A, Bradbury C**. Anesthetic Drugs and the Developing Fetal Brain [Chapter 5]. 72-85.
 - Morrison S, **Al-Areibi A**. Coagulation and Regional Anesthesia [Chapter 8]. 113-121.
 - **Gros M, Morrell BJ**. Ambulatory and Patient-Controlled Epidural Analgesia [Chapter 10]. 131-139.
 - **Delbridge D, McConachie I**. Hypotension Following Spinal Anesthesia [Chapter 11]. 140-153.
 - **Wakely L, Singh S, McConachie I**. Prevention and Management of Postdural Puncture Headache [Chapter 12]. 154-163.
 - **Miron C, Bradbury C, Singh S**. Epidurals and Outcome [Chapter 13]. 164-175.

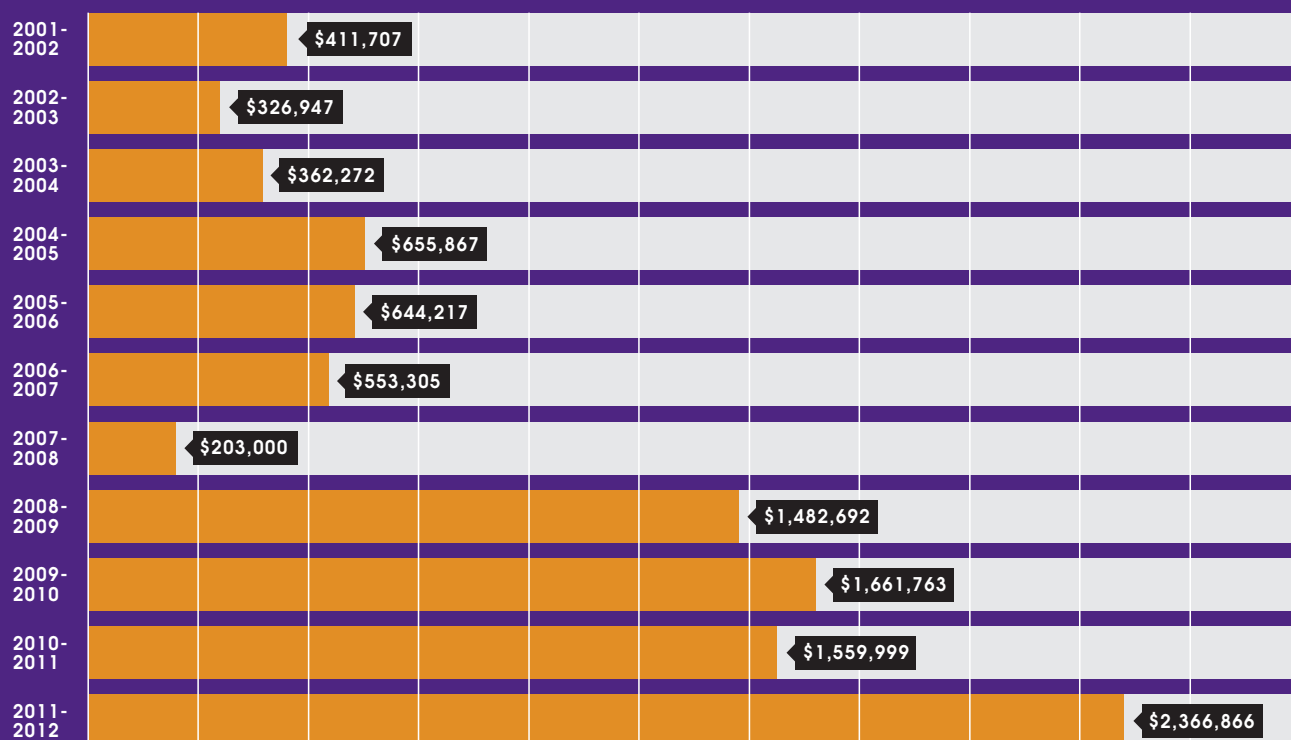
- **Batohi P, Parkin J.** Epidural and Intrathecal Opiates and Outcome [Chapter 14]. 176-185.
- **Smith R, McConachie I.** Nitrous Oxide [Chapter 16]. 196-206.
- **Teague K, Dhir S.** Fasting and Aspiration Prophylaxis in Labor and for Cesarean Delivery [Chapter 18]. 207 – 214.
- **Kuszewski P, Armstrong P.** Controversies Surrounding Airway Management and Cesarean Delivery [Chapter 18]. 215 – 228.
- **Marmai K, McConachie I.** Oxygen Supplementation for Cesarean Section [Chapter 19]. 229 – 237.
- **Racine J, McConachie I.** Oxytocin Use and Dosage During Cesarean Section [Chapter 20]. 238 – 245.
- **Quach T, Singh S, Bellingham G.** Analgesia Post Cesarean Section [Chapter 21]. 246.

Abstracts, Posters and Presented Papers

1. **Antoniou A, Marmai K, Cherry R, Singh S, Jones PM.** *Educating Anesthesia Residents to Obtain and Document Informed Consent for Epidural Labour Analgesia: Does Simulation Play a Role?* Society for Obstetric Anesthesia and Perinatology Annual Meeting. 2012 May. Monterey, CA.
2. **Raveendran R, Dhir A, Ralley F, Roy D, Harle C, Vannelli A, Dobkowski W.** *Effect of Marginal Donor Criteria on Liver Transplantation Outcome in Canadian System.* International Liver Transplantation Society (ITLS) Annual Meeting. San Francisco, CA. 2012 May.
3. **Gupta P, Dhir A, Ralley FE.** *Prewashed RBCs Prevent Hyperkalemia in Massive Transfusion.* Annual SABM Meeting. Philadelphia, PA. 2011 Sep 22.
4. **McFarling MR, Racine J, Mack P, Iglesias I, Bainbridge D, Lavi R.** *Assessing the Cricothyroid Membrane with Ultrasound – A Feasibility Study.*
 - a. The Annual McMaster/Western Research Day. London, ON. 2012 Jun 12 [presented].
 - b. Canadian Anesthesiologists' Society (CAS) Annual Meeting. Quebec City, QC. 2012 Jun 17.
5. **Morley-Forster PK,** Pergolizzi J, Sellers EM. *Mitigating the Risks of Addiction, Abuse, And Diversion: Undergraduate Pain Management Curricula.* College on Problems of Drug Dependence: 74th Annual Scientific Meeting. Palm Springs, FL. 2012 June.
6. **Riddell J, McCarty D, Guo R, Lavi R.** *Intraoperative TEE, Isoproterenol and Multidisciplinary Collaboration in the Surgical Correction of HCM.*
 - a. University of Toronto: TEE Symposium. Toronto, ON. 2011 Nov 05.
 - b. The Annual McMaster/Western Research Day. London, ON. 2012 Jun 12.
 - c. Canadian Anesthesiologists' Society (CAS) Annual Meeting. Quebec City, QC. 2012 Jun 17.
7. **Ralley F,** et al. *One Intraoperative Dose of Tranexamic Acid in Safe and Effective in Revision Total Knee Arthroplasty.* American Academy of Orthopedic Surgeons (AAOS), Annual Meeting. San Francisco, CA. 2012 Feb.
8. **Morrow J, Rogers M, Mawdsley E, Schulz V, Sen M, Bosma K.** *Implementing Routine Delirium Screening and Initial Management in a Critical Care Setting.* Critical Care Forum. Toronto, ON. 2011 Nov 14.

9. Ovakim DH, Bosma KJ, Mithu S, **Schulz V**. *Instituting Change in Clinical Practice: A Quality Improvement Initiative in Critical Care Delirium Assessment (Phase III)*. Critical Care Forum. Toronto, ON. 2011 Nov 14.
10. Koo KKY, Choong K, Cook DJ, Herridge M, Newman A, Lo V, Burns K, **Schulz V**, et al. *Development of a Canadian Survey of Mobilization of Critically Ill Patients in Intensive Care Units: Current Knowledge, Perspectives and Practices*. Critical Care Forum. Toronto, ON. 2011 Nov 14.
11. Canadian Anesthesiologists' Society (CAS) Annual Meeting. Annual Meeting: Quebec City, QC. 2012 June 15-18.
 - a. Ambulatory
 - i) *The Anesthetic That Broke My Heart: Cardiac Arrest Upon Induction of Anesthesia of an Otherwise Healthy Young Female*. Jennifer Racine [Presenter]; Craig Railton [Co-Author].
 - ii) *Cricothyroid Membrane Assessment Feasibility by Ultrasound*. Matthew McFarling [Presenter]; Ronit Lavi, Jennifer M Racine, Daniel Bainbridge, Peter Mack, Ivan Iglesias [Co-Authors]
 - iii) *Effectiveness of a Perioperative Smoking Cessation Program: a Randomized Controlled Trial*. Susan Lee [Presenter]; Phil Jones, Pat Morley-Forster, Jennifer Landry, Ozzie Buhrmann [Co-Authors]
 - iii) *Effect of Marginal Donor Criteria on Liver Transplantation Outcomes in Canadian System*. Raviraj Raveendran [Presenter]; Achal Dhir, Fiona Ralley, Debashis Roy, Chris Harle, Anthony Vannelli, Wojciech Dobkowski [Co-Authors]
 - iv) *Intra-operative TEE, Isoprotenerol and Multidisciplinary Collaboration in the Surgical Correction of HCM*. James Riddell [Presenter]; David McCarty, Linrui Guo, Ronit Lavi [Co-Authors]
 - v) *Up-take of Topical 10% Ketamine Gel Over 7 Days: A Pilot Study*. Pat Morley-Forster [Presenter]; Rajarathinam Manikandan, Craig Railton, Bradley Urquhart, David Freeman
- b. Cardiovascular and Thoracic
 - i) *Near-infrared Spectroscopy and Vascular Occlusion Test During Cardiopulmonary Bypass: A Pilot Study*. Ryan Smith [Presenter]; John Murkin [Co-Author]
- c. Education and Simulation in Anesthesia
 - i) *Educating Anesthesia Residents to Obtain and Document Informed Consent for Epidural Labour Analgesia: Does Simulation Play a Role?*. Richard Cherry [Presenter]; Kristine Marmai, Indu Singh, Phil Jones, Andreas Antoniou [Co-Authors]
- d. Obstetric
 - i) *The Analgesic Efficacy of Tap Blocks After Cesarean Deliveries: A Systematic Review*. Kamal Kumar [Presenter]; Indu Singh, Phil Jones, Angela Kolesnichenko [Co-Authors]

Total Peer-Reviewed Grants \$



GRANTS AND FUNDING

Peer-Reviewed

1. **Al-Areibi A.**
Department of Anesthesia and Perioperative Medicine, Internal Research Fund: *Aortic Stenosis and non-cardiac surgery: are clinical or echocardiographic findings more predictive of post-operative outcomes?* 2012-2014: \$1300 [Year 1 of 2] of \$2600.
2. **Armstrong K.**
Department of Anesthesia and Perioperative Medicine,

Internal Research Fund: *Ultrasound-assisted Spinal Anesthesia for Obstetrical Anesthesia.* 2010 – 2012: \$8,100

3. **Bainbridge D.**
Canadian Anesthesiologists' Society/GE Healthcare Canada Research Award in Perioperative Imaging: *Virtual reality with ultrasound guidance vs ultrasound guidance alone for central line insertion: a randomized trial.* 2011: \$30,000.

4. **Bainbridge D** (Co-investigator), et al.
Canadian Foundation for Innovation: *Image-Guided Minimally Invasive Intervention and Simulation.* 2011: \$644, 401 [Year 3 of 4] of \$2 577, 602
5. **Cheng D, Martin J** (Co-Principal Investigators)
 - AHSC AFP Innovation Grant: *Evidence-Based Decision-Making and Health Technology Assessment for Anesthesia and Surgery*

- *Building a Centre of Excellence*.
2012: \$176,250 [Year 2 of 2] of \$372,500
- AHSC AFP Innovation Fund: Integrating Vision Care into the MEDICI Framework (Medical Evidence, Decision Integrity and Clinical Impact).
Principal Investigator: Dr. William Hodge
2012: \$181,281
- Clarke C**
Department of Anesthesia and Perioperative Medicine, Academic Development Fund: *Investigate a New Imaging Modality for Identifying Regions of Spinal Cord at Risk Prior to Traco-Abdominal Aneurysm Repair*.
2012 Jan: \$7500
 - St. Lawrence K, **Clarke C** (co-investigator)
Canadian Institute of Health Research (CIHR): *Study on the Longitudinal Effects of CRPS on Cerebral Processing*.
2012 Jan: \$495,000.
 - Dhir SL, Mack P, Chiew M.**
Department of Anesthesia and Perioperative Medicine, Internal Research Fund: A Randomized Comparison of Infraclavicular and Supraclavicular Blocks for Elbow Surgery: A *Randomized, Single-blind Study*.
2012: \$5000
 - Dhir SL, et al** (co-investigator).
Physicians Services Incorporated (PSI)
Grant: *Success Rate of Infra-Clavicular Blocks: Comparison of Ultrasound vs. Neurostimulation Guided Catheter Placement*.
2009 Mar – 2011: \$60,000.
 - Craen R, Muthuchellppan R, Lavi R, Bainbridge D, et al.**
Department of Anesthesia and Perioperative Medicine, Internal Research Fund: *Gastric Volume Assessment with 2D and 3D Ultrasound Assessment: A Feasibility Study*.
2012: \$4000
 - Rotenberg B, **Fuller J (Co-investigator)**.
AHSC AFP Innovation Fund Project: Applying the evidence in perioperative medicine: 26. 2012 – 2013: \$27,500 [Year 1 of 2] of \$55,000
 - Purang A, **Ganapathy S, Armstrong K, Rachinsky M.**
CIHR Grant: *Needle Guidance System for Neuraxial Analgesia and Anesthesia*.
2011 – 2015: \$34,888 [Year 1 of 4] of \$139,554.
 - Ganapathy S, Brookes J, Armstrong K.**
Physicians Services Inc. Foundation: *Evaluation of Echogenic Needle and Catheter for Sciatic Nerve-blocks: A Randomized, Double-blind, Prospective Study*.
2012: \$16,500
 - Grant J.**
Department of Anesthesia and Perioperative Medicine, Internal Research Fund: *Near-Infrared Spectroscopy Tissue Oxygen Saturation Recovery Rate Responsiveness to Therapy for Severe Sepsis*.
2011: \$9,940
 - Jones PM.**
AMOSO Opportunities Fund: Randomized Isoflurane and Sevoflurane Comparison in Cardiac Surgery: A Prospective Randomized Clinical Trial (RISCCS)
2012: \$32,500 [per year/Year 3 of 3] of \$97,500.
 - Jones PM, Morley-Forster PK, Lee S.**
Department of Anesthesia and Perioperative Medicine, Internal Research Fund: *The effect of a perioperative smoking cessation program on rates of smoking cessation/resuction and perioperative complications: a randomized clinical trial*.
2011: \$10,000
 - Lavi S, **Lavi R** (CoPrincipal Investigator)
AMOSO Opportunities Fund: Sevoflurane Sedation During Primary Percutaneous Coronary Intervention - A *randomized pilot trial*
2011: \$32,500 [Year 3 of 3] of \$195,000

18. **Lavi R**, et al.
The American Society of Anesthesiologists – Anesthesia Patient Safety Foundation: *The association between platelet inhibition and perioperative major adverse cardiac events in post- percutaneous coronary intervention patients undergoing non-cardiac surgery*. 2010: \$49,278 2011: [Year 3 of 3] of \$147, 835
19. **Lavi R** (Principal Investigator), **McFarling M**.
Department of Anesthesia and Perioperative Medicine, Internal Research Fund: *Assessing the Cricothyroid Membrane with Ultrasound – A feasibility Study*. 2011: \$1660
20. **Murkin J, Ismail M**.
Department of Anesthesia and Perioperative Medicine, Internal Research Fund: *A Randomized Study Comparing Low Dose Vasopressin Infusion or Placebo on (NIRS) and (VOT) in Cardiac Patients During CPB*. 2012 – 2014: \$5000 [Year 1 of 2] of \$10,000
21. **Railton C**.
Department of Anesthesia and Perioperative Medicine, Internal Research Fund: *Is there an adverse drug reaction between renin-angiotensin blockade and inhaled anesthetics?* 2012: \$10,000
22. **Ralley F** (Co-investigator).
Department of Anesthesia and Perioperative Medicine, Internal Research Fund: *Randomized Clinical Trial of Immediate Pre-operative Erythropoietin on Acute Kidney Injury in Cardiac Surgery – a pilot study*. 2012: \$3600
23. **Taneja R**.
AMOSO Opportunities Fund: *Heparin Induced Coagulopathy in Cardiac Surgery – A Proof of Concept Study*. 2010 – 2012: \$65,000
24. Koo K, **Schulz V**.
AMOSO Grant: *Mobilization of Critically Ill Patients in Intensive Care Units: A Canadian Survey of Current Knowledge, Attitudes and Practice*. 2010 – 2013: \$65,000 [Year 2 of 3] of \$97,500
25. Lingard L, **Schulz V**, et al.
Canadian Institute of Health Research Grant (CIHR): *Palliative Care on the Heart Failure Team: Mapping Patient and Provider Experiences and Expectations*. 2012-2014: \$116, 024 [Year 1 of 2] \$232,048
26. Sen M, **Schulz V**.
AMOSO Opportunity Fund: *Assessment and Management of Delirium in the Intensive care Unit* 2011: \$32,500 [Year 3 of 3] of \$97,500
27. **Schulz V**, Arnold M, Shadd J.
AMOSO Innovation Competition: *Palliative care on the heart failure team: mapping patient and provider experiences and expectations to inform guideline implementation*. 2012: \$143,587

Non-Peer Reviewed/ Industry Grants

Murkin J (Enrolment Site Principal Investigator).
Ikaria Inc: *A Randomized, Double-Blind, Placebo Controlled, Multicentre Study of IK-001 to Evaluate Safety, Pharmacokinetics and Proof-of-Concept Efficacy for Reduction of Ischemia-Reperfusion Mediated Cardiac Injury in Subjects Undergoing CABG* 2011: Prorated amount of \$14,000/patient Based on Full Enrolment [Year 3 of 3].

FACULTY ACADEMIC ROLES AND PARTICIPATION

Al-Areibi, Arif

- Department of Anesthesia & Perioperative Medicine, Western University
 - Pediatric Anesthesia Group. *Member*. 2009 – Present.
 - Royal College of Physicians and Surgeons of Canada Exam Preparation Group. *Member*. 2011 – Present.

Antoniou, Andreas

- Department of Anesthesia & Perioperative Medicine, Western University Anesthesia Undergraduate Simulation Program. *Co-Coordinator*. 2011 – Present.
- St. Joseph's Health Care London Pharmacy and Therapeutics Committee. *Member*. 2011 – Present.

Arango, Miguel

- Faculty of 1000. Medicine Editorial Board for Critical Care and Emergency Medicine. *Member*. 2004 – Present.
- Latin American Congress of Anesthesia . Scientific Committee and Advisory Board for the Neuroanesthesia Module. *Member*. 2007 – Present.
- Columbian Society of Anesthesiology . Neuroanesthesia and Neurocritical Care Committee. *Founder and Member*. 2004 – Present.

Armstrong, Kevin

- Department of Anesthesia & Perioperative Medicine, Western University
 - Academic Affairs Committee. *Chair*. 2009 – Present.
 - Ambulatory Regional Anesthesia and Analgesia (ARAA). *Member*. 2002 – Present.

- City-wide Acute Pain Service. *Director*. 2008 – Present.
- City-wide Regional Anesthesia Program. Co-Director. 2008 – Present.
- Department Council. *Member*. 2011 – Present.
- Strategic Planning Committee for Obstetrical Anesthesiology. *Member*. 2006 – Present.
- Schulich School of Medicine & Dentistry, Western University. Mentoring Committee. *Member*. 2011 – Present.

Armstrong, Paidrig

- St. Joseph's Health Care London
 - Anesthesia Equipment Committee. *Member*. 2006 – Present.
 - Medical Emergency Response Committee. *Member*. 2003 – Present.

Badner, Neal

- Canadian Anesthesia Research Foundation. Board Member. 2006 – Present.
- Canadian Anesthesiologists' Society. Research Advisory Committee. 2007 – Present.
- Can-Am Anesthesia Conference. Scientific Program Committee. 1998 – Present.

Bainbridge, Daniel

- Canadian Anesthesiologists' Society. Scientific Affairs Subcommittee. *Chair*. 2010 – Present.
- Department of Anesthesia & Perioperative Medicine, Western University
 - Academic Affairs Committee. *Member*. 2009 – Present.
 - Cardiac Anesthesia Fellows Committee. *Member*. 2009 – Present.

- Departmental Research Committee. *Member*. 2011 – Present.
- ECHO Committee. *Member*. 2006 – Present.
- London Health Sciences Centre
 - City-wide Minimally Invasive Surgery (MIS) Committee. *Member*. 2008 – Present.
 - University Hospital. Cardiac Surgery Recovery Unit (CSRU) Steering Committee. *Member*. 2003 – Present.
 - University Hospital Transcatheter HV Steering Committee. *Member*. 2009 – Present.
- Ontario Medical Association. Scientific Program. *Chair*. 2010 – Present.

Bellingham, Geoff

- Department of Anesthesia & Perioperative Medicine, Western University
 - Academic Affairs Committee. *Member*. 2010 – Present.
 - Quality Assurance Committee. *Member*. 2010 – Present.

Butler, Ron

- Department of Anesthesia & Perioperative Medicine, Western University Department Council. *Member*. 2002 – Present.
- London Health Sciences Centre (LHSC)
 - Antimicrobial Committee. Committee *Member*. 2000 – Present.
 - Joint Professional Staff HR Committee. *Member*.
 - Residency Training Committee. Critical Care. *Member*.
- Schulich School of Medicine & Dentistry, Western University. Critical Care Program
 - Critical Care Operations Group. *Member*. 1997 – Present.

- ICU Consultant Committee. *Member*. 2003 – Present.
- ICU/EICU Management Committee. *Member*. 1997 – Present.
- Joint Leadership Committee. *Member*. 2002 – Present.
- Membership Committee. *Member*. 1997 – Present.
- Recruitment and Retention Core Team. *Member*. 2003 – Present.
- Research Committee. *Member*. 2001 – Present.
- Residency Training Committee. *Member*. 1999 – Present.
- Site Council. *Member*. 2003 – Present.
- Schulich School of Medicine & Dentistry, Western University Department of Medicine
 - Diagnostic and Therapeutic Rounds. *Rounds Coordinator*. 2009 – Present.
 - Undergraduate Education Curriculum and Assessment Committee. *Member*. 2009 – Present.
- Western University. Critical Care Western: Executive Committee. *Member*.

Champion, Lois

- Department of Anesthesia and Perioperative Medicine, Western University.
 - Postgraduate Education Program
 - * *Critical Care Academic Coordinator*. 2011 June – Present.
 - * *Junior Resident Coordinator*
- London Health Sciences Centre University Hospital
 - Antimicrobial Committee. *Member*. 2010 – Present.

- Infection Control Committee. *Member*. 1994 – Present.
 - Intensive Care Unit Collaborative Practice Committee. *Member*. 1992 – Present.
 - Intensive Care Unit Management Committee. *Member*. 1989 – Present.
 - Pharmacy and Therapeutics Committee. *Member*. 1992 – Present.
 - Medical Council of Canada
 - Qualifying Exams Part II Committee. *Deputy Registrar*. 1999 – Present.
 - Research Subcommittee. *Member*. 2000 – Present.
 - Schulich School of Medicine & Dentistry, Western University
 - Evaluating Committee for Undergraduate Education. *Member*. 2001 – Present.
 - Patient Centred Learning Task Team. *Member*. 1997 – Present.
 - Postgraduate Education Program
 - * *Critical Care Residency Training Committee. Member. 2010 – Present.*
 - * *Internal Review Committee. Member. 2010 – Present.*
 - Pre-clerkship and Transition Committee (UGE). *Member*. 2009 – Present.
 - Undergraduate Education (UGE) Program Courses.
 - Emergency Care (Medicine: Year 2). *Course Chair*. 2006 – Present.
 - Epidemiology (Year 1). *Course Chair*. 2010 – Present.
 - Health Care Systems (Year 1). *Course Chair*. 2010 – Present.
 - Western University
 - Provost Advisory Committee on Teaching and Learning. Schulich School of Medicine & Dentistry Representative. 1998 – Present.
- Cheng, Davy**
- American Heart Association Scientific Statements Guideline Writing Group, “Medications that should be used cautiously or avoided in patients with heart failure.” *Invited Member*. 2011 – 2012.
 - Association of Canadian University Departments of Anesthesia (ACUDA). *President*. 2011 – 2012.
 - Canadian Anesthesiologists' Society
 - Professional Specialty/Section Team. 2012 – Present.
 - Canadian Network for Environmental Scanning in Health (CNESH). *Member*. 2011 – Present.
 - Canadian Perianesthesia Clinical Trials Network (PACT) Steering Committee. *Committee Member*. 2010 – Present.
 - The Chinese Heart Congress (Beijing, Aug 9-12, 2012) Organizing Committee. *Member*. 2011-2012.
 - Department of Cardiothoracic Anesthesia, Duke-NUS Graduate Medical School Singapore, University of Malaya. Invited External Reviewer for Academic Promotion. 2011.
 - External Safety and Efficacy and Monitoring Committee (ESEM) of the POISE-2 Trial. *Member*. 2010 – Present.
 - International Anesthesia Research Society (IARS)
 - Board of Trustees Executive Committee. *Secretary*. 2011 – 2013.
 - Scientific Program Committee. Co-Chair. 2009 – 2011; International Advisor. 2011 – Present.



- International Society for Minimally Invasive Cardiac Surgery (ISMICS)
 - Steering Committee and Expert Consensus Panel, "Blood Conservation in Cardiac Surgery." *Co-Chair*. 2011.
 - Steering Committee and Expert Consensus Panel, "Transcatheter Aortic Valve Implantation (TAVI) Surgery." *Co-Chair*. 2012.
- London Health Sciences Centre
 - Canadian Surgical Technologies and Advanced Robotics (CSTAR) Education Committee. *Member*. 2007 – Present.
 - Patient Centred Care Surgery Portfolio Committee. *Member*. 2012 – Present.
 - Pediatric Care Steering Committee. *Member*. 2010 – Present.
 - Predictive Care Steering Committee. *Committee Member*. 2010 – Present.
 - Talent Management Strategy Steering Committee. *Committee Member*. 2010 – Present.
- Ministry of Health and Long Term Care (MOHLTC). Ontario Blood Advisory Committee (OBAC). *Vice Chair*. 2010 – Present.
- Society of Cardiovascular Anesthesiologists (SCA) & Asian Society of Cardiothoracic Anesthesiology (ASCA). Invited Board Member. 2010 – Present.
 - 9th International Congress of Cardiothoracic and Vascular; the 7th International Chinese Cardiovascular Anesthesia Forum; The 11th Annual Meeting, Taiwan Society of Cardiovascular Anesthesia. Organizing Committees. *Member*. 2010-2011.
 - 13th International Congress of ICCVA and New Zealand Anesthesia Annual Scientific Meeting. Scientific Program Advisory Group. *Advisor*. 2010 – 2012.
- Pre-congress Cardiothoracic and Vascular Symposium (WCA 2016 Hainan, China) Organizing Committee. *Advisor*. 2012 – Present.
- St. Joseph's Health Care London
- Medical Advisory Committee. Executive Committee. *Member*. 2011 – Present.
- Talent Management Strategy Steering Committee. Committee Member. 2010 – Present.
- Schulich School of Medicine & Dentistry, Western University: Knowledge Translation and Health Policy Steering Committee. Committee Member. 2011 – Present.
- World Federation of Societies of Anesthesiologists (WFSA)
- Circulation Scientific Sub-committee. *Chair*. 2012 – Present.
- Scientific Affairs Committee. Elected North American Representative. 2012 – Present.

Cherry, Richard

- Department of Anesthesia & Perioperative Medicine, Western University
 - Anesthesia Simulation Committee. *Director*. 2006 – Present.
 - Postgraduate Education Committee. *Member*. 2002 – Present.
- Fanshawe College, London ON. OR Respiratory Therapy (RT) Program Advisory Committee. *Member*. 2003 – Present.
- London Health Sciences Centre (LHSC)
 - CSTAR Simulation Committee. *Chair*. 2009 – Present.
 - LHSC Victoria Medical Simulation Group. *Member*. 2004 – Present.

- Milestone II Simulation Learning Initiatives. *Member*. 2010 – Present.

Clarke, Collin

- Canadian Anesthesiologists' Society: Chronic Pain Section. Deputy Chair. 2012 – Present.

Coveney, Lynn

- Schulich School of Medicine & Dentistry, Western University.
- Royal College of Physicians and Surgeons of Canada. Internal Review Committee. Chair. 2009 – Present.
- Selection Committee for First Nations Medical School Admissions. Member. 2008 – Present.

Craen, Rosemary

- Canadian Anesthesiologists' Society. Scientific Affairs Sub-committee. Member. 2012 – Present.
- Department of Anesthesia & Perioperative Medicine, Western University. Anesthesia Research Committee. Member. 2011-2012.
- London Health Sciences Centre
 - Patient Safety Summit Planning Committee. Member. 2008 – Present.
 - Pharmacy and Therapeutics Committee. *Member*. 1997 – Present.
 - Post-Anesthetic Care Unit. Anesthesia Liaison. 2002 – *Present*.
- Madame Vanier Services. Board of Directors. Member 2007 – Present.
- Schulich School of Medicine & Dentistry, Western University
 - Admissions Committee. *Member*. 2009 – Present.
 - Examiner for Clinical Methods OSCE. *Member*. 2000 – Present.

- Faculty of Medicine. Candidacy Interviews. *Interviewer*. 1997 – Present.

- Postgraduate Education Committee. *Member*. 2009 – Present.

Currin, Michael

- Department of Anesthesia & Perioperative Medicine, Western University Finance Committee. Member. 2005 – Present.

Dain, Steven

- American Association for Medical Instrumentation. Manuscript Reviewer. 2011.
- Bluezone Technology. Medical Advisory Committee. Medical Advisor. 2002 – Present.
- Department of Anesthesia & Perioperative Medicine, Western University. Medical Informatics Program. Director. 1998 – Present.
- Canadian Anesthesiologists' Society
 - Patient Safety Committee. Committee *Member*. 2006 – Present.
 - Standards of Care Committee. Appointed *Member*. 1994 – Present.
 - Standards of Practice Committee. Committee *Member*. 2004 – Present.
- Canadian Journal of Anesthesia. Manuscript Reviewer. 2009 – Present.
- Canadian Patient Safety Institute (CPSI). Health System Innovation Advisory Committee. Committee Member. 2006 – Present.
- Canadian Standards Association
 - Committee Z264.3-98 on User-Applied Labels in Anesthesia and Critical Care. *Chair*. 1997 – Present.
 - Strategic Steering Committee on Healthcare Technology. *Committee Member*. 2006 – Present.

- Technical Subcommittee Z251.1 on Respiratory Technology. *Chair*. 2007 – Present.
- Technical Subcommittee Z251.2 on Anesthesia Equipment. *Chair*. 2007 – Present.
- College of Physicians and Surgeons of Ontario (CPSO)
- Peer Assessment Program. Anesthesia Peer Assessor. 2010 – Present.
- Out of Hospital Premises Inspection Program (OHPIP). Peer Assessor. 2010 – Present.
- Healthcare Information and Management Systems Society. Member. 2009 – Present.
- International Health Terminology Standards Development Organization. Anesthesia Special Interest Group (SIG). Member. 2010 – Present.
- IEEE/ IHE (Integrating Health Enterprise). Rosetta Terminology Mapping (RTM) Ventilator Task Group. Member. 2008 – Present.
- London Health Sciences Centre
 - Patient Identification Committee. Committee Member. 2007 – Present.
 - Biomedical Engineering Wireless Technology Taskforce. Member. 2003 – Present.
 - Infusion Devices Committee. Committee Member. 2000 – Present.
 - Policy Review Task Force for the City-wide Use of Cellular Phones and Other Wireless Technologies. Committee Member. 2003 – Present.
- Organization for International Standardization. International Electrotechnical Commission.
 - ISO Technical Committee 121. Subcommittee 4, "Anesthesia Terminology". *Chair*. 2008 – Present.
 - Joint Working Group: Anesthesia

Workstations. *Canadian Expert*. 2001 – Present.

- Joint Working Group: Critical Care Ventilators. *Canadian Expert*. 1996 – Present.
- Technical Committee 121.
- Standards Council of Canada Canadian Advisory Committee for the International Organization for Standardization (ISO) Technical Committees
 - 121 Subcommittee. Anesthesia Workstations. *Chair*. 2004 – Present.
 - 121 Subcommittee. Breathing Machines. *Chair*. 2001 – Present.

Dhir, Achal

- Annals of Cardiac Anesthesia. *Editorial Board Member and Manuscript Reviewer*. 2012.
- London Health Sciences Centre. Renal Transplant Committee. Member. 2005 – Present.
- Schulich School of Medicine & Dentistry, Western University: Global Research Opportunities in Health (GROH). *Facilitator and Advisor*. 2006 – Present.

Dhir, Shalini

- Anesthesia and Analgesia. *Manuscript Reviewer*. 2011.
- British Journal of Anesthesia. *Manuscript Reviewer*. 2011.
- Canadian Anesthesiologists' Society
 - Abstract Reviewer
 - Regional Anesthesia Section. *Chair*. 2010 – 2012.
 - Scientific Affairs Committee. Member.
- Canadian Journal of Anesthesia. *Manuscript Reviewer*. 2011.
- Canadian Medical Association Journal. *Manuscript Reviewer*. 2011.

- European Journal of Anesthesia. *Manuscript Reviewer*. 2011.
- Journal of Clinical Anesthesia. *Manuscript Reviewer*. 2011.
- London Health Sciences Centre University Hospital Operating Room Committee. *Member*. 2002 – Present.
- Pediatric Anesthesia. *Manuscript Reviewer*. 2011.
- St. Joseph's Health Care London
 - Acute Pain Management Service Group. *Member*. 2006 – Present.
 - Regional Anesthesia Group. *Co-ordinator*. 2008 – Present.
 - Wednesday Morning Regional Rounds Group. *Member*. 2006 – Present.

Dobkowski, Wojciech

- Department of Anesthesia & Perioperative Medicine, Western University: Financial Management Committee. *Member*. 2005 – 2012.
- London Health Sciences Centre. University Hospital Operating Room Committee. *Member*. 2002 – Present.

Fuller, John

- Canadian Ambulatory Anesthesia Research and Education (CAARE) Group. *Committee Member*. 2009 – Present.
- Canadian Journal of Anesthesia. *Manuscript Reviewer*.
- London Health Sciences Centre Critical Care Division
 - Critical care Residency Program. *Member*. 2005 – Present.
 - EPO/OPS Study Safety Board. *Member*. 2009 – Present.
 - Finance Committee. *Member*. 2011 –

Present.

- M2 Proposals Task Team. *Chair*. 2009 – Present.
- Program Committee. *Member*. 2002 – Present.
- London Health Sciences Centre
 - Achieving New Heights. Critical Care Service/Delivery Model Working Group. *Member*. 2011.
 - Ambulatory Care Review Clinical Panel. *Member*. 2002 – Present.
 - CCTC Call Models Working Group. *Member*. 2011.
 - CCTC Recruitment and Retention Shared Leadership Core Team. *Member*. 2005 – Present.
 - Central Line Infection Working Group. *Member*. 2011.
 - Defibrillator Renewal Working Group. *Member*. 2011.
 - Maternal Emergency Response Post (M2P2). *Member*. 2011.
 - Oncology Perioperative Care Committee. *Member*. 2007 – Present.
 - Operating Room Executive Committee. *Member*. 2007 – Present.
 - Pre-admit Clinic Standardization Team. *Member*. 2007 – Present.
 - Pregnant Patients with Critical Illness Pathway Group. *Member*. 2009 – Present.
 - Process Improvement Review Re: Orders to Report. *Member*. 2012.
- Royal College of Physicians and Surgeons of Canada. Corporate Affairs Committee. *Member*. 2006 – Present.

- Schulich School of Medicine & Dentistry, Western University.
 - Family Medicine Enhanced Skills Program. Mandated Internal Review. *Chair*. 2011.
 - Group for the Advancement of Medical Education Scholarships (GAMES). *Member*. 2003 – Present.
 - Nuclear Medicine Program. Internal Review. *Chair*. 2011.
 - Policy Renewal Committee. *Member*. 2011.
 - Postgraduate Appeals Committee. *Chair*. 2011.
 - Undergraduate/Postgraduate Awards Committee. *Member*. 2012.
- St. Joseph's Health Care London
 - Accreditation/Required Organizational Practices (ROP). Venous Thromboembolism (VTE) Prophylaxis Team. *Member*. 2011 – Present.
 - Diaphragmatic Pacer Implant Process Development Committee. *Member*. 2009 – 2011.
 - Dobutamine Stress Testing Working
 - Implementing Steering Committee for SJHC Transition to an Ambulatory care and Diagnostic Centre. *Member*. 2002 – Present.
 - Medical Emergency Response Committee (MERC). *Member*. 2005 – Present.
 - Medical Emergency Response Sub-committee: Two-tiered response planning. *Chair*. 2011 – Present.
 - Medical Emergency Response Team. *Chair*. 2003 – Present.
 - Operating Room Executive Committee. *Alternate Chair*. 2006 - Present.
 - Perioperative Model of Care Evaluation

Committee. Member. 2004 – Present.

- Perioperative Obtrusive Sleep Apnea Guidelines. *Member*. 2006 – Present.
- Preadmission Improvement Committee. *Member*. 2004 – Present.
- Step-Up Capability Task Team. *Chair*. 2004 – Present.
- Step-Up Milestone 2 Planning Committee. *Member* 2009 – Present.
- Urgent Care Centre Partners Interim Operations Plans. *Member*. 2011.

Granton, Jeff

- Canadian Critical Care Society (CCCS)
 - Education Director and Board Member.
 - *National Anesthesia Representative*. 2004 – Present.
 - Residents Day and Forum. *Co-Chair and Organizer*. 2007 – Present.
- College of Physicians and Surgeons of Ontario. On-site assessor for Adult Critical Care and Anesthesia. 2011
- Critical Care Review Course. Planning Committee. Co-Chair and CCS Representative. 2008 – Present.
- Department of Anesthesia & Perioperative Medicine, Western University.
 - Academic Affairs Committee. *Member*. 2007 – 2011.
 - Department Council. *Member*. 2008 – Present.
- London Health Sciences Centre. Critical Care Division
 - Cardiac Surgery Recovery Unit. *Education Director*.
 - Finance Committee. University Hospital.



Dr. Shalini Dhir

Member. 2006 – Present.

- Quality Improvement Committee: University Hospital. *Chair*. 2006 – Present.
- Resident Training Committee: University Hospital. Member. 2006 – Present.
- London Health Sciences Centre University Hospital
 - Medical/Surgical Intensive Care Unit. Education and Research Committee. *Member*. 2006 – Present.
 - Pulmonary Artery Catheter Use Committee. *Member*. 2006 – Present.
 - Quality Improvement for Medical/Surgical

Intensive Care Unit. University Hospital *Coordinator*. 2005 – Present.

- Transfusion Practices Committee. *Critical Care Representative*. 2006 – Present.
- Royal College of Physicians and Surgeons of Canada
 - Critical Care Speciality Committee. *Committee Member*.
 - Anesthesia Speciality Committee. *Committee Member*.
- Schulich School of Medicine & Dentistry, Western University
- Appeals Committee. Committee Member.

- Critical Care Western Residency Training Committee. *Committee Member*.
- Postgraduate Education Committee. *Committee Member*.

Gros, Michelle

- Department of Anesthesia & Perioperative Medicine, Western University. Quality Assurance Committee. *Member*. 2010 – Present.

Gverdys, Rooney

- The Kuwait Institute of Medical Specialties (KIMS). *Examiner in Anesthesia*. Present.

Harle, Chris

- London Health Sciences Centre. City-wide Perioperative Committee. *Member*.

Herrick, Ian

- Association of Canadian Academic Departments of Anesthesia (ACUDA), Continuing Education and Professional Development Committee. 2008 – Present.
- Department of Anesthesia & Perioperative Medicine, Western University. City-Wide Anesthesia Quality Assurance Committee. Chair. 2008 – Present.
- London Health Sciences Centre (LHSC), Quality and Patient Safety Committee. 2011 – Present.
- Office of the Chief Coroner of Ontario, Patient Safety Review Committee. Toronto, ON. 2007 – Present.
- Schulich School of Medicine & Dentistry, Western University. Continuing Medical Education Advisory Committee (ACCME). 2008 – Present.
- Thames Valley Hospitals. HUGO (Healthcare Undergoing Optimization) Physician Advisory Committee. 2012 – Present.

Hoogstra, Jason

- Department of Anesthesia & Perioperative Medicine, Western University
 - Victoria Hospital, London Health Sciences Centre. City-wide Equipment Co-ordinator. 2011 – Present.
 - Undergraduate *Education Coordinator*. 2007 – Present.
- London District Academy of Medicine. *Vice President*. 2007 – Present.
- London Health Sciences Centre. Anesthesia Technical Advisory Group. *Member*. 2007 – Present.

Jones, Philip

- Anesthesia and Analgesia. *Manuscript Reviewer*. 2011.
- Association of Canadian Departments of Anesthesia (ACUDA): Perioperative Anesthesia Clinical Trials (PACT) Group. *Member*.
- British Journal of Anesthesia. *Manuscript Reviewer*. 2011.
- British Medical Journal. *Manuscript Reviewer*. 2011.
- Canadian Anesthesiologists' Society (CAS)
 - CAS Annual Research Awards. *Grant Reviewer*. 2011.
 - Ethics Committee. *Committee Member*.
 - Research Committee. *Committee Member*.
- Canadian Journal of Anesthesia. *Manuscript Reviewer*. 2011.
- Making a Mark. *Faculty Member*.
- Department of Anesthesia & Perioperative Medicine, Western University
 - Department Council. *Member*. 2008 – Present.

- Finance Management Committee. *Member*. 2009 – Present.
- Journal of Cardiothoracic and Vascular Anesthesia. *Manuscript Reviewer*. 2011.
- Journal of Clinical Anesthesia. *Manuscript Reviewer*. 2011.
- Lippincott Williams and Wilkins. *Manuscript Reviewer*. 2011.
- London Health Sciences Centre
 - City-wide Laser Safety Committee. *Member*. 2004 – Present.
 - Drugs and Therapeutics Committee. *Chair*. 2011 – Present.
 - Medical Leader of Pharmacy. Present.
- Physician Services Incorporated Foundation (PSI Foundation). *Grant Reviewer*. 2011.
- Yonsei Medical Journal. *Manuscript Reviewer*. 2011.

Katsiris, Sandra

- Department of Anesthesia & Perioperative Medicine, Western University.
 - Department Council. *Member*. 2008 – Present.
 - Postgraduate Education Committee. *Member*. 1999 – Present.
- London Health Sciences Centre
 - Birthing Centre Redesign and Alignment Team. *Member*. 2008 – Present.
 - Women's Health Quality Care Committee. *Member*. 2005 – Present.
- London Health Sciences Centre/St. Joseph's Health Care London
 - MORE OB (Managing Obstetrical Risk Efficiently). *Core-Team Member*. 2005 – Present.

- Perinatal Leadership Council. *Member*. 1999 – Present.
- Royal College of Physicians and Surgeons of Canada
 - Education Committee in Anesthesiology. *Member*. 2009 – Present.
 - Examination Board in Anesthesiology. *Chair*. 2011 – Present.

Lavi, Ronit

- Department of Anesthesia & Perioperative Medicine, Western University
 - Quality Assurance Committee. *Member*. 2008 – Present.
 - Research Committee. *Member*. 2011 – Present.
- Hamilton Health Sciences Corporation. The Canadian Network and Centre for Trials Internationally (CANNeCTIN). *Member*. 2009 – Present.
- London Health Sciences Centre. Impella Left Ventricle Assist Device Program. Co-ordinator. 2010 – Present.
- Schulich School of Medicine and Dentistry, Western University. Management Physician Advisory Committee for the Recruitment of Talent and Excellence. *Member*. 2011 – Present.

Martin, Janet

- The Canadian Agency for Drugs and Technologies in Health (CADTH)
 - Canadian Agency for Environmental Scanning in Health (CNESH). *Member*. 2010 – Present.
 - Health Technology Exchange. *Vice Chair*. 2007 – 2012; *Chair*. 2012 – 2014.
- Canadian Society of Hospital Pharmacists. Knowledge Translation Toolkit. *Contributor*. 2010 – Present.

- Health Canada. Health Technology Strategy for Canada (HTS 1.0). *Invited Expert Consult*, 2010 – 2011.
- The International Evidence Based Health Care Conference (www.ebhc.org). *Chair and Organizer*.
- London Health Sciences Centre
 - Bioethics Interest Committee. *Member*. 2005 – Present.
 - Pharmacy and Therapeutics Committee. *Evidence-based Consultant*. 2003 – Present.
 - Strategic Initiative Task Force: Evidence-based Care. *Member*. 2005 – Present.
- Ministry of Health and Long Term Care (MOHLTC)
 - Committee to Evaluate Drugs (CED). *Voting Member and Clinical Reviewer*. 2004 – Present.
 - Rare Diseases Assessment Committee. *Member*. 2008 – Present.
- Ontario Framework for Drugs for Rare Diseases (DRDs). Provincial Policy Development. *Co-Author and Co-Developer*. 2008 – Present.
- Pan-Canadian Health Technology Assessment (HTA) *Collaborative*. *Member*. 2012 – 2013.
- Schulich School of Medicine & Dentistry, Western University. Advisory Committee on CME (ACCME). *Member*. 2003 – Present.
- Ulysses Master of Science in Health Technology Assessment and Management (MSchTA&M), a partnership between University of Toronto, University of Montreal, University of Barcelona, and the Catholic University of Rome. *Faculty and Coordinating Committee Member for Curriculum and Program Oversight*. 2009 – Present.
- World Health Organization (WHO)
 - Priority Setting Criteria for Breast Cancer

Interventions. *Contributor and Delphi Panel Member*. 2011 – Present.

McConachie, Ian

- Canadian Anesthesiologists' Society
 - Abstract Review Committee. *Member*. 2009 – Present.
 - Ambulatory Section. *Chair*. 2008 – Present.
 - Canadian Ambulatory Anesthesia Research and Education (CAARE) Group. *Chair*. 2009 – Present.
- Department of Anesthesia & Perioperative Medicine, Western University
 - Finance Management Committee. *Member*. 2011 – Present.
 - Quality Assurance Committee. *Committee Member*. 2009 – Present.
- London Health Sciences/St. Joseph's Health Care London.
 - Joint Credentials Committee. *Member*. 2011 – Present.
 - Joint Medical Advisory Committee. *Member*. 2010 – Present.
- St. Joseph's Health Care London
 - Hospital Board. *Board Member*. 2011 – Present.
 - Care Committee. *Committee Member*.
 - Governance Committee. *Member*. 2011 July – Present.
 - Professional Staff Organization. *President*. 2011 July – Present.

McNamara, Jeffrey

- London District Academy of Medicine. *Vice President*. 2010 – 2011; *Vice President and Treasurer*. 2011 – Present.

- London Health Sciences Centre.
 - Professional Staff Organization (PSO). Secretary. 2011 – 2012; *Vice President*. 2012 – Present.
 - PSO By-Law Working Group for 2012. *Member*. 2012.
- Schulich School of Medicine & Dentistry, Western University. Selection Committee for the Chief of the Department of Dentistry. *Member*. 2012.

Morley-Forster, Pat

- Canadian Institutes of Health Research (CIHR). Population Health Grants. *Grant Reviewer*. 2011.
- Canadian Journal of Anesthesia. Editorial Board. *Editor*. 2009 – Present.
- Canadian Pain Society. Neuropathic Pain Special Interest Group. *Invited Member*. 2005 – Present.
- Ontario Medical Association (OMA) and the Ministry of Health and Long Term Care (MOHLTC) Chronic Pain Working Group. *Chronic Pain Representative and Invited Member*. 2011 – Present.
- Royal College of Physicians and Surgeons of Canada
 - Pain Medicine Working Group. *Chair*. 2010 – Present.
 - Task Force for the Royal College Accreditation of Pain Medicine as a Subspecialty. *Chair*. 2006 – Present.
- St. Joseph's Health Care London
 - Ambulatory Medicine Shared Leadership Council. *Member*. 2006 – Present.
 - Multidisciplinary Pain Clinic, London, ON. *Medical Director*. 2001 – Present.
 - Pain Clinic Advisory Committee. *Chair*. 2002 – Present.

Murkin, John

- Blood Conservation using Antifibrinolytics in a Randomized Trial (BART) Steering Committee. *Executive Committee Member*. 2008 – Present.
- The Heart Surgery Forum periodical. *Editorial Board Member*. 2009 – Present.
- McMaster Health Research Institute. Coronary Steering Committee. *Member*.
- National Heart, Lung and Blood Institute (NIH). Scientific Advisory Board. *Member*.

Nicolaou, George

- The London & District Academy of Medicine. *Member*. 2005 – Present.
- London Health Sciences Centres. Citywide Perioperative Executive Committee. *Vice Chairman*. 2011 – Present.

Ower, Katherine

- College of Physicians and Surgeons of Ontario. *Medical Inspector*. 2010 – Present.

Railton, Craig

- Canadian Anesthesiologists' Society. Pharmacology Poster Session, Basic and Clinical Science Review Board. *Moderator and Co-Chair*. 2011 – Present.
- Department of Anesthesia & Perioperative Medicine, Western University. Quality Assurance Committee. *Member*. 2009 – Present.
- London Health Sciences Centre
 - The City-Wide Blood Transfusion Committee. *Member*. 2009 – Present.
 - The Drug and Therapeutics Committee. *Member*. 2011 – Present.
 - Victoria Hospital Perioperative Adverse Event Reporting Committee. *Member*. 2009 – Present.
- Schulich School of Medicine & Dentistry,

Western University. Department of Medicine. Clinical Pharmacology Resident Training Committee. *Member*. 2009 – Present.

Ralley, Fiona

- Advisory Board for the Pathogen Inactivation Study Advisory Group (McMaster University). *Member*. October 2010 – Present.
- Canadian Journal of Anesthesia. *Guest Reviewer*. Present.
- Journal of Cardiothoracic and Vascular Anesthesia. Editorial Board. *Editor*. 1997 – Present.
- London Health Sciences Centre
 - City-Wide Blood Transfusion Committee. *Chair*. 2006 – Present.
 - Emergency Blood Management Committee. *Member*. Present.
 - Ontario Nurse Transfusion Coordinators Provincial Blood Conservation Program (ONTraC). *Site Director*.
 - Perioperative Blood Conservation Program. *Director*.
 - Perioperative Blood Conservation Program Committee. *Chair*.
- McMaster Transfusion Research Program. Advisory Committee for the CIHR Grant, "Pathogen inactivated blood products in Canada." *Advisory Member*. 2012.
- Ministry of Health and Long Term Care (MOHLTC). Blood Programs Coordinating Office.
 - Ontario Emergency Blood Management Committee. *Member*. 2008 – Present.
 - MOHLTC EPO Working Group. *Member*. 2008 – Present.
 - MOHLTC Provincial Contingency Planning Working Group. *Member*. 2008 – Present.

- Society for the Advancement of Blood Management (SABM). Board of Directors. *Member*. Present.

Schulz, Valerie

- Associated Medical Services. Long Term Mechanical Ventilation Committee. *Member*. 2010 – Present.
- Canadian Society of Palliative Care Physicians (CSPCP)
 - Educating Future Physicians in Palliative & End of Life Care (EFPPEC). National Committee. *Lead Physician for the Schulich School of Medicine & Dentistry*. 2005 – 2011.
 - Planning Committee. *Board Member*. 2011 – Present.
- Community Care Access Centre London Middlesex (CCACLM) End-of-Life Care Initiative. Southwest LHIN Local EOL Service Delivery Group. *Member*. 2005 – Present.
- Government of Canada. Parliamentary Committee on Palliative and Compassionate Care, "Not To Be Forgotten, Care of Vulnerable Canadians". *Lead Physician*. 2011 – 2012.
- London Health Sciences Centre (LHSC)
 - Bioethics Education and Practice Subcommittee. *Member*. 2008 – 2011.
 - Ethics Education and Practice Subcommittee. *Member*. 2008 – 2011.
 - Humanistic Care Committee: End of Life Resource Team. *Palliative Medicine Representative*. 2008 – 2011.
 - Long Term Mechanical Ventilation Committee. *Member*. 2010 – Present.
 - Palliative Care LHSC Accreditation Committee. *Member*. 2010 – Present.
 - Palliative Care Program Committee. *Member*. 2011 – Present.

- Palliative Recognition and Management Project: Language and Definition Team. *Chair*. 2011 – 2012.
- Strategic Planning for Ethics Retreat. *Member*. 2008 – 2011.
- Royal College of Physicians and Surgeons of Canada
 - Advisory Committee on Palliative Medicine. *Member*. 2010 – Present.
 - Train-the-Trainer (TTT) Focus Group #3, Can Meds. 2010 – Present.
- Schulich School of Medicine & Dentistry, Western University
 - Palliative Care Medical Student Education. *Member*. 2001 – Present.
 - Population Health Course Committee. *Chair*. 2011 – Present.
 - Undergraduate Education Committee. *Member*. 2006 – Present.
- St. Joseph's Health Care London. Palliative Care Recognition and Management Project Policy Forum Team. *Member*. 2011 – Present.

Sharpe, Michael

- Canadian Council for Donation and Transplantation. Steering Committee for Cerebral Blood Flow Studies in Neurological Determination of Death Planning Committee. *Member*. 2005 – Present.
- Canadian Intensive Care Foundation. Ontario Chapter. *Member*. 2000 – Present.
- Critical Care Program Western University
 - Critical Care Joint Council. *Member*. 2006 – Present.
 - Facilities and Technology Core Team. *Member*. 2003 – Present.
 - Organ Donor Management Committee. *Chair*.

2000 – Present.

- Postgraduate Education Committee. *Member*. 1993 – Present.
- London Health Sciences Centre
 - ICU Research Committee. *Research Associate*. 2009 – Present.
 - Respiratory Therapy Program. *Medical Director*. 2000 – Present.
 - Surgery Planning Committee. *Committee Member*. 2009 – Present.
- Province of Ontario Critical Care Strategy. Ministry of Health and Long Term Care (MOHLTC)
 - Critical Care Information System Enhancement Committee. *Member*. 2007 – Present.
 - Critical Strategic Planning and Advisory Committee. *Member*. 2006 – Present.
 - Provincial Long-Term Ventilation Strategy Committee. *Member*. 2007 – Present.
- Royal College of Physicians and Surgeons of Canada
 - Council. *Area Representative, Region 3: Division of Medicine*. 2004 – Present.
 - Governance Review Committee. *Member*. 2006 – Present.
- Trillium Gift of Life Network
 - Critical Care Advisory Board. *Member*. 2002 – Present.
 - Routine Notification and Request (RNR) Steering Committee. *Co-Chair*. 2005 – Present.

Simon, Gary

- London Health Sciences Centre
 - Pediatric Symptom Management and



Supportive Care. *Member*. 2010 – Present.

- Perioperative Blood Conservation Committee. *Member*. 2004 – Present.

Singh, Indu

- Association of Canadian Universities Departments of Anesthesia (ACUDA) Research Group. *Member*. 2003 – Present.
- London Health Sciences Centre
 - Managing Obstetrical Risk Effectively Core Team. *Member*. 2005 – Present.
 - SRTP Advisory Board. *Clinical Member*. 2009 – Present.

- St. Joseph's Health Care London

- Hospital Medication Committee. *Member*. 2003 – Present.
- Pharmacy and Therapeutics Committee. *Member*. 2003 – 2011.
- Quality Assurance Committee. *Member*. 2005 – Present.

Sischek, William

- Department of Anesthesia & Perioperative Medicine, Western University
 - Anesthesia Associates. *Executive*. 2007 – Present.

- Department Council. *Member*. 2007 – Present.
- Finance Management Committee. *Chair*. 2007 – Present.

- London Health Sciences Centre

- Medical Advisory Committee Executive. *Member*. 1999 – Present.
- Medical Advisory Credentials Subcommittee. *Chair*. 2004 – Present.

St-Amand, Marc

- The Royal College of Physicians and Surgeons of Canada: Oral Section of the Royal College Exam Board. *Member*. 2009 – Present.

Taneja, Ravi

- Canadian Anesthesia Fellowship Steering Committee. *Member*. 2009 – Present.
- London Health Sciences Centre
 - CSRU Committee. *Member*. 2009 – Present.
 - ICU Research Committee. *Member*. 2009 – Present.

Teague, Kevin

- Department of Anesthesia & Perioperative Medicine, Western University. Finance Management Committee. *Member*. 2010 – Present.

Turkstra, Tim

- Anesthesia and Analgesia. *Manuscript Reviewer*.
- Canadian Journal of Anesthesia. *Manuscript Reviewer*.
- Schulich School of Medicine & Dentistry, Western University
 - National Curriculum Committee. *Member*.
 - Patient Centered Care and Integration. *Facilitator*. 2010 – Present.

- Southwestern Ontario Anesthesia Airway Conference. *Instructor and Course Organizer*. 2005 – Present.

Watson, James

- Canadian Anesthesiologists' Society. Ontario Division *Representative to the Board*. 2010 – Present.
- College of Physicians and Surgeons of Ontario. *Medical Inspector*. 2012 – Present; *Peer Assessor*. 2000 – Present.
- College of Respiratory Therapists of Ontario. Anesthesia Care Team Provincial Advisory Panel. *Member*. 2007 – Present.
- Department of Anesthesia & Perioperative Medicine. Academic Affairs Committee. *Member*. 1998 – Present.
- Fanshawe Community College, London, ON. Anesthesia Assistants Program. *Medical Director*. 2009 – Present.
- Michener Institute. Anesthesia Assistants Program Advisory Committee, Toronto, ON. *Member*. 2011 – Present.
- London Health Sciences Centre. Anesthesia Assistants Program. *Director*. 2007 – Present.
- Ontario Medical Association
 - Board of Directors. *Board Member*. 1992 – Present.
 - Ministry of Health and Long Term Care. Physicians Services Committee. *Member*. 2001 – Present.
 - Physician Services Incorporated Foundation (PSI Foundation). *Member*. 2000 – Present.
- Ontario Section on Anesthesiology. *Chair*. 2011 – 2012; *Delegate to Council*. 2008 – Present; *Executive*. 2007 – Present

Surgical Centre C1-300

Pre-Admission

Admitting

Surgical Daycare

Lithotripsy



Dr. Collin Clarke

PRESENTATIONS

*See CAS Annual Meeting

Arango, Miguel*

- III Congreso Regionale de Neur anestesia Neurocirugia y Cuicado Neurocritico. Medellin, Colombia. 2011 December. *Moderator*: Epilepsy Poster Sessions
- XXXIII Reunion Annual: Guadalajara, Mexico. 2012 Feb 10. *Invited Lecturer*: Complicaciones Intraoperatorias en Neuroanesthesia; Se Puede Detectar Isquemia Intraoperatoria

en Neuroanesthesia, Eventos Criticos en Recuperacion Postneurocirugia.

- Canadian Surgery Forum. London, ON. 2011 September. *Invited Lecturer*: CRASH 1 & 2: Tranexamic Acid for All.

Dain, Steven

- 56th Ontario Anesthesia Meeting, Sponsored by the Ontario Medical Association and the Canadian Anesthesiologists' Society. Toronto, ON. *Invited Speaker*: Apps for the Smartphone Tablet Computer.

- University of Waterloo: Department of Computer Engineering. Waterloo, ON. 2012 Jun 4. *Visiting Professor*: The Challenges of Medical Device Technology: Design, Usability Standards and Regulations [Lecture].
- Yale University: Faculty of Medicine, Department of Anesthesia; US FDA Center for Devices and Radiological Health. New Haven, CN. 2012 Jul 1. *Visiting Professor*: Ventilator Terminology and Semantics [Lecture].

Cheng, Davy

- 2nd International Congress: Anesthesia for Seniors. Prague, Czechoslovakia. 2012 Jun 7-9. *Invited Lecturer*. TEVAR – Perioperative Management and Outcomes.
- The 7th Biennial CPB Meeting. Kuching, Sarawak, Malaysia. 2012 Jun 28-Jul 1. *Invited Speaker*.
 - Antifibrinolytic: The Aprotinin Story [Lecture].
 - Continuous Quality Improvement in Cardiac Anesthesia and Surgery [Lecture].
 - Knowledge Translation – Bridging the Gap from Knowledge to Practice [Lecture].
- The 15th IACTA Conference. New Delhi, India. 2012 Feb. *Invited Speaker*.
 - Heparin Induced Thrombocytopenia (Case Discussion Panelist).
 - Knowledge Translation: Evidence to Guidelines to Practice – The Road Less Travelled
 - Where Can We Incorporate Recent Literature in Our Clinical Practice – Perioperative Blood Management? [Lecture]
- The 15th WFSA World Congress of Anesthesiologists. Buenos Aires, Argentina. 2012 Mar 25 – 30. *Invited Speaker*: OPCAB Surgery in Elderly Patients: Evidence of Benefits?
- Asian Society of Cardiothoracic Anesthesia (ASCA). Taipei, Taiwan. 2011 Sep 29.
 - *Invited Lecturer*.
 - * Anesthesia Risk and Quality Improvement [Lecture].
 - * The Future of Cardiovascular Anesthesia and Surgery [Lecture].
 - * Knowledge Translation: Bridging the Gap from Knowledge to Practice [Lecture]
 - *Moderator and Session Chair*
 - * CVS Anesthesia and TEE Training in Asia
 - * Hybrid Procedures in Cardiac Surgery
 - * Robotic Surgery and Anesthesia
- International Anesthesia Research Society (IARS). Boston, MA. 2012 May 19-21.
 - *Invited Lecturer*: TEVAR – Perioperative Management and Outcomes (Refresher Course Lecture).
 - *Invited Panel Speaker*: Perioperative Evidence-Based Decision Making and Knowledge Translation.
- ISMICS Annual Meeting 2012. Los Angeles, California. 2012 June 1. *Invited Speaker*: Consensus Statements on TAVI.
- ISMICS Winter Workshop. Xiamen, China. 2011 Nov 9. *Invited Speaker*.
 - ISMICS Consensus Statement Report – Perioperative Blood Management.
 - Thoracic Endovascular Aortic Repair (TEVAR).
- London Health Research Day. London Convention Centre, London, ON. 2012 Mar 20. Judge.
- King Fahad Arms Force Hospital: Department of Cardiac Surgery. Jeddah, Saudi Arabia. 2011 Dec 07. Visiting Professor.
 - Anesthesia Risks and Complications [Lecture]
 - Perioperative Blood Management – ISMICS Consensus Statements. [Lecture]

- Perioperative Myocardial Ischemia [Lecture]
- New York Mount Sinai Hospital: 30th Annual Symposium, Clinical Update in Anesthesiology, Surgery, and Perioperative Medicine. Rio Grande, Puerto Rico. 2012 Jan 15-20.
 - Best Practice in Cardiac Surgery and Anesthesia (Panelist).
 - The History of Cardiac Anesthesiology (Special Lecture).
 - Knowledge Translation: New Evidence Impacting Your Practice [Lecture].
- ONTrac Meeting. Toronto, ON. Invited Speaker: Consensus Guidelines of Blood Management in Cardiac Surgery.
- Richard Ivey School of Business: The Medical Technology Innovation Conference. Western University, London, ON. 2011 June 10. Panel Chair: The Pathway to Medical Technology Adoption.
- Society for Cardiothoracic Surgery in Great Britain and Ireland, and the ACTA Joint Symposium. Manchester, UK. 2012 Apr 18-20. *Invited Speaker.*
 - Anesthesia Educational Stream: Anticoagulation/Bleeding in Cardiac: Management of HIT Patients in Cardiac Surgery [Lecture].
 - Cardiac Surgery Stream: Anesthetic Implications in Minimally Invasive Mitral Valve Surgery [Lecture].
 - Surgery Educational Stream: Optimal Management in Shifting Sands: Perioperative Blood Management in Cardiac Surgery: Drugs, Techniques and Procedures [Lecture].
- Society for Cardiovascular Anesthesiologists (SCA): 34th Annual Meeting. Boston, MA. 2012 April 28 – May 2. *Invited Speaker.*
 - Does Ultrafiltration Reduce Blood Loss and Improve Clinical Outcomes in Cardiac Surgery? A Meta-analysis of Clinical Trials (Poster Presentation).
- Knowledge Translation – Practicing Perioperative Evidence-Based Decision Making [Lecture]
- Uncontrolled Bleeding After Cardiac Surgery: Risk Factors and Management Strategies [Lecture]
- Weill Cornell Medical College: Department of Anesthesia. New York, NY. 2011 Nov 14. Visiting Professorship
 - Knowledge Translation: Bridging the Gap from Knowledge to Practice (Grand Rounds Lecture)
 - Perioperative Assessment of Cardiac Risk for Non-cardiac Surgery: What is in, what is out? (Residents' Lecture)
 - Perioperative Blood Management in Cardiac Surgery and Consensus Statements 2011 (Cardiac Surgery Grand Rounds).

Railton, Craig*

Western University: Department of Clinical Neurological Sciences, Division of Neurology and Pain. London, ON. 2011 Sep 28. Invited Lecturer: Pain: Looking through the Pharmacogenetic Key-hole.

*CANADIAN ANESTHESIOLOGISTS' SOCIETY (CAS) ANNUAL MEETING: QUEBEC CITY, QC. 2012 JUNE 15-18.

- Track: Airway Management, Equipment/Monitoring
 - Workshop: Hands-on Video Laryngoscopy Workshop.
Tim Turkstra [Instructor]
- Track: Ambulatory
 - Case Discussion: *If Looks Could Kill – Anesthesia for Cosmetic Surgery*
Ian McConachie [Presenter]
 - Poster Discussion 7
Ian McConachie [Co-Chair]
- Track: Neuroanesthesia, Critical Care Medicine and Trauma, Perioperative Medicine
 - Case Discussion: *Emergency Orthopedic Surgery in a Patient with a Recent Cerebrovascular Accident.*
Miguel Arango [Presenter]
- Track: Perioperative
 - Case Discussion: *My Second Patient for Hip Replacement in 3 Years Post-Liver Transplant – What Should I Do?*
Wojciech Dobkowski [Chair]
Achal Dhir [Presenter]
- Track: Regional and Acute Pain
 - Refresher Course: *The Big Freeze: Intravenous Lidocaine Infusion*
Ian McConachie [Presenter]
 - Poster Discussion 6
Shalini Dhir [Co-Chair]
 - Symposium: *Best Block for Lower Limb Surgery*
Dr. Indu Singh [Chair]
Jonathan Brookes [Presenter].
 - Symposium: *Reducing Risks in Regional Anesthesia*
Shalini Dhir [Co-Chair]
 - Symposium: *Regional Anesthesia for Children*
Shalini Dhir [Chair]
 - Workshop: *Ultrasound-guided Regional Anesthesia: Advanced Lower Limb*

Jonathan Brookes [Instructor].

- Workshop: *Ultrasound-guided Regional Anesthesia: Advanced Torso*
Shalini Dhir [Instructor].
- Workshop: *Ultrasound-guided Regional Anesthesia: Basic Upper Limb*
Indu Singh [Instructor].

- Chronic Pain Management Breakfast: Frontiers in Pain Education.
 - *The New RCPSC Sub-specialty, and the Academic Pain Directors of Canada.*
Pat Morley-Forster [Invited Speaker].

Poster Discussions

- Ambulatory
 - *The Anesthetic That Broke My Heart: Cardiac Arrest Upon Induction of Anesthesia of an Otherwise Healthy Young Female.*
Jennifer Raccine [Presenter]; Craig Railton [Co-Author].
 - *Cricothyroid Membrane Assessment Feasibility by Ultrasound*
Matthew McFarling [Presenter]; Ronit Lavi, Jennifer M Racine, Daniel Bainbridge, Peter Mack, Ivan Iglesias [Co-Authors]
 - *Effectiveness of a Perioperative Smoking Cessation Program: a Randomized Controlled Trial*
Susan Lee [Presenter]; Phil Jones, Pat Morley-Forster, Jennifer Landry, Ozzie Buhrmann [Co-Authors]
 - *Effect of Marginal Donor Criteria on Liver Transplantation Outcomes in Canadian System*
Raviraj Raveendran [Presenter]; Achal Dhir, Fiona Ralley, Debashis Roy, Chris Harle, Anthony Vannelli, Wojciech Dobkowski [Co-Authors]
 - *Intra-operative TEE, Isoprotenerol and Multidisciplinary Collaboration in the Surgical Correction of HCM*
James Riddell [Presenter]; David McCarty,

- Linrui Guo, Ronit Lavi [Co-Authors]
- *Up-take of Topical 10% Ketamine Gel Over 7 Days: A Pilot Study*
Pat Morley-Forster [Presenter]; Rajarathinam Manikandan, Craig Railton, Bradley Urquhart, David Freeman
 - Cardiovascular and Thoracic
 - *Near-infrared Spectroscopy and Vascular Occlusion Test During Cardiopulmonary Bypass: A Pilot Study*
Ryan Smith [Presenter]; John Murkin [Co-Author]
 - Education and Simulation in Anesthesia
 - *Educating Anesthesia Residents to Obtain and Document Informed Consent for Epidural Labour Analgesia: Does Simulation Play a Role?*
Richard Cherry [Presenter]; Kristine Marmai, Indu Singh, Phil Jones, Andreas Antoniou [Co-Authors]
 - Obstetric
 - *The Analgesic Efficacy of Tap Blocks After Cesarean Deliveries: A Systematic Review*
Kamal Kumar [Presenter]; Indu Singh, Phil Jones, Angela Kolesnichenko [Co-Authors]

Hospital	Approximate number of Anesthetic Procedures Per Year/Per Patient Group						
	Adult Surgical	Pediatrics	Obstetrical	Cardiac	Major Vascular Surgery	Thoracic	Neurosurgical
Victoria Hospital	10,500	5,100	5,350	2	686	666	267 (154/Pediatric)
University Hospital	6,362	150	1	1,380	2	2	1,116 (3/Pediatric)
St. Joseph's Health Care London	17,300	0	0	0	0	0	0
Totals	34,162	5,250	5,351	1,381	688	668	1,057

Hospital	Technical Procedures				
	General Anesthetics	Nerve Blocks			OR, Sedation Only
		Epidural/Spinal	Regional	Pain-Control (non-epidural catheters)	
Victoria Hospital (non-OB)	14,100	400	10	0	120
Victoria Hospital (OB)	150	5,200	0	0	0
University Hospital	7,500	800	410	365	500
St. Joseph's Health Care London	9,500	90	1,580	273	5,576
Totals	31,250	6,490	1,990	638	6,196

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