

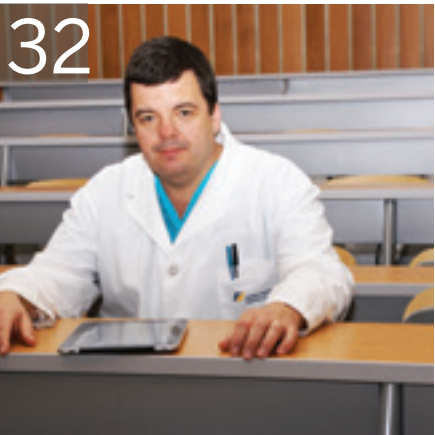
# THE DEPARTMENT OF ANESTHESIA & PERIOPERATIVE MEDICINE

ANNUAL REPORT 2012-13



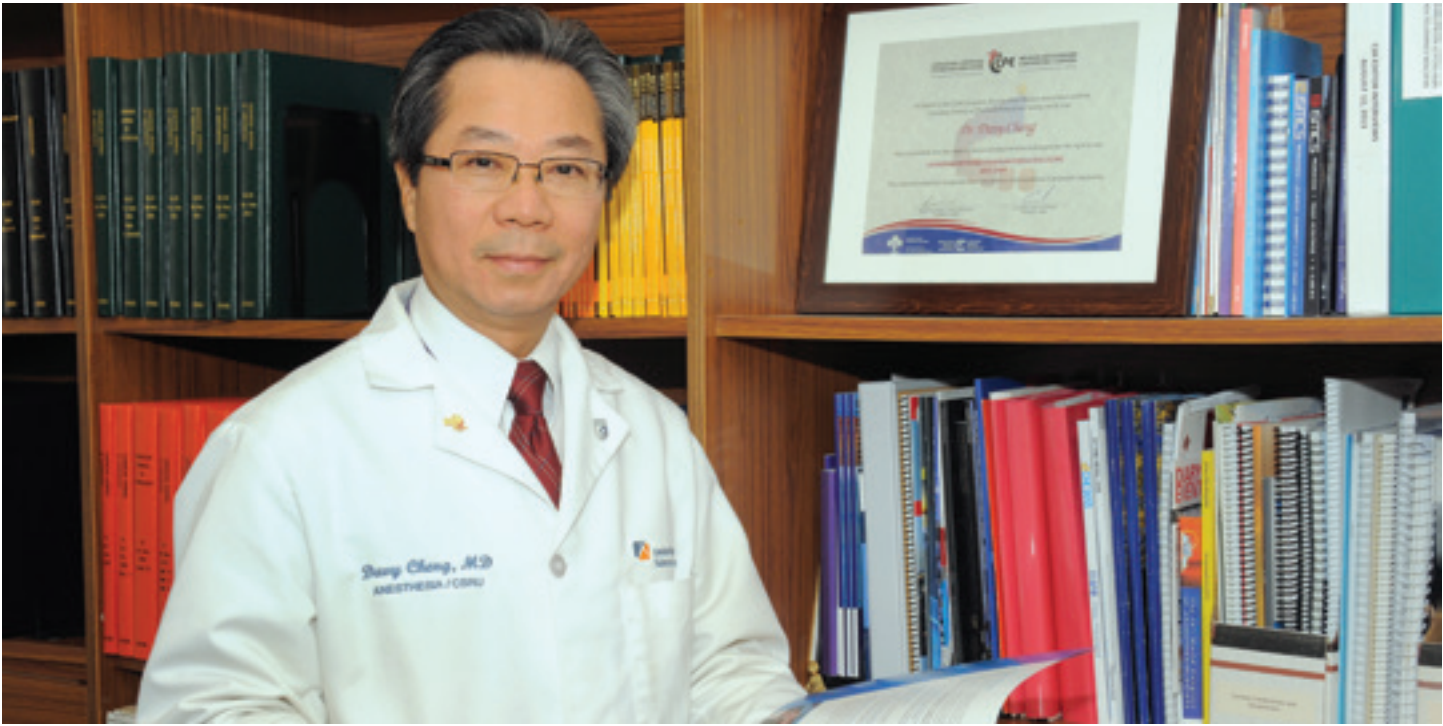
Our vision & mission is to be an internationally acclaimed academic department in anesthesia, pain, and critical care. We strive to provide exemplary best-practice patient care and foster excellence in anesthesia delivery, research and education at the undergraduate, and postgraduate levels, and in continuing medical education at the regional, national, and international levels.

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# Message from the Department Chair and Chief



Welcome to the Department of Anesthesia & Perioperative Medicine at the Schulich School of Medicine & Dentistry, Western University. Our Department provides clinical service to over 40 operating rooms daily 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 Department is amongst the top five academic anesthesiology departments in Canada and has an international reputation for academic excellence in Research and Education.

## Our 80 faculty, 46 residents and 12 clinical fellows are committed to patient-centered quality care.

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 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 peer-reviewed grants and publications continue to grow in our Department.

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 has been recognized nationally and internationally.

They have been awarded Canadian Anesthesiologists’ Society CAS Gold Medal (Wojciech Dobkowski, Patricia Morley-Forster), CAS Research Recognition Awards (John Murkin, Davy Cheng), CAS Clinical Teacher Award (John Fuller), CAS John Bradley Young Educator Award (Jeff Granton), CAS Research Awards (Daniel Bainbridge, Ronit Lavi, Collin Clarke), Member Appreciation Award of the Canadian Standard’s Association (Steven Dain), YWCA Women of Distinction Award (Su Ganapathy), the Hind Ratten Award (Jewel of India) (Achal Dhir), Western Silcox-Fellow Mentorship Award (Ivan Iglesias). Faculty who has been inducted as Fellow of the Royal College of Anaesthetists in Ireland (John Murkin), the Canadian Academy of Health Sciences (Davy Cheng), honored with an Outstanding Contribution Award for Chinese Anesthesiology in China (Davy Cheng), and honored with CCPE Credentials (Davy Cheng) by the Canadian Medical Association (CMA) and the Canadian Society of Physician Executives (CSPE). They have been elected as Board of Trustee in the International Anesthesia Research Society (Davy Cheng), Board of Director in the Society of Cardiovascular Anesthesiologists (Davy Cheng), NIH Protocol Review Committee (John Murkin), Chair of 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), OMA Honor of Excellence in Palliative Care (Valerie Schulz), LHIN Regional Critical Care Lead (Michael Sharpe),

SJHC London MAC Award (Bill Sischek) and Joint LHSC/SJHC MAC Award (Davy Cheng). 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 pen white papers to the Canadian Parliamentary Committee on Palliative and Compassionate Care (Valerie Schulz) and on Health Technology Assessment in Canada (Janet Martin). Our faculty (Brian Church) serves in the NATO Role 3 Multinational Medical Unit which was awarded the Dominique-Jean Larrey Award, the highest NATO honor for medical achievements in Afghanistan with its highest survival rate in combat medical operation.

### FACULTY RECRUITMENT & PROMOTION

Congratulations to Dr. Alexander Briskin, Dr. Brian Church, Dr. Kate Ower, and Dr. Maxim Rachinsky who were promoted to the rank of Associate Professor with Continuing Appointment in the Provost stream, effective July 1, 2012 and to Dr. Pat Morley-Forster who was promoted to Professor.

Our Department is pleased to welcome two new faculty members who joined the Department in the 2012-13 academic year. Dr. Jonathan Brookes was appointed as an Assistant Professor in August 2012, following completion of over two years as a Clinical Fellow in our Department. His area of specialization is Regional Anesthesia. His previous education and training took place in UK. In September 2012, Dr. Ramiro Arellano joined our Department as an Associate Professor. He brings much experience from his previous appointments at University of Toronto, Queen’s University and Dalhousie, and has significant expertise in TEE. He is an excellent educator and researcher.

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 whole-heartedly want to congratulate all those whose contributions made this possible.

Best Regards,



**DAVY CHENG, MD MSC FRCPC FCAHS CCPE**  
DISTINGUISHED UNIVERSITY PROFESSOR, CHAIR & CHIEF  
DEPT OF ANESTHESIA & PERIOPERATIVE MEDICINE  
PROFESSOR, CRITICAL CARE MEDICINE  
WESTERN UNIVERSITY, LONDON, CANADA



# Clinical Leadership

## Dr. Bill Sischek, City-wide Clinical Coordintor



The Department of Anesthesia and Perioperative Medicine has seen a year of clinical growth and expansion in 2012-13. We are pleased to have had Dr. Ramiro Arellano and Dr. Jonathan Brookes join us during this past year to enhance and broaden the skill sets of our consultant staff. With their addition we now number 80 consultant staff in the clinical department. Our academic programs continue to attract high calibre fellows from around the world to further their training at Western University, with a total of 12 fellows in 2013.

This past year has seen the continuation of the final phase of the hospital restructuring plan which began more than ten years ago in London. The final renovations to the Victoria Hospital London Health Sciences Centre (LHSC) are well underway with a projected completion time of fall 2014. In anticipation of the expanded operating room (OR) facilities, as well as ongoing growth in out-of-OR service activity, the Department is actively recruiting new staff. Three new recruited consultant staff joined us in the fall of 2013, as well as five anticipated to be recruited by the summer of 2014. The expanded numbers of staff and operating rooms means we will be in a position to implement the increased number of shorter elective operating lists which was identified as a key initiative in 2011.

The renovations to the University Hospital LHSC office space will help to accommodate the growing number of staff when new office construction is completed. With the increased staff, there is also the need to address the integration of administrative staff support city wide as well. This has all translated into further increased integration of the multiple sites we service.

The city of London hospitals continue to evolve to improve patient care and as they do we see ever increasing demands for anesthesia services. The diversity of out-of OR commitments now include endoscopy, a broad range of pediatric services, interventional radiology, diagnostic imaging and research related projects. In the near future we are looking to expand into the new Schulich School of Medicine & Dentistry dental procedures which are anticipated to address the growing pressures for dental work and training in outpatient anesthesia.

2012/13 was another successful year for the Department and we look forward to all that 2013/14 has to offer.

80

CLINICAL  
CONSULTANT STAFF



12

CLINICAL FELLOWS

46

RESIDENTS

### DEPARTMENT ORGANIZATION

#### 2012-2013

##### Executive

DAVY CHENG, CHAIR/CHIEF

WILLIAM SISCHECK, ST. JOSEPHS HEALTH CARE LONDON SITE CHIEF, AND CITY-WIDE COORDINATOR

CHRISTOPHER HARLE, UNIVERSITY HOSPITAL SITE CHIEF

GEORGE NICOLAOU, VICTORIA HOSPITAL SITE CHIEF

LOIS HAYTER, ADMINISTRATIVE OFFICER

##### Department Council

Davy Cheng (Chair)

Christopher Harle

George Nicolaou

Ivan Iglesias

Jeff Granton

John Murkin

Kevin Armstrong

Michael Currin (Elected Rep.)

Philip Jones (Elected Rep.)

Ron Butler

Sandra Katsiris (Elected Rep.)

William Sischek

##### Academic Affairs Committee

Kevin Armstrong (Chair)

Collin Clarke

Davy Cheng

Fiona Ralley

Geoff Bellingham

Ramiro Arellano

Sandra Katsiris

##### Undergraduate

Ivan Iglesias, Director

Pravin Batohi, SJHC Coordinator

Michelle Gros, VH Coordinator

Peter Mack, UH Coordinator

##### Postgraduate

Jeff Granton, Program Director

Davy Cheng, Chair

Arif Al-Areibi, Associate Program Director

Sean Loughheed, Chief Resident

Rosemary Craen, UH Site Coordinator

Pod Armstrong, SJH Site Coordinator

Kevin Teague, VH Site Coordinator

Indu Singh, Research Coordinator

Richard Cherry, IT and Simulation Director

Colin Phillips, Resident Rep

Nicole Quigley, Resident Rep

Sarah Ashton, Enhanced Skills Rep

Linda Szabo, Administrator

Nicole Campbell, Community (St. Thomas) and SWOMEN Rep

Daniel Grushka, Enhanced Skills/ Family Medicine Program Director

##### Continuing Medical Education

Ian Herrick, Chair

Erin Cecchini

##### Fellowship

Miguel Arango, Director and Neuroanesthesia

Achal Dhir, Liver Transplant

George Nicolaou, Thoracic and Vascular Anesthesia

Indu Singh, Obstetric Anesthesia

Pat Morley-Forster, Chronic Pain

Ramiro Arellano, Cardiac Anesthesia

Richard Cherry, Simulation

Sugantha Ganapathy, Regional Anesthesia

##### Cardiac Surgery Recovery (CSRU) Consultants

Ron Butler (Director)

Daniel Bainbridge

Davy Cheng

Jeff Granton

Philip Jones

##### Research Committee

John Murkin (chair)

Daniel Bainbridge

Davy Cheng

Richard Cherry

Collin Clarke

Philip Jones

Craig Rallton

Indu Singh

Timothy Turkstra

Ronit Lavi

Erin Cecchini

##### AAPP Finance Management Committee

William Sischek (Chair)

Chris Harle

Davy Cheng

Ian McConachie

Kevin Teague

Lois Hayter

Philip Jones

Sandra Silverthorn

Wojciech Dobkowski

##### Anesthesia Quality Assurance, City-wide

Ian Herrick, Director

Geoff Bellingham (SJHC)

Indu Singh (SJHC)

Steven Dain (UH)

Michelle Gros (VH)

Christopher Harle (Site Chief Rep.)

Ronit Lavi (UH)

Craig Rallton (VH)

Rebecca Ashcroft (Anesthesia Resident)

Magdalena Terlecki

Anne Marie McIlmoyle (Director, Perioperative Services, SJHC)

Silvie Crawford (VP, Patient Centred Care, LHSC)

##### Site Rounds Coordinators

Achal Dhir (UH)

Gary Simon (VH)

Paidrig Armstrong (SJHC)

Shalini Dhir (Regional)

##### Equipment

Jason Hoogstra

##### Journal Club Covenors

Philip Jones

Timothy Turkstra

##### Administrative Support Staff

Andrea Fragassi

Barbara Callam

Brie McConnell

Cathy Pollard

Cathy Worsfold

Christina White

Erin Cecchini

Jamie Allaer

Jessica Moodie

Julie Anderson

Kathy Bilton

Kim Harrison

Linda Gibson

Linda Szabo

Lynn Hinchcliffe

Marilyn Twiddy

Ola Bienkowski

Shannon McConnell

Val Rapson



# Clinical Statistics



Adult Day/InPatient	LHSC University Hospital			LHSC Victoria Hospital		Pediatric Day/InPatient	St. Joseph's Health Care London	
General Surgery	1783			3268	926		378	
Cardiac	1418			02	--		--	
Dental	184			557	304		74	
Neurologic	1208			247	131		--	
Obstetric and Gynecologic	02			3281	--		295	
Ophthalmologic	--			290	271		2256	
							2912	Cataract Suite
Orthopedic	3887			2677	937		814	
Otolaryngologic	394			1692	712		307	
Plastic	426			866	261		441	
Thoracic and Vascular	03			1664	05		--	
Urologic	501			834	219		570	
							448	Litho
Total Surgical Procedures Requiring Anesthesia/Analgesia	9,806			15,378	3,766		8,495	
Grand Total for 2012/13 Academic Year	37,445							

# Clinical Sites: Reports from the Site Chiefs

Victoria Hospital, London Health Sciences Centre (LHSC), University Hospital LHSC, and St. Joseph's Health Care London

## VICTORIA HOSPITAL, LONDON HEALTH SCIENCES CENTRE (LHSC)

DR. GEORGE NICOLAOU, SITE CHIEF

The Department of Anesthesia and Perioperative Medicine at the Victoria Hospital, provides clinical service for vascular, thoracic, orthopaedic (trauma and spine), plastic (including craniofacial), ENT, urologic, oncologic, general surgical, robotic, and pediatric (ENT, general, thoracic, urologic, neurosurgical and plastic) surgery.

Our 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.

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' procedures 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.

The operating suites at Victoria Hospital are undergoing major renovations and reconstruction. When completed there will be

eighteen state of the art Operating Suites equipped with the latest anesthesia and surgical technological advances.

## ANESTHESIA RESOURCES

The Anesthesia office space continues to be modernized with updated computer equipment, as well as an up to date medical library, and a formal classroom/team room that utilizes 'smart-board' technology.

## THORACIC/VASCULAR ANESTHESIA

Both thoracic and vascular subspecialties have flourished and remain popular as resident rotations and as fellowship training programs. Vascular surgery at Victoria Hospital 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 procedures. Several recent clinical research projects in these subspecialties have been completed, and others involving Video Assisted Thoracic Surgery (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 pediatric division is under the guidance of Dr. Mohamad Ahmad, with program direction from members of the Pediatric Anesthesia Subspecialty Group.

It currently support three dedicated pediatric surgery operating rooms on a daily basis. In addition, this is 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 in the ward for pediatric patients with epidurals is both offered and supported. We are also in the process of developing a pediatric, multi-disciplinary chronic pain program for residents. Interested staff continue to



participate in the nationwide telemedicine conferences hosted by the Hospital for Sick Children, Toronto, ON.

**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 at Victoria Hospital in London, the volume of births in this level 3 unit has increased 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 Assistant 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 multi-disciplinary pain program is well established and continues to expand. We have recruited two new nurse practitioners to help with all aspects of pain including research and opioid addiction. A pain database has been developed for recording patient data, which can be used for research purposes. Our interventional pain management program is well established and has expanded to include pediatric patients.

**ST. JOSEPH'S HEALTH CARE LONDON**

**DR. WILLIAM SISCHEK, SITE CHIEF**

St. Joseph's Health Care London (St. Joseph's) continues to serve the population of Southwestern Ontario and beyond with a wide array of ambulatory and short-stay surgical procedures. St. Joseph's is home to the recently named Roth McFarlane Hand and Upper Limb Centre, as well as the Ivey Eye Institute, and also supports minimally invasive surgery for urology, gynecology and general surgery.

The Department of Anesthesia and Perioperative Medicine is pleased with the growth of the Regional Anesthesia program at St. Joseph's as well as the integration of the newly formed Comprehensive Pain Management Program (CPMP). The CPMP is intended to coordinate the care of a diverse group of patients by bringing together the Acute Pain, Regional, Chronic Pain and Palliative Care pain groups. While the CPMP has a city wide presence, the new Royal College Chronic Pain fellowship, which is slated to begin summer 2014, will be sited primarily at St. Joseph's and will form a significant component of training and work there.

As in the past two years, the ambulatory care programs have continued to evolve and are pushing the boundaries for short stay surgery. This past year saw the first of our 23 hour stay robotic, minimally invasive radical prostatectomy procedures. New and innovative surgical approaches to disease have mandated an equally assertive anesthetic management to help meet the ever changing needs of the surgical population. Our department strives to make patient care "goals" standards. With 11 700 surgical procedures in our operating rooms and over 4400 procedures in our cataract suites we have a wealth of opportunities to excel!

**UNIVERSITY HOSPITAL, LHSC**

**DR. CHRIS HARLE, SITE CHIEF**

The University Hospital is a major quaternary referral center and teaching facility within the University of Western Ontario. We provide anesthesia for cardiac surgery, neurosurgery, general surgery, orthopedic surgery, sports medicine, plastic surgery, urological surgery and ear nose and throat surgery. We are a major transplantation center, and service cardiac transplantation, liver transplantation and kidney and pancreas transplantation. We are actively involved in the provision of anesthetic support for procedures in the interventional radiology suite, the cardiac catheter labs 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 a flourishing regional anesthesia program and acute pain service. We have a dedicated 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 an active Neuro-surgical program and we provide anesthesia for innovative neurosurgical techniques including major epilepsy surgery as well as for device implants for patients with movement disorders and chronic pain.

At present we have 16 fully operational operating rooms, and have

excellent facilities for minimally invasive and robotic procedures. 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 pleased to welcome our fourth full time Anesthesia Assistant, and look forward to recruiting more.

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



# Quality Assurance

**DR. IAN HERRICK, QUALITY ASSURANCE COMMITTEE CHAIR**

The Department of Anesthesia and Perioperative Medicine has an established tradition of high quality care. To compliment the key role of the individual practitioner in the provision of quality care, the Department has an established quality assurance program and multidisciplinary Quality Assurance (QA) Committee with the following mandate:

To assist the Chief/Chair and the 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 post hoc systematic review of critical incidents and events impacting of 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. Erin Cecchini. Data management was provided by Dr. Magda Terlecki.

**HIGHLIGHTS FOR 2012-13**

**CLINICAL AUDIT**

The QA Committee monitors departmental performance across several surveillance indicators and various clinical audit activities. Over the past year, projects have focused on:

- i) review and realignment of surveillance indicators to enhance focus on anesthesia care.
- ii) completed an analysis of surveillance indicator performance for past two years.
- iii) audited anesthetic record quality.

**RESEARCH**

The Committee, through a working group, has completed work on a policy-initiative focused on perioperative care for patients with sleep apnea.

# Education Programs

Postgraduate, Undergraduate, and Continuing Medical Education; and Fellowship



Linda Szabo, Postgraduate Education Coordinator

## POSTGRADUATE EDUCATION

### DR. JEFF GRANTON, DIRECTOR

The past academic year has been another successful one for the Anesthesia Residency Training at the Schulich School of Medicine & Dentistry. Our program in 2012-13 included forty three residents in the Royal College of Physicians and Surgeons program and one resident in the Family Medicine/Anesthesia Enhanced Skills Program. We are also very proud to continue the training of Physician Assistants from the Canadian Forces.

This past academic year included a scheduled accreditation visit from the Royal College of Physicians and Surgeons. Our Residency Training Programs came through this visit with very positive feedback from the site accreditors. The final report provided in January 2013 provided our program with full accreditation and mentioned a long list of strengths.

The clinical services at London Health Sciences Centre and St. Joseph’s Health Care span the spectrum of primary to tertiary surgical and medical care.

This gives our anesthesia trainees the opportunity 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	VACULAR ANESTHESIA

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



Adrian Vethanayagam, PGY5

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. The purchase of a new, state of the art, simulator this past year has only served to strengthen the program further.

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 RESEARCH

### DR. INDU SINGH, DIRECTOR

The McMaster-Western Anesthesia Resident Reserach Day, is an annual event, hosted every other year at Western University. This year’s Resident Research Day was hosted by McMaster University’s Department of Anesthesia on June 13, 2013. Residents from both universities presented their research at this all day event. Case

reports, pilot studies, and randomized clinical trials were presented. Residents were encouraged to ask questions of their peer presenters to further their knowledge of the subject matter as well as evaluate the research methods of the projects presented. Prizes were awarded to the top presenters.

Western Resident presentations were the following:

Colin Phillips. Laparoscopic Surgery in a Patient with Fontan Circulation and Liver Cirrhosis

Farah Manji. A Foray into Undergraduate Medical Education: A New Course about Canada’s Health Care System

Fiorenzo Cusano & Jason Fridfinnson. Comparison of Early Endotracheal Tube Insertion with Glidescope Use. Awarded 3rd prize.

Matthew Banasch. Gastric Ultrasound: An Update of the “Wave” of Tomorrow

Melissa Chin. A Case of Unexpected Intraoperative Bilateral Jugular Vein Resection and Its Anesthetic Management

Samer Al-Ghazaly. Incidence and Transesophageal Echocardiography Predictors of Dynamic Left-Ventricular Outflow Tract Obstruction during Orthotoic Liver Transplantation: A Pilot Study



IN CLOSING

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.

At the conclusion of this academic year Drs. Katsiris, Gverzdys and Soderman have stepped down from the PGE Committee. All have provided outstanding leadership and dedication to the committee and department over the years.

2012 -13 PGE COMMITTEE

- Jeff Granton – Program Director
- Davy Cheng – Chair of Department of Anesthesia and Perioperative Medicine
- Sandra Katsiris – Associate Program Director
- Arif Al-Areibi – Academic Half Day Coordinator
- Jennifer Landry – Co-Chief Resident
- James Riddell – Co-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
- Colin Phillips – Resident Representative
- Farah Manji – Resident Representative
- Bart Mysliwicz – Enhanced Skills Representative
- Linda Szabo - Administrator



Dr. Andre Gauthier

IN MEMORIAM

DR. ANDRE GAUTHIER

It is with sadness that we remember the loss of Dr. Andre Gauthier in July 2012. Andre was a senior anesthesia resident and a highly respected physician within the Department of Anesthesia and Perioperative Medicine at the Schulich School of Medicine & Dentistry.

He will certainly be missed by all who had the good fortune to work alongside him in the operating room, critical care units, wards and clinics

UNDERGRADUATE EDUCATION

DR. MICHELLE GROS, DIRECTOR AS OF 2013 JULY

Anesthesia is a mandatory 2 week core rotation that all third year medical students complete as part of their surgery block at Western. Six students are on Anesthesia at any one time in the city. In the past, 2 students would each be assigned to 1 of the 3 teaching hospitals in London. This past year, we have increased the flexibility, so that the students spend time at more than one hospital. This allows the students a better exposure to the wide variety of anesthetics delivered across the city.

Students spend each day of their rotation assigned to a staff supervisor, where they receive one-on-one teaching.

This past year, we have also been linking each student to 2 staff members for their rotation. This has greatly improved the continuity of teaching that the students receive.

An updated medical student handbook was purchased for our department this year.

Each medical student rotating through is given this book and encouraged to read it during their rotation

Another welcome addition to the Anesthesia rotation is Anesthesia Bootcamp in the simulator. Each group of students gets to spend the first day of their 2 week rotation in the simulator with a simulation fellow, and/or staff anesthetist. They learn some basic skills and knowledge, so that when they come to the operating room, they feel more comfortable. Some of the things that they are taught include preoperative assessments, the anesthesia machine and monitoring, airway management, and drug administration. They then have the opportunity to run through some case-based scenarios. The students evaluate this very highly, and state that it eases the transition into the operating room.

We also have a significant number of Western and visiting elective students from Canada and abroad that rotate through the Anesthesia program. They are given the opportunity to meet with the program director to discuss the program at Western during their rotation.

CONTINUING MEDICAL EDUCATION

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 (CME) Program supports a variety of high quality



Dr. Michelle Gros, UGE Director as of 07/2013

continuing education events aimed at practicing anesthesiologists and affiliated health care professionals. Current activities include departmental rounds (held as monthly city-wide forums across 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.).

The CME Program benefited substantially in 2012-13 with the addition of Erin Cecchini as Program Coordinator.

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. M. Shazam Hussain – an internationally distinguished academic neuroradiologist in the field of vascular neurology – as our Aitken Lecturer, held jointly with the Department of Neurosurgery.

Several projects have been undertaken by the CME work group in 2012/13, including an internal audit and accreditation renewal of ongoing Departmental CME events with the Royal College of Physicians and Surgeons of Canada; creation of a self-approved events database and internal registration process for new CME events; and the coordination of a videoconferencing platform that enables the broadcast of rounds events to remote locations across the city.



CME Activities and Events, the year in review

CITY-WIDE ROUNDS – 2012/2013

September 19, 2012

Speaker: Dr. Mohamed Ahmad, Anesthesia and Perioperative Medicine

Title: Anesthesiology in Pediatric to Adult Transitional Care

October 31, 2012

Speaker: Norma Colenutt, Pyxis Products

Title: Pyxis Workflow Meeting

November 21, 2012

Speaker: Dr. Chris Lewis, Physician Executive, Cerner Consulting

Andrew Nemirovsky, Physician Information Specialist, HUGO

Title: HUGO Process Update for Anesthesiologists

December 5, 2012

Speaker: Dr. Nicolai Goettel, Anesthesiologist and Critical Care Specialist, Emergency Medicine

Clinical/Research Fellow, Department of Anesthesia, University of Toronto

Title: Innovation in Neuroanesthesia and Neurosurgical Pathways



Dr. Kate Ower

January 16, 2013

Speaker: Dr. Janet Martin and Dr. Davy Cheng, Anesthesia and Perioperative Medicine

Title: Colloids vs. Crystalloids for Surgical and ICU Patients: Which is Best?

April 17, 2013

Speaker: Dr. Davy Cheng, Anesthesia and Perioperative Medicine

Title: Health Technology Assessment & Knowledge Translation: Evidence to Guidelines to Practice: The Road Less Traveled

June 19, 2013

Speaker: Dr. Magda Terlecki and Dr. Ian Herrick, Anesthesia and Perioperative Medicine

Title: Quality Assurance Update: QA Indicator Review 2011-2013

PERIOPERATIVE ROUNDS – 2011/2012

October 17, 2012

Speaker: Dr. Jennifer Barr, Psychiatry

Dr. Kevin Teague, Anesthesia and Perioperative Medicine

Title: Postoperative Delirium – The Brain's Failure

January 23, 2013

Speaker: Dr. Robert Stodilka, Radiation Safety Officer

Title: Radiation Safety Awareness for Operating Room Staff

Speaker: Ben Reyes, Radiation Safety Officer

Title: London Hospitals Radiation Safety Program and X-ray Safety

May 15, 2013

Speaker: Dr. Rookaya Mather, Ophthalmology

Dr. Mohamad Ahmad, Anesthesia and Perioperative Medicine

Sue Taylor, Nurse Educator/LSOPhyllis Brady, Quality Management and Clinical Decision Support

Title: Patient Safety Critical Incident Use of Cautery in the Operating Room

June 5, 2013

Speaker: Dr. Ian McConachie, Anesthesia and Perioperative Medicine

Dr. Kate Ower, Anesthesia and Perioperative Medicine

Heather Fisher, RN, Acute Pain Service

Title: A New Perioperative Modality for Challenging Pain Patients, Lidocaine Infusions

2013 AITKEN LECTURE – MARCH 20, 2013

March 19 & 20, 2013

Speaker: Dr. M. Shazam Hussain, Assistant Professor (Neurology), Cleveland Learner College of Medicine, Case Western University; Head, Cleveland Clinic Stroke Program; Staff, Vascular Neurology and Endovascular Surgical Neuroradiology Cerebrovascular Centre, Neurological Institute Cleveland Clinic

Title 1: Acute Stroke Intervention: What Next?

Title 2: General vs. Local Anesthesia for Acute Stroke Intervention

Fellowship

DR. MIGUEL ARANGO, DIRECTOR

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.

During the 2012-2013 academic year, the department had 17 clinical fellows. Our cardiac program had 3, Transplant had 3, Regional had 3, Obstetrics had 2, Simulation had 2, Chronic Pain had 1, Vascular/Thoracic had 2, and Neuroanesthesia had 1.

FELLOWS RESEARCH DAY

Our annual Fellows Research Day was held on May 11th 2013. The event was well attended and a huge success. We had 9 fellows presentations throughout the day and all of the fellows worked very hard on their research.

**DR. CRISTIANA MIRON WON 1ST PLACE FOR HER PRESENTATION ON MATERNAL ANESTHESIA FOR EXIT PROCEDURE: A SYSTEMATIC REVIEW OF THE LITERATURE.**

**DR. APHICAT “KI” SUPHATHAMWIT WON 2ND PLACE FOR HIS PRESENTATION, STUDY OF PERIPHERAL MICROCIRCULATORY DYSFUNCTION IN END-STAGE LIVER DISEASE PATIENTS DURING LIVER TRANSPLANTATION USING NEAR INFRARED SPECTROSCOPY.**

And many thanks to our judges: Dr. John Murkin, Dr. Tim Turkstra, Dr. Ronit Lavi and Dr. Kevin Armstrong.

And last but not least, a big thank you to Dr. Indu Singh for officiating the day as Dr. Arango was not able to attend.

OBSTETRICS FELLOWS' RESEARCH POSTERS RECEIVE CRITICAL ACCLAIM AT SOAP

The SOAP meeting is an internationally recognized meeting for obstetric anesthesia research. At the recent 45th Annual Meeting for the Society of Obstetric Anesthesia & Perinatology (SOAP), Dr. Kamal Kumar and Dr. Cristiana Miron, both Obstetric Anesthesia Fellows in the Department, had their research posters selected, above many others, as high-level posters for formal discussion during the poster presentation session.

Dr. Kamal Kumar's poster was titled Pre-Procedural Ultrasound Does Not Decrease the Number of Attempts in Trainees Performing Spinal Anesthesia for Obstetric Patients: A RCT. Co-authors included Drs. Turkstra, Singh, Marmai, & K Armstrong.

Supervisor: Dr. Tim Turkstra

Dr. Cristiana Miron's poster was titled Maternal anesthesia for EXIT procedure: a systematic review of the literature. Co-authors of this study included Drs. Singh, Kumar, & Agarwal.

Supervisor: Dr. Indu Singh

Besides Dr. Kumar and Miron, most of our other fellows have presented research at annual international conferences throughout the year such as: American Society of Anesthesiologist's meeting (ASA), Canadian Anesthesiologists' Society meeting (CAS), Regional Anesthesiology and Acute Pain Medicine meeting, American Society of Regional Anesthesia meeting (ASRA), and the European Society of Regional Anesthesia and Pain Therapy meeting (ESRA).



Dr. John Murkin congratulates Dr. Aphicat “Ki” Suphathamwit



# Clinical Academic Programs



## Anesthesia Assistants Program

**DR. JAMES WATSON, DIRECTOR**

The past year has continued to build on the success of the Anesthesia Care Team. We have continued with the development of this program. The two major teaching hospitals in London, London Health Sciences Centre and St. Joseph's Health Care London, and the Department of Anesthesia and Perioperative Medicine have invested more resources into this program to increase the number of Anesthesia Assistants, and increase the number of areas the department can integrate care. Anesthesia Assistants have been integrated in to work routines and clinical 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 AA's 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 fifth 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 generally becoming widespread in Ontario and Canada and has been recently adopted by the Canadian Anesthesiologists' Society. Currently, we are developing new models of care in areas where previously, 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 MOHLTC to further develop and define the roles within the Anesthesia Care

Team. Review of the application of the ACT model has demonstrated a cost effective, safe and accepted model of care. We have continued to receive funding from the Ministry of Health that continues to support the ACT program. We will continue to explore ways to improve patient safety, efficiency and improve the working conditions for anesthesiologists.



## Cardiac Anesthesia

**DR. DANIEL BAINBRIDGE, DIRECTOR**

The cardiac program continues at a steady pace for the 2012-2013 academic year with approximately 1400 cases per year.

Eighteen anesthesiologists participated in the program during the year. The trans catheter aortic valve program was firmly established along with a ventricular assist program, which resulted in the implantation of two LVAD devices. Finally, a mitral clip program was started at the end of the year with the aim of having one day per month for mitral clip insertions. The fellowship program has again expanded and currently there are 4 fellows participating.

The perioperative echocardiography program continues to expand. On the training front, another simulator was purchased to enhance training of both fellows and residents. The goal is to expand the program to include perioperative TTE examinations for non-cardiac patients. On the clinical front, the integration of ultrasound storage into the hospital Excelera platform is now finished, marking a complete integration of perioperative ultrasound within the hospital frame work.



# ACCTTS

ANESTHESIA AND CRITICAL CARE TEACHING THROUGH SIMULATION



ACCTTS FACULTY: R CHERRY (DIRECTOR), A ANTONIOU, I BRUNI, R BUTLER, L CHAMPION, B CHURCH, J GRANTON

Simulation continues to be an integral part of the Department of Anesthesia and Perioperative Medicine. During our recent residency accreditation by the Royal College, the ACCTTS group was a specifically recognized strength in the training program at Western. The ACCTTS faculty are committed to excellence in simulation delivery and debriefing. We continue to refine our skills through systematic and rigorous peer assessment. In light of the Royal College initiative to transition residency programs to competency-based curriculum after 2015, we are striving to position our simulation program to make that transition a smooth one.

Dr. Richard Cherry is the Western representative on the Canadian National Anesthesia Simulation Curriculum (CaNASC) committee. This committee is tasked with the development of a standardized national simulation curriculum for postgraduate training in anesthesia.

While the predominant focus of ACCTTS is postgraduate anesthesia and critical care, our faculty participate annually in multiple other simulation-based education activities. As in previous years, we actively deliver the curriculum for the Anesthesia Clerkship Boot Camp, the CSTAR IPE Summer School, and Surgery PGY1 Simulation, and assist in the annual Emergencies in Otolaryngology course.

This past academic year saw greater opportunities to expand interprofessional simulation based education. ACCTTS continues to break new ground in this area of study and practice at Western University. Under the direction of Dr. Andreas Antoniou, a successful interprofessional simulation-training program has been piloted in obstetrical anesthesia.

During these simulations, teams of anesthesiologist, obstetricians, respiratory therapists and nurses participate in Crisis Resource Management training.

These events have been well received and participants are wholly committed to improving our overall team performance and increasing patient safety.

In further interprofessional activities, the ACCTTS (Drs. Bruni, Butler, and Cherry) faculty participated with over thirty operating room nurses from Victoria Hospital and University Hospital in a simulation-based education day focused on anesthesia emergencies in the operating room. In collaboration with general surgery, critical care and CSTAR, ACCTTS faculty successfully delivered the first high fidelity, in-situ simulation experience in the CCTC and Victoria Hospital. It is our objective to see that this type of professional training activity will become a regular occurrence for our trainees and practicing professional staff.

ACCTTS enjoyed having Dr. David Dubois as our Simulation Fellow during this academic year. Dr. Dubois has returned to Sherbrooke, Québec, where he will help to establish the anesthesia simulation programming. We are pleased the fellowship program will be expanding next year and we look forward to the arrival of Drs. Arwa Alzahrani (Saudi Arabia) and Erika Dutz (Australia). Acceptance to our fellowship continues to be a competitive process with numerous applicants from both national and international locations.

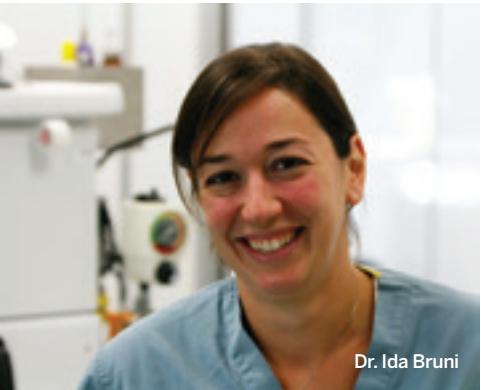
Our group continues to represent the department well at notable national and international meetings. Drs. Antoniou and Cherry presented two workshops at The Canadian Simulation Summit (Ottawa Nov 2012) and the International Meeting for Simulation in Healthcare (IMSH Orlando Jan 2013). The workshops covered two topics: Thinking Outside the Box - Creativity and Simulation Scenario Design; and Degrief the Debrief - How to Manage the Difficult Debrief.



Dr. Richard Cherry



Dr. Brian Church



Dr. Ida Bruni



# Cardiac Surgery Recovery Unit

**DR. RON BUTLER, DIRECTOR**

The Cardiac Surgery Recovery Unit (CSRU) is a 14 bed critical care unit that specializes in the care of the post-operative cardiac surgery patient. The CSRU is one of three teaching intensive care units under the leadership of the Critical Care Program. 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, ventricular assist device placement. 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. Trainees from anesthesia and cardiac surgery, cardiology, critical care residents, and cardiac anesthesia rotate through the unit. The CSRU has an Advanced Practice Nurse who works within the unit 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. One and two year Fellowship opportunities are available within the unit.

# Chronic Pain Clinic

**DR. PAT MORLEY-FORSTER**

## CLINICAL CARE

Several important developments occurred in 2012-2013 for the Western Pain Program. In September, the Pain Management Program at St. Joseph's Health Care London moved to a 3,326 sq. ft. state-of-the-art facility on the third floor of the hospital. This includes procedure rooms, physician offices and a fluoroscopy suite dedicated to pain management. The fluoroscopy suite allows us to offer a number of fluoroscopically-guided procedures for intractable pain such as nerve root blocks, lumbar and cervical epidural steroid injections, and radiofrequency facet denervation for chronic back and neck pain. St. Joseph's Outpatient Pain Clinic receives over 5,000 patient visits per year and this number is growing. Another exciting event in 2012 was the launch of two websites: the Western

Pain Medicine website and St. Joseph's Pain Management Program website. The Western Pain Medicine website is our virtual voice in research and education, describing the faculty, research, resources, and our contributions to education including upcoming speaking events and conferences. There is also an extensive history of the Earl Russell Research Chair in Pain Management and Research.

A new triage system to streamline our referrals was developed this year. It was implemented with direction from Dr. Kate Ower and RN Cathy Rohfritsch. This new triage system has been very effective in reducing the average wait time for new patients to 3-6 months depending on the service required. Urgent consults, specifically complex Regional Pain Syndrome, can be seen within 2-3 weeks.

## EDUCATION

### UNDERGRADUATE

The pain program continues to be very active in pain education at the undergraduate level. This includes a well-attended Year 4 elective on Pain Medicine. This is a multi-disciplinary course provided by anesthesiologists, neurologists, a psychiatrist, a psychologist, a palliative care specialist, and a pharmacist. This past year, the ICE hours were increased by the Schulich School of Medicine Curriculum Committee from 12 to 18 hours, with a future hope of increasing this to 36 hours annually.

### POSTGRADUATE

Anesthesia residents rotate through the Pain Clinic for at least one block (more if requested). We also offer Physical Medicine residents a three-month rotation as part of their training requirement. Pain Management continues to be a popular elective with Family Medicine, and Psychiatry residents.

### FUTURE SUBSPECIALTY TRAINING

The Royal College Pain Medicine Subspecialty Program is a two year multidisciplinary training program, which includes Psychiatry, Pediatrics, Neurology, Physical Medicine, Rehabilitation, and Rheumatology. The curriculum received official approval from the Royal College in June, 2013. Program Director, Dr. Geoff Bellingham was responsible for preparing the Western University application for accreditation.

### CONTINUING MEDICAL EDUCATION

Interdisciplinary Pain Rounds (MAINPORT –accredited) are presented on the fourth Thursday of each month and feature invited speakers with national and international reputations. A list of seminar topics and lectures follows on the next page. Announcements are posted regularly on [www.westernpain.ca](http://www.westernpain.ca), as well as in the weekly electronic newsletter for the Schulich School of Medicine and Dentistry.

FOR MORE INFORMATION: [www.westernpain.ca](http://www.westernpain.ca)

# Chronic Pain Continuing Medical Education & Academia

2013 June: Patient education days, supervised by the psychologist affiliated with the clinic, Dr. Heather Getty.

## INTERDISCIPLINARY PAIN ROUNDS

September 26 : Headache Management – The Good, The Bad and The Ugly. Dr. Paul Cooper, Professor Department of Clinical Neurological Sciences, Schulich School of Medicine & Dentistry, Western University, London, Ontario

October 31: Life After Oxycontin – Recent Trends in Abuse and Division of Prescription Analgesics in the USA. Dr. Richard Dart, Director Rocky Mountain Poison and Drug Centre, Professor Emergency Medicine, University of Colorado, Boulder, Colorado, USA

November 28: Opioid-Induced Hyperalgesia – Presentation, Mechanisms and Treatment. Dr. Ronald Wasserman, Director Back and Pain Centre, Chief Pain Services, Assistant Professor Department of Anesthesiology, University of Michigan, Ann Arbor, Michigan USA

## ACADMEMIC OUTREACH AND SCHOLARSHIP

**Bellingham, Geoff**

### Invited Lectures

Canadian Interventional Pain Conference: Ultrasound Workstations. 2013 Mar. McMaster University, Hamilton, ON. Workshop Demonstrator.



Southwestern Ontario Anesthesia Meeting: Bronchoscopy Station. 2012 Oct. London, ON. Workshop Demonstrator.

Ultrasound for Pain Medicine: Ultrasound Workstations. 2012 Nov. Toronto Western Hospital. Workshop Demonstrator.

**Clarke, Collin**

### Invited Lectures

CanAM International Anesthesia Conference, Niagara Falls, ON. 2013 May. Presenter: Can anesthetic technique influence cancer recurrence ?

Ontario Pain Fellow Interventional Review Course. 2012 Nov. Invited Speaker: Review of the Interventional Procedures for Pain Fellows in Ontario.

Schulich School of Medicine & Dentistry, Western University.

- Oncology Grand Rounds. 2012 Sep. Presenter: Beyond Opioids: What Can Palliative Care offer?
- Principles of Surgery Curriculum. 2013 Mar. Presenter: Pain Management in Surgical Patients.
- Surgical Grand Rounds. 2012 Oct. Presenter: Addiction After Surgery, strategies for Prevention.

St. Joseph's Health Care London. Perioperative Nursing Rounds. 2013 Apr. Presenter: Optimizing Perioperative Pain.



**Morley-Forster, Pat**

### Invited Lectures

Beaverbrook Family Health Care Unit. 2012 Nov. Invited Speaker: Update on pharmacotherapy in chronic pain: London Family Health Care Team.

St. Joseph's Health Care London: Pain Program Patient Education Day. 2013 Jan. Presenter: The biology of persisting pain.

For additional information on the roles and academic outreach of the Chronic Pain faculty, please refer to the section on [FACULTY ROLES, ACADEMIC OUTREACH & SCHOLARSHIP](#), [p.43]

# Dr. Pat Morley-Forster is the CAS Gold Medalist for 2013

In recognition for outstanding contributions to anesthesiology and leadership in the advancement of chronic pain management. Read more, [p.42].





# Neuroanesthesia

DR. MIGUEL ARANGO, DIRECTOR

The Neuroanesthesia Program has had another successful year in 2012-2013. Between July 1, 2012 and June 30, 2013, University Hospital had a total of 1218 Neuro cases and Victoria Hospital had 269.

The program had 1 Neuroanesthesia fellow and 8 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 CARE

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 ACITIVITIES

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 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.



# Obstetrical Anesthesia

DR. SANDRA KATSIRIS, DIRECTOR

This past year marked completion of a full year of occupancy for the Obstetrical Anesthesia Program at Western University, as we are now located 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 once again fully subscribed for this year. Consolidation of services has allowed us to assign two residents to Obstetrical Anesthesia rotations at one time. In addition to core UWO 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.

The Obstetrical Anesthesia Fellowship Program had 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.

With the consolidation of all obstetrical services at Victoria Hospital in London, the volume of births in this level 3 unit has increased to over 6,000 deliveries per year.

This makes Victoria Hospital the **second** busiest obstetrical unit in the province.



# Palliative Medicine

DR. VALERIE SCHULZ, DIRECTOR



Dr. Valerie Schulz is the proud recipient of the 2013 Award of Excellence from the Ontario Medical Association Section on Palliative Medicine.

This has been a very productive academic and clinical year for the Palliative Medicine Program. Clinically the service supported Palliative consultations in the Critical Care at LHSC, and dialysis unit at University Hospital. The quality of care in LHSC Critical Care was advanced through integration of the 'Assessment and Management of Delirium in the Intensive Care Unit: A Quality Improvement Initiative'. This was accomplished by partnering with intensivists Drs. Karen J. Bosma and Mithu Sen, and committed Critical Care staff and supported by the Academic Medical Organization of Southwestern Ontario (AMOSO) Opportunities Fund.

National palliative academic highlights involved participating with the Royal College of Physicians and Surgeons of Canada's recent decision to support the subspecialty certification for academic qualification and clinical leadership in Palliative Medicine. This was accomplished through Dr. Valerie Schulz' participation as a Board member for the Canadian Society of Palliative Care Physicians and as a member on the National Advisory Committee in Palliative Medicine.

Drs. Valerie Schulz and Dr. Richard Novick (Division of Cardiac Surgery, Western University) published an original article in Seminars in Cardiothoracic and Vascular Anesthesia titled, The Distinct Role of Palliative Care in the Surgical Intensive Care Unit (Semin Cardiothorac Vasc Anesth. 2013 Dec;17(4):240-8).

Dr. Schulz and Dr. Lorelei Lingard at the Centre for Education Research and Innovation (CERI), are providing leadership for a multi-site, multi-province Palliative Care project exploring: Palliative care on the heart failure care team: Mapping patient and provider experiences and expectations. CIHR and AMOSO AFP Innovation Funding support this on-going project.

And in July of 2013, Dr. Schulz became a Professor at Western University, acknowledged for her extensive contributions to the field of Palliative Medicine.

In closing, this work could only have been accomplished through the support of Western's Department of Anesthesia & Perioperative Medicine, under the leadership of Chair and Chief, Dr. Davy Cheng.

## In the Literature

Stecho W, Khalaf R, Prendergast P, Geerlinks A, Lingard L, Schulz V. Being a hospice volunteer influenced medical students' comfort with dying and death: A pilot study. J Palliat Care . 2012 Autumn;28(3):149-56.



Dr. Mohamad Ahmad, Director of Pediatric Anesthesia



# Pediatric Anesthesia

DR. MOHAMAD AHMAD, DIRECTOR



Our pediatric anesthesia program has maintained its momentum in 2012. We continued to consolidate complex pediatric anesthesia within the pediatric groups while keeping in mind that all anesthesiologists at Victoria Hospital are very much pediatrics-capable. We have also continued the improvements in our academic program with new initiatives such as teaching and resident evaluations. Our Program has received consistently positive feedback from our residents and those from other programs such as pediatrics.

Four of our residents have applied to and been accepted to pediatric anesthesia fellowship programs in Canada, the United States and Australia.

Those that have completed pediatric anesthesia electives at other institutions have returned to give us positive comparative feedback about our own program and teaching. Medical students have also commented that participating in pediatric anesthesia has been especially interesting and rewarding - largely because of the quality of the education provided.

Our visibility and profile has expanded. Various members of our department have presented on pediatric anesthesia locally and at regional conferences in 2012 such as Grand Rounds, the Annual Post Anesthesia Care Conference, and the OMA Annual meeting. In addition, we continue to be invited to sit on more pediatrics-related committees and task forces within London Health Sciences such as pediatric pharmacy and transitional care.

We interviewed a number of potential recruits in 2012/13 and I am pleased to announce that Dr. Raju Poolacherla from the United Kingdom and Dr. Enda Connolly from Ireland have accepted positions in our department.

Dr. Poolacherla completed a pediatric anesthesia fellowship at Great Ormond Street Hospital and has been in clinical practice since 2007. He has extensive experience in quality improvement and will assist us in our own such initiatives. Dr. Connolly is currently finishing pediatric anesthesia and intensive care fellowships at Boston Children's Hospital. He has an interest in simulation and ethics.

Our goal for 2013 is to continue the gains we have made in developing our program. We will implement a continuous quality of care initiative that will also enable us to conduct research within our clinical practices.

We will also expand advanced learning and teaching opportunities for our consultants and residents by increasing subspecialty rounds and establishing a pediatric anesthesia journal club.

# Perioperative Blood Conservation Program

The 10th Anniversary Program Report

DR. FIONA RALLEY, DIRECTOR

This year marks the tenth anniversary of the introduction of the Perioperative Blood Conservation Program (PBCP) into the Pre-admit Clinic (PAC) at London Health Sciences Centre (LHSC). Since its inauguration, the program has grown considerably in size and depth, and is now an integral part of the preoperative assessment of the surgical patient. Therefore it seems pertinent to review the successes that the program has achieved since its conception.

In the area of orthopedic surgery, transfusion rates for patients undergoing primary major joint replacements has been reduced from 16% to less than 5% this year

1.8% for primary TKJR and 2% for primary THJR. In lieu of this reduction, the calculated result is a cost saving in 2012 of \$438.00 per TKJR patient and \$223.00 per THJR patient. In addition over 250 units of red blood cells were saved.

In the area of cardiac surgery the reduction in transfusion rate is a little less impressive going from 32% to 21% in 2012 for primary Coronary Artery Bypass Graft (CABG) surgery. However in addition to this reduction there has been the introduction of the process of acute normovolemic hemodilution with product splitting. This process has been used to reduce the transfusion rates in our complex cardiac surgical procedures with great success, and has also been the topic of a recent publication.

The management of any patient who refuses blood products, whether for religious reasons or not, has always been a challenging scenario.

Over the past few years the PBCP has developed a management pathway and strategy to improve the care of these individuals by the implementation of a standard refusal form, and that all patients, where exists the possibility of significant blood loss associated with their surgical procedure, are referred to the PBCP for assessment and optimization.

Since the beginning of the program, education and research has been a major component. In 2006 with the introduction of the PBCP transfusion database we have been able to send biannual reports to

each surgical service on their transfusion rates both by procedure and by physician. This way we have been able to detect any negative as well as positive trends in these parameters. Furthermore blood products that are transfused and transfusion triggers, are also tracked. Recently these reports have incorporated the assessment of one vs. two red blood cell transfusion rates per service. In addition any modifications in the PBCP management strategies for patients can be carefully monitored for efficacy and safety.

Over the past ten years members of the PBCP have participated in multiple meetings for a variety of societies, presenting on various perioperative blood management strategies. At present there have been seven publications in major journals, and multiple abstract presentations at meetings provincially, nationally and internationally. Members of the PBCP are active on the boards of several major societies and the program is nationally and internationally recognized. This is attested to by the numerous speaking requests that have been made to members of the PBCP over the last 10 years. At present three different research projects are currently in progress under the umbrella of the program.

The success of the program is definitely due to its multidisciplinary approach with representatives from anesthesia, surgery, hematology, medicine, blood bank, perfusion, nursing, pharmacy and administration. This allows for the free discussion on topics from several standpoints and for the rapid integration of new policies once incorporated into the program. As always the PBCP extends an invitation to anyone who wishes to enquire about any of our many patient blood management strategies to contact any member of the program.



Read More

Chu MW, Losenno KL, Moore K, Berta D, Hewitt J, Ralley F. Blood conservation strategies reduce the need for transfusions in ascending and aortic arch surgery. Perfusion. 2013 Jul;28(4):315-21.

# Regional Anesthesia & Acute Pain

**DR. KEVIN ARMSTRONG, CO-DIRECTOR**  
**DR. SUGANTHA GANAPATHY, CO-DIRECTOR**

The RA and APS programs strive to be effective in three core areas.

1. Clinical: to provide our patients with optimal care.
2. Education: to provide our trainees the opportunity to develop knowledge and skill in management strategies which address both routine and complex peri-operative management issues.
3. Research: to be productive in the development and dissemination of knowledge related to these specialties.

## NEW MEMBERS OF THE APS

In 2013 we welcomed two nurse practitioners (NP) to the department and the APS. Heather Whittle (VH) and Charlotte McCallum (UH) graduated from the Nurse Practitioners' Programs in January. After an opportunity to develop a deeper understanding of the assessment and management of chronic pain with our chronic pain colleagues (Pat Morley Forster, Geoff Bellingham, Collin Clarke and Kate Ower) they joined the APS. With these expanded skills and together with our nurse clinicians Cindy Carnegie (UH), and Heather Fisher (VH), we now have greater resources to address patients who come to the hospital with pre-existing pain issues or those who develop challenges in the perioperative period. The intention is to expand our reach to the patients pre-operatively as well as post operatively. Eventually these Nurse Practitioners will provide a bridge to both Chronic Pain and Palliative Care patients in the Comprehensive Pain Management Program.

## UNIVERSITY HOSPITAL

2013 saw us initiate the UH block room. There are a number of goals here, the first is to increase the ability to offer patients who would benefit most, or those who wish to have regional anesthesia as part of their anesthesia and/or pain management.

Regional anesthesia takes time to both perform and learn. Although resources are required to maintain a block room, there will be gains for patient care, education and clinical research. The OR is a highly resourced environment and is subject to significant time restraints. The block room will improve overall efficiencies through reduced

OR utilization when possible. It will allow a better environment for learning by our trainees. Similarly clinical research in RA often requires additional time for assessment pre-operatively, this is more readily achieved without impacting negatively on the time of the anesthesiology, surgery and OR nursing teams. Intended care and research includes lower and upper limb peripheral nerve block, central nerve blockade and spinal imaging. Development of an outpatient regional analgesia program for patients having a high tibial osteotomy is moving ahead.

## ST. JOSEPH'S HEALTH CARE LONDON

The St. Joseph's block room continues to be the location where patient care, and the education of our residents, and subsequent research related to upper limb regional anesthesia takes place simultaneously. Over the years it has become an efficient, and integral process of the operating room. From the surgical day care unit, the OR, the PACU and the day surgery or inpatient units, there are approximately 2000 procedures done here yearly. This requires a significant commitment by all stakeholders (anesthesia, nursing, surgeons and patients) to team work and communication. The outpatient regional program continues to allow patients from Middlesex and Elgin counties to be discharged home with regional analgesia

## VICTORIA HOSPITAL

As in the past, our residents gain their greatest structured APS learning through exposure at the Victoria Hospital site. Under the direction of Kate Ower, the VH site has also served as a test site for the electronically generated electronic orders. This project will ease the transition to computer provider order entry in early 2014. For the past few years electronic charting at both LHSC sites, has been the norm for APS charting. As with electronic generated orders, when the electronic patient record becomes a reality there is hope the transition is smooth.



## ADDITIONAL MEASURES

Over the past year there has been considerable effort and education toward improving perioperative pain management through the expanded use of multimodal analgesia.

More recently there has been pharmacy and therapeutics (P&T) approval for the use of lidocaine infusions as well as the addition of ketamine to intravenous opioid, patient controlled analgesia (PCA). Kate Ower, Heather Fisher, Ian McConachie, Michael Pariser and others, have been influential in leading the way for developing new protocols, providing education and implementing the use of the agents for our patients who would most benefit.

## LHSC AND ENHANCED RECOVERY SERVICES (ERAS)

With the leadership of Chris Harle and Chris Schlachta (surgery) LHSC has entered into the ERAS program. This initiative is designed to assess the adherence and outcomes of evidence informed practices which improve recovery after colorectal surgery. In addition to some measures which affect traditional anesthesia management of these patients, there is an emphasis on pain management. These include intra-operative lidocaine infusions, epidural analgesia and multimodal analgesia. The APS and RA programs will contribute significantly in this project.

## WEBSITE

The Acute Pain Service website (<http://www.lhsc.on.ca/priv/pain/algorithm.htm>) is managed by Cindy Carnegie. This provides visitors the opportunity to gain insight into topics related to acute and chronic pain management. Be it the assessment of pain, anatomy, mechanisms of pain, regional anesthesia, oral and parenteral agents or non-pharmacological methods. This site serves as an educational portal for our consultants, trainees and nurses.

## COMPUTER PROVIDER ORDER ENTRY

Bobbi Jo Morrell, Kate Ower, Heather Fisher and Ian Herrick through HUGO (Health UnderGoing Optimization) have provided great input to the anesthesia orders which will become part of the electronic ordering system. One aspect of the orders will be those orders used by the APS and RA groups. Over the coming year (early 2014), the implementation will be enhanced due to their contributions.



# Thoracic and Vascular Anesthesia

**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 six 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 respiratory.



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 (da Vinci robot) 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.

### 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. In April 2013, the construction of the hybrid vascular operating room was completed. This hybrid suite is equipped with numerous large, high-definition, flat-screen monitors for viewing images as well as the patient's vital signs. It combines the newest computer generated technology and the newest radiologic imaging in a sterile operating room environment. This gives the surgeons the ability to perform traditional, open surgery and minimally invasive, endovascular procedures on the same patient, at the same time in the same place.

### Patient benefits include the following:

- Shorter procedure times;
- Less radiation used during imaging;

- Reduced need for ICU care;
- Shorter hospital stays;
- Faster recovery.

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 12 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 spinal cord protection treatment strategies. We presented our results on spinal cord protection strategies at the 2012 International Forum of Cardiovascular Anesthesia in China.

### TRANSESOPHAGEAL ECHOCARDIOGRAPHY

Our Transesophageal 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. While not every anesthetist involved in vascular anaesthesia is experienced in TEE, there is usually one anesthetist experienced in TEE available for guidance.

### RESEARCH PROJECTS IN PROGRESS

- The influence of CPAP and PEEP (with a recruitment maneuver) on PaO2 during one lung ventilation, employing a lung protective ventilation strategy;
- 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.

### SIMULATION

The integration of simulation scenarios on thoracic and vascular anesthesia for fellows and residents has been very successful and rewarding. This environment allows for better preparation in this clinically diverse patient 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 and 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) Anesthesia

**DR. ACHAL DHIR, DIRECTOR**

The Liver Transplantation Program continues to provide excellent care to one of the sickest patient population. The group consists of five highly experienced consultants: Drs. Achal Dhir, Wojciech Dobkowski, Christopher Harle, Fiona Ralley and Anthony Vannelli.

There have been recent changes in the donor organ allocation policy in Ontario, adopting the MELD scoring system. This has significantly affected our total number of transplants as many local donor organs (which would have stayed locally) have been sent to other centers. This year, the group provided anesthetic care to 51 adult liver transplant recipients including 6 critically ill patients from the ICU. The organs came from 43 brain dead donors while 8 were donations after cardiac death. There was one living related liver transplant. During the same period, we also provided anesthetic care for over 75 major liver resections and several major hepato-biliary surgeries. Dr. Roberto Hernandez, from liver transplant surgery team is the pioneer in starting 'Associating Liver Partition with Portal Ligation for Staged hepatectomy' (ALPPS) procedure. ALPPS is the hope for patients with extensive hepatic malignancies which otherwise are deemed unrespectable. Preliminary results have been excellent and our group plays a significant role in the success of this particular procedure.

(continued)

(continued...Transplant Anesthesia)

We also do preoperative assessment and optimization of patients before they are listed for orthotopic liver transplant. Every effort is made to attend 'Transplant Assessment' rounds before enlisting the patients, M & M rounds as well as the Bon- Mots rounds.

We also run a very successful fellowship program. Dr. Steve Morrison, after completing his residency at LHSC and passing the FRCPC exam, has joined as a liver fellow. Along with him, are two highly motivated international fellows. We are hoping that Steve will join the group after completing his fellowship. The fellows, apart from getting excellent clinical experience, are also involved with research and academic activities. From this year, the fellows are getting TEE experience as part of their training. We feel that it is an important skill to have in managing patients with hemodynamic instability.

The group meets every month for Problem Based Learning Discussions (PBLD) and discussing journal articles.

SUB-SPECIALTY JOURNAL CLUB / PBLD

- 2012 Sep 11: Liver Transplantation in Jehovah's Witnesses: Anesthesia issues
- 2012 Oct 06: CV complications after liver transplantation
- 2012 Dec 04: Liver transplant anesthesia in cardiac patients
- 2013 Feb 03: Anesthetic management of ESLD patient for non-transplant surgery

- 26 March, 2013: Anesthetic management of Hepatectomy in a patient with carcinoid syndrome
- 2013 Apr 25: Intraoperative intra-cardiac thrombus during liver transplant.
- 2013 Jun 06: Anesthesia for the post-liver transplant patient

ONGOING RESEARCH PROJECTS

The Study of peripheral microcirculatory dysfunction in end-stage liver disease patients during liver transplantation using near infrared spectroscopy.

Infusion of ketamine and Lidocaine for pain management after major liver resection. We have enrolled more than 80 patients.

Extended donor criteria and orthotopic liver transplantation – an outcome study of the Canadian system.

Liver transplantation in patients with grade 4 encephalopathy: differences between fulminant and acute on chronic hepatic failure.

OTHER ACADEMIC ACTIVITES

For the past 7 years, the group has been successfully organizing the 'Transplant symposium' or 'Case discussions' for the annual Canadian Anesthesiologists Society meetings. Case discussion for the June 2013 conference was titled: 'Non Transplant surgeries in transplant patients'. Unfortunately, the CAS was cancelled at the last minute because of massive floods in Calgary



Dr. Christopher Harle

Centre for Medical Evidence, Decision Integrity, Clinical Impact (MEDICI)

DR. JANET MARTIN, PROGRAM DIRECTOR

DR. DAVY CHENG, MEDICAL DIRECTOR

DR. LI WANG, SYSTEMATIC REVIEWER

DR. AVTAR LAL, SYSTEMATIC REVIEWER

DR. AVA JOHN-BAPTISTE, HEALTH ECONOMIST

DR. JUNSEOK JEON, VISITING PROFESSOR (SEOUL, KOREA)

JESSICA MOODIE, EVIDENCE & INFORMATION RETRIEVAL EXPERT AND ADMINISTRATIVE SUPPORT

decision-making and knowledge translation regarding health technologies and programs in the developed and developing world; and

- 3. To conduct cutting-edge research to advance the front of health technology assessment, economic analysis, health policy analysis, decision-making sciences and knowledge translation.

In 2013, MEDICI became an EXCITE Methodology Centre and welcomed the addition of Dr. Ava John-Baptiste, a Health Economist.



The Centre for Medical Evidence, Decision Integrity, Clinical Impact (MEDICI) was established in 2011 with the support of the Schulich School of Medicine and Dentistry, London Health Sciences Centre (LHSC), St. Joseph's Health Care London and Lawson Research. MEDICI is the first university and hospital-based, evidence-based health technology assessment program in Ontario.

MEDICI has three key mandates:

1. To provide timely, contextualized evidence syntheses to enable evidence-based decision-making related to drugs, devices, procedures and programs in healthcare, with special focus on hospital based decision-making at the local level, but with relevance also to regional, national, and international healthcare decision-making;
2. To provide educational opportunities for local decision-makers and students to build capacity in evidence-informed decision-making and health technology assessment, and to expand educational opportunities nationally and internationally to enable improved decision-making globally regarding

ONGOING MEDICI RESEARCH PROGRAMS:

- Know4Go: Combining Evidence + Ethics + Economics + “Everything Else” to inform value in health care
- Real World Robust Decision-Making
- Quantifying the Opportunity Cost
- Disinvestment Methodology
- Evidence Contextualization
- Relevance of health economics in the hospital setting



ONGOING MEDICI PROJECTS

SURGERY, ANESTHESIA & CRITICAL CARE

- Orthopedic Surgery: Optimizing Technologies & Techniques
- across Patient Pathway of Care for Joint Replacements
- Prehabilitation: Is it worth it for patients planning to undergo hip or knee replacement?
- Vascular Surgery: Optimizing Technologies & Techniques across Patient Pathway of Care
- Colloids vs Crystalloids for Acute Care
- Voluven vs Crystalloids in ICU and Surgery
- Dexmedetomidine for ICU and Surgery
- Inhaled Nitric Oxide – when is it safe, effective and cost-effective?
- TAVI – quantifying the learning curve

MENTAL HEALTH

- For whom is ECT safe, effective, and cost-effective?

AWARDS

Best Poster Award, Ketamine Plus Morphine for Patient Controlled Analgesia: A Meta-Analysis. Co-Authors: Wang L, Johnston B, Kaushal A, Cheng D. Canadian Anesthesiologists' Society (CAS) Annual Meeting, 2013

EPiCOR



EPICOR MEMBERS: DR. DAVY CHENG, DR. JANET MARTIN, AND DR. 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
- Dexmedetomidine for Awake Fiberoptic Intubation
- Dexmedetomidine for Craniotomy
- Dexmedetomidine for MAC
- Ketamine for Post-operative Analgesia

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
- Transcatheter Aortic Valve Implantation (TAVI)

BYPASS SURGERY

- Endovascular versus Open Vein Harvest for CABG (EVH)
- Thoracic endovascular Aortic Repair versus Conventional Open Repair (TEVAR)



(L to R): Dr. Janet Martin, Dr. Davy Cheng, Jessica Moodie, Dr. Ava Jean-Baptiste, Dr. Avtar Lal, and Dr. Li Wang

- 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)
- Video-Assisted Thoracic Surgery (VATS)
- 

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
- Perioperative Antibiotic Prophylaxis
- Transcatheter aortic valve implantation (TAVI)

LEADERSHIP  
POSITIONS &  
PROFESSIONAL  
CONTRIBUTIONS

DR. JANET MARTIN

- Chair, HTA Exchange, supported by the Canadian Agency for Drugs and Technologies in Health (CADTH), April 2012 to April 2014
- Chair, Canadian Hospital/Regional-Based HTA Network, in partnership with Ottawa Health Research Institute (OHRI) and AdHopHTA (European Commission funded network of hospital HTA units), and supported by CADTH 2013 to present
- Faculty, Ulysses International Master of Sciences in Health Technology Assessment & Management, 2009 to present
- Member, Coordinating Committee for Curriculum & Program Oversight of the Ulysses Master of Science in Health Technology Assessment & Management (MSchHTA&M), 2009 to present
- Collaborator, International Task Force On Decision Criteria. Collaborators include University of Montreal, Evidem, University of York, University of Twente, Radboud University, and CIHR, 2011 to present
- Pan-Canadian Health Technology Assessment Collaborative (Health Canada, CADTH, HTA Exchange, Policy Forum, and selected representative agencies involved in HTA or decision-making at HTA agency level and MOH level), 2012 to present
- Member & Clinical Reviewer, Committee to Evaluate Drugs, Ministry of Health & Long Term Care (MOHLTC), 2004 to present
- Member, Drugs for Rare Diseases Policy Working Group, Ministry of Health & Long Term Care (MOHLTC), 2008 to present
- Co-Developer, Policy Framework for Drugs for Rare Diseases, Ontario

Framework for Drugs for Rare Diseases (DRDs), Ministry of Health & Long Term Care (MOHLTC), 2008 to present

- Member, Advisory Committee on CME (ACCME), Schulich School of Medicine & Dentistry, 2003 -2013
- Associate Scientist, Lawson Health Research Institute, 2003 to present

PROFESSIONAL MEMBERSHIPS

- Centre for Evidence-Based Medicine, Oxford, England
- CNESH Horizon Scanning,
- CADTH HTA Exchange
- Health Technology Assessment International (HTAi)
- Society of Medical Decision Making (SMDM)
- Canadian Society of Hospital Pharmacists
- Ontario College of Pharmacists

SELECTED PRESENTATIONS

Introduction to Hospital-Based HTA (HB-HTA). Health Technology Assessment International (HTAi) 10th Annual Meeting (Seoul, KO), June 2013

Hospital & Regional HTA: Managing the Interface to Optimize KT. Health Technology Assessment International (HTAi) 10th Annual Meeting (Seoul, KO), June 2013

Evidence-Based Decision-Making & Knowledge Translation. Invited Workshop for the International Anesthesia Research Society (IARS) Annual Meeting (San Diego, CA), May 2013

Barriers to Uptake of HTA. CADTH Annual Symposium on Health Technology Assessment (St. John's, NL), May 2013

Quantifying the Opportunity Cost. Session Chair & Presenter. CADTH Annual Symposium on Health Technology Assessment (St. John's, NL), May 2013

Health Technology Assessment & Knowledge Translation: Where theory intersects with

reality. Special Lecturer & Course Provided at the University of Barcelona, Graduate School of Economics (Barcelona, Spain), May 2013

Know4Go: Bringing Evidence, Economics, Ethics and 'Everything Else' into Health Technology Decision-Making. Special Lecturer & Course Provided at the University of Barcelona, Graduate School of Economics (Barcelona, Spain), May 2013

OPCAB vs CABG: Applying your knowledge to a real world case. University of Barcelona, Graduate School of Economics (Barcelona, Spain), May 2013

Bias & Error in Decision-Making. University of Barcelona, Graduate School of Economics (Barcelona, Spain), May 2013

International Collaboration for Hospital HTA. Invitation to collaborate in Hospital HTA with Seoul Hospital and Korean MOH (Seoul, KO), April 2013

Off-Pump vs On-Pump Bypass Surgery: An updated meta-analysis, Seoul National University (SNU), Seoul, Korea, April 2013

Off-Pump Bypass Surgery – Who benefits from innovation? Society for Cardiothoracic Anesthesia (SCA) Annual Meeting (Miami, FL), April 2013

Knowledge Translation in Mental Health: Defining our Priorities & Measuring our Impact. Regional Mental Health Grand Rounds (London, ON), March 2013

Colloids vs Crystalloids – What should be the role of Voluven in Surgery and Critical Care? A Systematic Review & Economic Analysis. Citywide Critical Care Grand Rounds (London, ON), February 2013

Colloids vs Crystalloids – What should be the role of Voluven in Surgery and Critical Care? A Systematic Review & Economic Analysis. Pharmacy & Therapeutics Committee, St. Joseph's Health Care London (London, ON), February 2013

Colloids vs Crystalloids – What should be the role of Voluven in Surgery and Critical Care? A Systematic Review & Economic Analysis. Citywide Anesthesia Grand Rounds (London, ON), January 2013

Evidence-Based Decision-Making & Health Technology Assessment. Update in Clinical Anesthesia (Curacao, NL) January 2013

Off-Pump Bypass Surgery: An Update. Update in Clinical Anesthesia (Curacao, NL) January 2013

Colloids vs Crystalloids – What should be the role of Voluven in Surgery and Critical Care? A Systematic Review & Economic Analysis. Drug & Therapeutics Committee, London Health Sciences Centre (London, ON) January 2013

Update on HTA in Canada. Pan-Canadian HTA Collaborative, Health Canada (Ottawa, ON) November 2012

Dexmedetomidine for Awake Fiberoptic Intubation: A Meta-Analysis. Drug & Therapeutics Committee (London, ON) October 2012

Dexmedetomidine for Monitored Anesthesia Care and Procedural Sedation: A systematic review. Drug & Therapeutics Committee (London, ON) October 2012

PUBLICATIONS

Martin J, Cheng DC. Perioperative Blood Management: Cardiac Surgery. Waters J (editor). 3rd ed. AABB Press, Bethesda, Maryland. 2013.

Neumann I, Letelier LM, Rada G, Claro JC, Martin J, Howden CW, Yuan Y, Leontiadis GI. Comparison of different regimens of proton pump inhibitors for acute peptic ulcer bleeding. Cochrane Database Syst Rev 2013 Jun 12;6:CD007999.

Louzada ML, Hsai CC, Ralley F, Lazo-Langner L, Xenocostas A, Martin J, Connelly S, Berta D, Binns V, Chin-Yee IH. A pilot study to assess the feasibility of a randomized controlled trial to compare the safety of intravenous iron dextran versus iron sucrose in non-hemodialysis adult patients. (Submitted)

Martin J, Cheng D. Health Economics & Governance: Anesthesiologists in Wider Governance and Health Economics. Can J Anesth 2013;60(9):918-928. Epub 2013 Jul 3.

Bainbridge D, Martin J, Arango M, Cheng D. Anaesthetic-related mortality in sub-Saharan Africa – Authors' reply. Lancet 2013;381(9862):199-200.

Coyle D, Bell CM, Clarke JTR, Evans G, Gadhok A, Martin J, Sabharwal M, Winquist. Application of operations research to funding decisions for treatments with rare disease. Operations Res Health Care Policy 2013;190:281-294.

Barkun AN, Bhat M, Armstrong D, Dawes

M, Donner A, Enns R, Martin J, Moayyedi P, Romagnuolo J, Tugwell P. Effectiveness of disseminating consensus management recommendations for ulcer bleeding: A national cluster randomized trial. CMAJ 2012 epub CMAJ-12-0095.R1.

Winquist E, Bell CM, Clarke JT, Evans G, Martin J, Sabharwal M, et al. An evaluation framework for funding drugs for rare diseases. Value in Health 2012 Sep-Oct;15(6):982-6.

Bainbridge D, Martin J, Arango M, Cheng D, for the Evidence-Based Perioperative Clinical Outcomes Research (EpiCOR) Group. Perioperative and anaesthetic-related mortality in developed and developing countries: a systematic review and meta-analysis. Lancet 2012 Sep 22;380(9847):1075-81.

Martin J, Cheng D. Tranexamic acid for routine use in off-pump coronary artery bypass surgery: evidence base "fait accompli" or further research needed? Anesth Analg. 2012 Aug;115(2):227-30.

MEDICI  
PRESENTATIONS

DR. AVTAR LAL

- Development of Evidence Based Clinical Practice Guidelines. All India Institute of Medical Sciences. (New Delhi, India) February 27, 2013
- The Role of Development of Systematic Review and Evidence Based Clinical Practice Guidelines in Pediatrics in India. University College of Medical Sciences and GTB Hospital (Delhi, India) February 27, 2013
- The Methodology of Development of a Systematic Review and Evidence Based Clinical Practice Guidelines. Maulana Azad Medical College and GB Pant Hospital, (New Delhi, India) February 19, 2013
- The Methodology of Development of a Systematic Review. Government Medical College and GN Hospital (Amritsar, India) on February 14, 2013.

DR. DAVY CHENG

- ISMICS 2013 Consensus Statements on OPCAB Surgery in Elderly Patients. ISMICS Annual Meeting (Prague, Czech Republic) June 14, 2013.

- OPCAB versus CCAB Revisit: Risks and Benefits. ISMICS 2013 Expert Panel Consensus Conference. "OPCAB/Off-Pump Surgery" (Dublin, Ireland) May 25, 2013
- Evidence-Based Decision-Making and Knowledge Translation in Health Technology Assessment; Perioperative Antiplatelet Drugs With Coronary Stents and Dancing With Surgeons: Can We Ever Agree About Bleeding Versus Ischemic Risk? IARS Education Symposium (San Diego, CA, USA) May 4-7, 2013
- Health Technology Assessment and Knowledge Translation: Evidence to Guidelines to Practice - the Road Less Traveled; Consensus Statements on Perioperative Blood Management in Cardiac Surgery. Visiting Professorship, Heart and Vascular Institute, Cleveland Clinic (Cleveland OH, USA) April 26, 2013
- Knowledge Translation: Evidence to Guidelines to Practice- the Road Less Traveled; Transfusion & Haemostasis- Blood Management Strategies in Cardiac Surgery. Korea Society of Cardiothoracic Anesthesiology Annual Meeting (Seoul, Korea) April 12-15th, 2013
- Challenging cardiovascular cases in the hybrid operating room. SCA 35th Annual Meeting, Problem-Based Learning Discussion, (Fontainebleau Miami, Florida). April 7, 2013
- OPCAB in High Risk Elderly Patient-Outcomes: Health Technology Assessment and Knowledge Translation: Evidence to Guidelines to Practice - the Road Less Traveled. 31st Annual Symposium, New York Mount Sinai Hospital, Clinical Update in Anesthesiology, Surgery and Perioperative Medicine (Curacao, Netherlands Antilles) Jan 21-25th, 2013
- Evidence-Based Practice: What is Evidence? UCSD Anesthesiology Update 2013 (San Diego, California) January 1, 2013
- Knowledge Translation: Evidence to Guidelines to Practice- the Road Less Traveled; Applying Health Technology Assessment and Knowledge Translation- Case Study of Transcatheter Aortic Valve Implantation (TAVI). University of California San Diego (UCSD) Medical Center (San Diego, CA, USA) January 15-17, 2013



(continued....Dr. Davy Cheng, presentations)

- Best Evidence Practice – iNO Cardiac and Critical Care: Clinical Benefits or Cost Burden? 13th International Congress of Cardiothoracic and Vascular Anesthesia (Auckland, New Zealand) November 14 - 17th, 2012
- Setting Up Academic Anesthesiology Department: Canadian Perspective. The Society of Academic Anesthesiology Chairs (USA) Annual Meeting (San Francisco, CA, USA) November 1-3, 2012
- CanMEDS Leadership and Professionalism. Critical Care Western (London, Ontario) September 27, 2012
- OPCAB Surgery in Elderly Patients: Evidence of Benefits? The 3rd ISCA International Symposium for Cardiac Anesthesia (Sendai, Japan) Sep 13 - 15th, 2012
- Cardiac Surgery & Anesthesia: Past, Present, and Future; Quality Assurance in TCV Surgery & Anesthesia Valve Implantation: Transcatheter Valve Implantation. The Chinese Heart Congress (Beijing, China) Aug 9-12th, 2012

DR. JANET MARTIN

- Introduction to Hospital-Based HTA (HB-HTA). Health Technology Assessment International (HTAi) 10th Annual Meeting (Seoul, KO), June 2013
- Hospital & Regional HTA: Managing the Interface to Optimize KT. Health Technology Assessment International (HTAi) 10th Annual Meeting (Seoul, KO), June 2013
- Knowledge Translation. Invited Workshop for the International Anesthesia Research Society (IARS) Annual Meeting (San Diego, CA), May 2013
- Barriers to Uptake of HTA. CADTH Annual Symposium on Health Technology Assessment (St. John's, NL), May 2013
- Quantifying the Opportunity Cost. Session Chair & Presenter. CADTH Annual Symposium on Health Technology Assessment (St. John's, NL), May 2013
- Health Technology Assessment & Knowledge Translation: Where theory intersects with reality. Special Lecturer & Course Provided at the University

of Barcelona, Graduate School of Economics (Barcelona, Spain), May 2013

- Know4Go: Bringing Evidence, Economics, Ethics and 'Everything Else' into Health Technology Decision-Making. Special Lecturer & Course Provided at the University of Barcelona, Graduate School of Economics (Barcelona, Spain), May 2013
- OPCAB vs CABG: Applying your knowledge to a real world case. University of Barcelona, Graduate School of Economics (Barcelona, Spain), May 2013
- Bias & Error in Decision-Making. University of Barcelona, Graduate School of Economics (Barcelona, Spain), May 2013
- Off-Pump Bypass Surgery – Who benefits from innovation? Society for Cardiothoracic Anesthesia (SCA) Annual Meeting (Miami, FL), April 2013
- Knowledge Translation in Mental Health: Defining our Priorities & Measuring our Impact. Regional Mental Health Grand Rounds (London, ON), March 2013
- Off-Pump vs On-Pump Bypass Surgery: An updated meta-analysis, Seoul National University (SNU), Seoul, Korea, April 2013
- International Collaboration for Hospital HTA. Invitation to collaborate in Hospital HTA with Seoul Hospital and Korean MOH (Seoul, KO), April 2013

- Colloids vs Crystalloids – What should be the role of Voluven in Surgery and Critical Care? A Systematic Review & Economic Analysis. Citywide Critical Care Grand Rounds (London, ON), February 2013

- Evidence-Based Decision-Making & Health Technology Assessment. Update in Clinical Anesthesia (Curacao, NL) January 2013

- Off-Pump Bypass Surgery: An Update. Update in Clinical Anesthesia (Curacao, NL) January 2013

- Colloids vs Crystalloids – What should be the role of Voluven in Surgery and Critical Care? A Systematic Review & Economic Analysis. Drug & Therapeutics Committee, London Health Sciences Centre (London, ON) January 2013

- Update on HTA in Canada. Pan-Canadian HTA Collaborative, Health Canada (Ottawa, ON) November 2012

- Dexmedetomidine for Awake Fiberoptic Intubation: A Meta-Analysis. Drug & Therapeutics Committee (London, ON) October 2012

- Dexmedetomidine for Monitored Anesthesia Care and Procedural Sedation: A systematic review. Drug & Therapeutics Committee (London, ON) October 2012



Dr. Janet Martin,  
Director of MEDICI

Fellows

Ramesh Sai OB (VH)	DION, Joanna PGY5	MORRISON, Stephen PGY5	SMITH, Ryan PGY5
Omar Ageel Cardiac (UH)	FRIDFINNSON, Jason PGY1	MYSLIWIEC, Bart PGY3 FMA	SOMMERFREUND, David PGY4/5
Hilda Alfaro Cardiac (UH)	GAI, Nan PGY1	NGUYEN, Don PGY1	STALDER, Marc PGY5
Arwa Alzahrani Simulation (VH)	HEGAZY, Ahmed PGY5	PARISER, Michael PGY4	TAAM, Lindsay PGY4
Fatimah Daynan Al-Salah Transplant (UH)	JASUDAVISIUS, Amanda PGY2	PATEL, Sanjay PGY5	THORNTON, Alistair PGY3
Kirk Duguay Cardiac (UH)	JIANG, Jessica Ming PGY1	PHILLIPS, Colin PGY2	VERGEL DE DIOS Jennifer PGY4
Erika Dutz Simulation (VH)	KHALAF, Roy PGY1	REWARI, Abhitej PGY2	VETHANAYAGAM Adrian PGY4
Ameerah Filemban Neuro (UH)	KUSZEWSKI, Peter PGY5	QUIGLEY, Nicole PGY1	YOUSSEF, Hesham PGY1
Mauricio Giraldo Cardiac (UH)	LANDRY, Jennifer PGY4	RACINE, Jennifer PGY4	ZHOU, Ray PGY3
Khalid Hanish Cardiac (UH)	LIN, Bill PGY2	RIDDELL, James PGY4	
Kamal Kumar OB (VH)	LOUGHEED, Sean PGY3	SCHINDEL, Mark PGY3	
Maria Lopera Velasquez Regional (SJHC & UH)	LUDWIG, Nathan PGY2	SCHULTZ, William PGY1	
Ashish Malik Transplant (UH)	MANJI, Farah PGY3	SCHWARTZ, Amanda PGY5	
Steve Morrison Transplant (UH)	CUSANO, Fiorenzo PGY3	SMALLWOOD, Jennifer PGY3	
	DAHROUJ, Dalal PGY1	McFARLING, Matthew PGY4	

Residents

AL-GHAZALY, Samer PGY3	KUSZEWSKI, Peter PGY5	QUIGLEY, Nicole PGY1	YOUSSEF, Hesham PGY1
BANASCH, Matthew PGY2	LANDRY, Jennifer PGY4	RACINE, Jennifer PGY4	ZHOU, Ray PGY3
BEBBINGTON, Fraser PGY2	LIN, Bill PGY2	RIDDELL, James PGY4	
CHIN, Melissa PGY2	LOUGHEED, Sean PGY3	SCHINDEL, Mark PGY3	
CUSANO, Fiorenzo PGY3	LUDWIG, Nathan PGY2	SCHULTZ, William PGY1	
DAHROUJ, Dalal PGY1	MANJI, Farah PGY3	SCHWARTZ, Amanda PGY5	
	McFARLING, Matthew PGY4	SMALLWOOD, Jennifer PGY3	

# Awards & Honours



[L to R] Dr. Ray Kao, Department of Emergency Medicine, Critical Care Division, Dr. Davy Cheng, Chair/Chief of the Department of Anesthesia and Perioperative Medicine, and Dr. Brian Church, of Anesthesia and Perioperative Medicine

## ANESTHESIOLOGIST DR. BRIAN CHURCH, AND THE ROLE 3 MULTINATIONAL MEDICAL UNIT RECEIVE NATO’S HIGHEST HONOURS

In late 2005, Canadian Forces Health Services (CFHS) was tasked with the command of the NATO Role 3 Multinational Medical Unit (R3MMU) on Kandahar Airfield in southern Afghanistan. Preparations drew on past experience and planning. Eight complete hospital contingents were trained and deployed in rotation. Near-reality simulation training was undertaken with the combat brigade, including complete deployment of the field hospital in the exercise area. Standard operating procedures (SOP) were developed and applied by each rotation so successfully that they were adopted by the new command in late 2009. The Canadian period at R3MMU had the highest survival rate ever recorded for victims of war.

Lessons learned are being applied among victims of the conflict and trauma. The experience of the R3MMU was used to successfully deploy a hospital as part of the earthquake relief effort in Haiti in 2010. The training protocols and SOP are being applied to disaster preparedness in Canadian civilian hospitals [abstract]<sup>1</sup>

The Dominique-Jean Larrey Award was awarded to Canada for its establishment and command of the NATO Role 3 Multinational Medical Unit at Kandahar Airfield, Afghanistan, from 2006 to 2009. It was the first ever NATO multi-national field hospital involved in combat operations.

Each year for the past six years Dr. Vivian McAlister has packed up his scrub caps and headed to the NATO Role 3 Multinational Medical Unit at Kandahar Airfield, Afghanistan. There, along with other Schulich Medicine & Dentistry faculty members Drs. Ray Kao, Critical Care, Brian Church, Anesthesia and Perioperative Medicine, and Surgery resident Rich Hilsden, they have established the highest survival rate for war victims recorded to date. In recognition for their outstanding contributions, the NATO Role 3 Multinational Medical Unit, was just awarded with the Dominique-Jean Larrey Award, the highest NATO honour for medical achievements in Afghanistan.

## The NATO Role 3 Multinational Medical Unit has established the highest survival rate for war victims recorded to date...

It is awarded in recognition of a significant and lasting contribution to NATO multi-nationality and/or interoperability or to improvements in the provision of health care in NATO missions within the areas of military medical support or military healthcare development. This is only the second time the award has been granted. Dr. McAlister and his Role 3 team, are now in the middle of a three month deployment in Kabul where his unit is assisting the Afghan people in the development of residency training programs in General surgery, Orthopaedics, Urology, ENT/ maxillofacial surgery, Internal Medicine and Critical Care.

### Read More about the R3MMU

<sup>1</sup>Brisebois R, Hennecke P, Kao R, McAlister V, Po J, Stiegelmar R, Tien H; Canadian Forces Health Services Research Consortium. The Role 3 Multinational Medical Unit at Kandahar Airfield 2005-2010. Can J Surg. 2011 Dec;54(6):S124-9

Brisebois RJ, Tien HC. Surgical experience at the Canadian-led Role 3 Multinational Medical Unit in Kandahar, Afghanistan. J Trauma. 2011 Nov;71(5 Suppl 1):S397-400.

## DR. ACHAL DHIR RECEIVES PRESTIGIOUS HIND RATTAN AWARD

2013 Jan: Dr. Achal Dhir, Director of Transplant Anesthesia and Associate Professor in the Department of Anesthesia and Perioperative Medicine at Western University, has received the prestigious Hind Rattan Award (Jewel of India) by the Non Resident Indian (NRI) Welfare Society of India, on January 25, 2013 (the eve of Republic Day). The award is given to approximately 25 eminent NRI's from various parts of the world at the Annual International Congress. The society has a mandate to promote unity, progress, friendship and co-operation and

honours those Indians who have made their mark overseas. The Department wishes to congratulate Dr. Dhir on this momentous achievement and honour

## DR. IVAN IGLESIAS IS AWARDED THE SILCOX-FELLOWS AWARD FOR EXCELLENCE IN UNDERGRADUATE MENTORING

2012 Oct: Dr. Ivan Iglesias was presented with the Silcox-Fellows Mentorship Award at Michael's Garden, Great Hall. Dr. Jim Silcox presented him with the distinction and spoke very kindly of Ivan's evident passion and love for education and the many students who have benefited from it over the last 10 years.

After accepting the award, Dr. Iglesias expressed his thoughts on why faculty mentorship for students is so important and how mentorship for students continues to be an enjoyable and satisfying experience for him.

## THE MEDICAL ADVISORY COMMITTEE (MAC) RECOGNIZES DR. WILLIAM SISCHEK WITH THE 2012 SJHC MAC AWARD

2012 Dec: The Medical Advisory Committees (MAC) annually recognizes hospital and Professional Staff who go "above and beyond the call of duty". These individuals are acknowledged for their outstanding contributions to London Health Sciences Centre (LHSC) and St. Joseph's Health Care, London (St. Joseph's) through nominations endorsed by the Medical Advisory Executive Committee.

This year, Dr. Bill Sischek, City-wide Clinical Coordinator and St. Joseph's Health Care London's (SJHC) Site Chief for the Department of Anesthesia and Perioperative Medicine, recieved the SJHC MAC Award. "Dr. Sischek has role modeled all that St. Joseph's is - respect, excellence and compassion - and members of the Endoscopy Unit (those who nominated him) thank him for his leadership and dedication to providing deeper sedation in the Endoscopy Unit a success."

St. Joseph's MAC Award – A Professional Staff member at St. Joseph's who has recently demonstrated qualities of leadership and provided outstanding contribution to the success of initiatives aligning with the strategic direction of St. Joseph's (vetted by the Medical Advisory Executive Committee and approved and awarded by the St. Joseph's MAC.



DR. PAT MORLEY-FORSTER IS THE CANADIAN ANESTHESIOLOGISTS SOCIETY’S GOLD MEDALIST FOR 2013

2012-2013 has been monuementous for the Chronic Pain Program. Under the leadership of anesthesist Dr. Pat Morley-Forster, the chronic pain program has positioned itself as a national leader in the management and prevention of pain. A major achievement was the acceditation of a Pain Medicine Subspecialty Program by the Royal College of Physicians and Surgeons of Canada (RCPSC).

The Pain Medicine Subspecialty Program, is a two year multidisciplinary training program, that includes Psychiatry, Pediatrics, Neurology, Physical Medicine and Rehabilitation and Rheumatology. The the curriculum received official approval from the Royal College in June, 2013. Read more about the Western Pain Program on [p. 20].

The Department is thrilled to announce that faculty member, Dr. Pat Morley-Forster, Professor and Director of the Chronic Pain Program in the Department of Anesthesia and Perioperative Medicine at Western University, was recently honoured by the Canadian Anesthesiologist’s Society with the 2013 Gold Medal.

In the span of over 20 years of an illustrious career, Dr Morley-Forster has shown leadership in advancing the clinical practice of pain management, is known as a “remarkable” coach and mentor, and has distinguished herself as an educator among her peers.

The Gold Medal is the highest award of the Canadian Anesthesiologists’ Society. The medal may be awarded to any individual, ordinarily a Canadian who has made a significant contribution to anesthesia in Canada through teaching, research, professional practice, or related administration and personal leadership.

This is the second time in recent years that the Department of Anesthesia and Perioperative Medicine has seen one of their faculty member honoured with a Gold Medal from CAS. Dr.Wojciech Dobkowski, of the Liver Transplant



Dr. Pat Morley-Forster

TEACHER OF THE YEAR AWARDS

FELLOW TEACHER OF THE YEAR

2012 – 2013: Ramiro Arellano

2011-2012: Su Ganapathy

POSTGRADUATE TEACHER OF THE YEAR

2012 – 2013: Rooney Gverzdys

2011 – 2012: Arif Al-Arebi

UNDERGRADUATE TEACHER OF THE YEAR

2012 – 2013: Michelle Gros

2011 – 2012: Collin Clarke



UNIVERSITY STUDENT COUNCIL (USC), WESTERN UNIVERSITY:

TEACHING HONOUR ROLL

FOR EXCELLENCE IN TEACHING IN UNDERGRADUATE MEDICAL EDUCATION.

Granton, Jeff

Gros, Michelle

Faculty Roles, Academic Outreach & Scholarship

Ahmad, Mohamad

Pediatric Anesthesia Program, Department of Anesthesia & Perioperative Medicine, Western University. Director.

Pediatric to Adult Care Transition Task Force. London Health Sciences Centre. Member. 2012 – Present.

Invited Lectures

CSTAR’s Interprofessional Summer School. London Health Sciences Centre. 2012 May. Faculty and Workshop Demonstrator: Airway Management.

Al-Areibi, Arif

Department of Anesthesia & Perioperative Medicine, Western University

- Pediatric Anesthesia Group. Member. 2009 – Present.
- Quality Assurance Committee, London Health Sciences Centre. Member. 2012.
- Royal College of Physicians and Surgeons of Canada Exam Preparation Group. Member. 2011 – Present.

Invited Lectures

Conference: Cardiovascular Care in 2012, The Heart-Team Approach. 2012 Dec. Benghazi, Libya. Invited Speaker.

Southwestern Ontario Anesthesia Meeting: Airway Workshop. 2012 Oct. London, ON. Workshop Demonstrator.

Antoniou, Andreas

Department of Anesthesia & Perioperative Medicine, Western University.

- Anesthesia Undergraduate Simulation Program. Coordinator. 2011 – Present.
- Resident Academic Half-day. Co-Coordinator. 2012 Feb – Present.

London Health Sciences Centre.

- Anesthesia and Obstetrics Interdisciplinary Simulation Program. Coordinator. 2013 – Present.
- Procedural Sedation Guidelines Committee. 2012 Aug – Present. Member.
- St. Joseph’s Health Care London. Pharmacy and Therapeutics Committee. Member. 2011 – Present.

Invited Lectures

Simulation Summit, Royal College of Physicians and Surgeons of Canada. Co-Organizer: Thinking Outside the Box, using creativity to improve scenarios [workshop].

- 2012 Nov. Ottawa.
- 2013 Jan. Orlando, Florida.

Arango, Miguel

Confederacion Latinoamericana de Sociedades de Anestesiologia. Committee Member. 2012 – Present.

Faculty of 1000. Medicine Editorial Board for Critical Care and Emergency Medicine. Member. 2004 – Present.

Latin American Brain Injury Consortium. Committee Member. 2012 – 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.

Invited Lectures

TIVAmerica 2012: Congreso Nacional de Anestesiologia. 2012 Nov. Fesacac, El Salvador.

- Invited Speaker
- 1. Isquemia Cerebral Intra-Operatoria [lecture].
- 2. Implicaciones Anesthesicas para Cirugia Minimamente Invasia en Neurocirugia [lecture].
- Keynote Speaker: Complicaciones Trans-Operatorias en Neurocirugia [lecture].

IV Congreso Regional de Neuroanestesia, Neurocirugia y Cuidado Neurocritico. 2012 Dec.

- Invited Speaker: Caso Clinico Accidente Cerebro-vascular [lecture].
- Session Moderator

1. Epilepsia
  2. Trauma Encefalocraneano
- Workshop Demonstrator: Taller para Medicos: Atencion Inicial Paciente Neurologico

Armstrong, Kevin

Department of Anesthesia & Perioperative Medicine, Western University

- Academic Affairs Committee. Chair. 2009 – Present.
- City-wide Acute Pain Service. Director. 2008 – Present.
- City-wide Regional Anesthesia Program. Co-Director. 2008 – Present.
- Department Council. Member. 2011 – Present.

Schulich School of Medicine & Dentistry, Western University. Mentoring Committee. Member. 2011 – Present.

Invited Lectures

2nd Annual Ultrasound Guided Regional Anesthesia Cadaver Course. 2012 May. Penn State: Hershey Medical Centre, Hershey, Pennsylvania. Invited Speaker.

(continued...Armstrong, Kevin)

Southwestern Ontario Anesthesia Meeting: Airway Workshop. 2012 Oct. London, ON. Workshop Instructor.

Schulich School of Medicine & Dentistry, Talent Management Conference. 2012 Nov. London, ON. Invited Lecturer: Implementing a Formalized Mentorship Program for Academics

Armstrong, Paidrig

St. Joseph's Health Care London

- Anesthesia Equipment Committee. Member. 2006 – 2012.
- Medical Emergency Response Committee. Member. 2003 – Present.
- Physician Assistant Site Coordinator. 2012 – Present.
- Postgraduate Education Committee. Member. 2012 – Present.

Invited Lectures

Southwestern Ontario Anesthesia Meeting: Airway Workshop. 2012 Oct. London, ON. Workshop Demonstrator.

Bainbridge, Daniel

AMOSO Innovation Fund Committee. Member. 2012 – Present.

Canadian Anesthesiologists' Society.

- Annual Meeting Committee. Chair. 2012 – 2015.
- Scientific Affairs Subcommittee. Chair. 2010 – 2012.

Department of Anesthesia & Perioperative Medicine, Western University

- Academic Affairs Committee. Member. 2009 – 2012.
- Cardiac Anesthesia Fellows Committee. Member. 2009 – 2012.
- Departmental Research Committee. Member. 2011 – Present.
- ECHO Committee. Member. 2006 – 2012.

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.

Invited Lectures

ICCVA 2012: 13th International Congress of Cardiothoracic and Vascular Anesthesia - combined with the New Zealand Society of Anaesthetists (NZSA). 2012 Nov. Invited Speaker: Advanced

Qualification Workshop

Schulich School of Medicine & Dentistry. 2012 Critical Care Ultrasound Course. Invited Speaker: Vascular Workshop.

Batohi, Pravin

St. Joseph's Health Care London. 2012 – Present.

- Board of Directors. Member
- Governance Committee. Member
- Medical Advisory Committee. Member
- Professional Staff Organization. Chair

Bellingham, Geoff

Department of Anesthesia & Perioperative Medicine, Western University

- Academic Affairs Committee. Member. 2010 – Present.
- Chronic Pain Fellowship. Subspecialty Education Coordinator. 2012 Jul – Present.
- Quality Assurance Committee. Member. 2010 – Present.

Western Pain Medicine, Western University: Scientific Advisory Board for Western Pain Clinic and Earl Russell Pain Chair. Board Member. 2012 – Present.

Brookes, Jonathan

Invited Lectures

Southwestern Ontario Anesthesia Meeting, Western University. 2012 Dec. Workshop Demonstrator.

Mini-University Session, Western University: Demonstrating Ultrasound to Young Students as part of an anatomy lab project. 2012 Aug. Workshop Demonstrator.

Anatomy Lab, Western University: Undergraduate Anatomy Studies, teaching sonoanatomy to medical students. 2012 Sep. Workshop Demonstrator.

Bruni, Ida

Invited Lectures

ENT Bootcamp, Western University: Simulation Session. 2012 Sep. Workshop Demonstrator.

Southwestern Ontario Anesthesia Meeting, Western University: Simulation Session. 2012 Dec. Workshop Demonstrator.

Butler, Ron

Department of Anesthesia & Perioperative Medicine, Western University.

- Anesthesia Associates Practice Plan Financial Committee. Member.
- Department Council. Member. 2002

London Health Sciences Centre (LHSC)

- Critical Care Executive Committee. Member.
- Critical Care Joint Council. Member.
- Critical Care Program Members Committee. Member.
- CSRU Committee. Chair.
- Joint Professional Staff HR Committee. Member.
- MSICU Consultants Group. Member.
- Quality Workplace Committee. Member.
- Residency Training Committee. Member. 1999 – Present.

Cave, Anita

Invited Lectures

OMA: Ontario Anesthesia Meeting. 2012 Sep. Presenter: Literature Review – The Annual Update in Anesthesia.

Southwestern Ontario Anesthesia Meeting, Western University: Basic Workshop for AirTraQ. 2012 Oct. Workshop Demonstrator.

Champion, Lois

Department of Anesthesia and Perioperative Medicine, Western University.

- Postgraduate Education Program
- Critical Care Academic Coordinator. 2011 June – Present.
- Junior Resident Coordinator

Department of Medicine, Western University: Diagnostic and Therapeutics Rounds / Critical Care. Rounds Coordinator for University Hospital.

London Health Sciences Centre University Hospital

- Antimicrobial Committee. Member. 2010 – Present.
- Infection Control Committee. Member.
- Intensive Care Unit Collaborative Practice Committee. Member.
- Intensive Care Unit Management Committee. Member.
- Medication Safety Committee. Member.
- 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

- Critical Care Program Committee. Member.
- Postgraduate Education Program
- Critical Care Residency Training Committee. Member. 2010 – Present.
- Internal Review Committee. Member.
- Provost Advisory Committee on Teaching and Learning. Schulich School of Medicine & Dentistry Representative. 1998 – Present.

Undergraduate Education (UGE) Program Courses.

- Emergency Care (Year 2). Course Chair. 2006 – Present.
- Epidemiology (Year 1). Course Chair. 2010 – Present.
- Evaluating Committee for Undergraduate Education. Member. 2001 – Present
- Pre-clerkship and Transition Committee. Member. 2009 – 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 – Present.

Canadian Anesthesiologists' Society

- Board of Directors. Board Member. 2011 – Present.
- 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 (ESEMC) 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 2009– 2012; Chair 2012 - 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): Scientific Affairs Committee. Elected North American Representative. 2012 – Present.

Invited Lectures

WFSA Symposium, Euroanesthesia annual meeting, Barcelona, Spain. 2013, Jun 1-4.

- Symposium: Field of the anesthesiologist's competency.
- What place for subspecialties in anesthesiology? [Lecture]

For the complete list of Dr. Davy Cheng's Invited Lectures, please see the MEDICI and EPiCOR program report, [p. 37].

Cherry, Richard

Department of Anesthesia & Perioperative Medicine, Western University

- Anesthesia Simulation Program. Director.
- Postgraduate Education Committee. Member. 2002 – Present.
- Residency Program. IT Coordinator.
- Simulation Fellowship Program. Coordinator.

London Health Sciences Centre (LHSC)

- CSTAR Simulation Committee. Chair. 2009 – Present.
- Women and Children's Simulation Steering Committee. Member.

Royal College of Physicians and Surgeons of Canada.

- Anesthesia Examination Committee. Director of Exam Technologies and Simulation.
- CanNASC Committee, for the implementation of standardized simulation curriculum. Member.

Schulich School of Medicine & Dentistry, Western University.

- Department of Medicine: Chair Selection Committee. Member.
- Globalization, Internationalization and Simulation Committee. Member.
- Undergraduate Education Simulation Curriculum Advisory Committee. Member.
- Undergraduate Education Simulation Infrastructure Advisory Committee

Invited Lectures

Simulation Summit, Royal College of Physicians and Surgeons of Canada. 2012 Nov 17. Co-Organizer

- Presenter: The difficult de-brief – how to de-grief the debrief [workshop].
- Presenter: Thinking Outside the Box, using creativity to improve scenarios [workshop].

Clarke, Collin

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

(continued)



(continued...Clarke, Collin)

Department of Anesthesia and Perioperative Medicine, Western University.

- Academic Affairs Committee. Member. 2012 – Present.
- Pain Medicine Residency Program. Interventional Coordinator. 2012 – Present.
- Medical Advisory Committee, St. Joseph's Health Care London. Vice 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.

- Site Specific Resident Coordinator - University Hospital. 2008- present.
- Anesthesia Research Committee. Member. 2011-2012.

London Health Sciences Centre

- Pharmacy and Therapeutics Committee. Member. 1997
- Post-Anesthetic Care Unit. Anesthesia Liaison. 2002 – Present.

London Health Sciences Centre and St. Joseph's Health Care London: Quality and Patient Safety Planning Committee. Member. 2008 – 2009.

Schulich School of Medicine & Dentistry, Western University

- Admissions Committee. Member. 2009 – Present
- Examiner for Clinical Methods OSCE. 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.

Dhir, Achal

Annals of Cardiac Anesthesia. Editorial Board Member. 2012.

Department of Anesthesia and Perioperative Medicine.

- Liver Transplant Program. Director and Fellowship Coordinator. 2012 – Present.
- Site Specific Rounds Coordinator. 2005 – Present.
- Subspecialty Journal Club: Liver Transplant Journal Club. Journal Club Convenor. 2012 Sep-Dec.

Ontario Medical Association. Scientific Program. Chair. 2010 – Present.

Schulich School of Medicine and Dentistry, Western University: Global Research Opportunities in Health (GROH). Facilitator and Advisor. 2006 – Present.

Canadian Anesthesiologists' Society : Regional Anesthesia Section. Chair. 2010 – 2012.

London Health Sciences Centre.

- Renal Transplant Committee. Member. 2005 – Present.
- University Hospital Operating Room Committee. Member. 2002 – Present.

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

Invited Lectures

ISA Annual Conference. Indore, India. 2012 Dec.. Invited Speaker: Measurements of Pressures, volumes and flows by TEE [lecture].

PGIMR & RML Hospital, New Delhi, India. 2012 Jul. Visiting Professor: Role of the Anesthetist in Minimally Invasive Cardiac Surgery [lecture].

Toronto TEE Symposium. Toronto, ON. 2012 Nov. Invited Speaker: TEE as a monitoring tool [lecture].

Dhir, Shalani

Canadian Anesthesiologists' Society

- Annual Meeting Committee. Core Member. 2012 – present.
- Regional Anesthesia Section. Chair. 2010 – 2012.

London Health Sciences Centre. University Hospital Operating Room Committee. Member. 2002 – Present.

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

Invited Lectures

All India Institute of Medical Sciences (AIIMS): Trauma Workshop. India. 2012 Oct. Invited Instructor and Workshop Chair.

- Basics of US Machine
- Lower Limb Sonoanatomy
- Upper Limb Sonoanatomy
- US guided truncal blocks

International Conference on Recent Advances in Anesthesiology. India. 2012 Oct. Invited Speaker.

- Cancer recurrence and anesthesia [lecture].
- Newer anticoagulants and anesthesia [lecture].

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.

Fantillo, Vanessa

Ontario Society of Anesthesia, Quality Assurance Committee. Member. 2012 – present.

Invited Lectures

London Health Sciences Centre, Victoria Hospital. Pediatric Transport Team. 2012 Nov.

- Assessment of Critically Ill Children [lecture]
- Shock in Critically Ill Children [lecture].

Fuller, John

Canadian Ambulatory Anesthesia Research and Education (CAARE) Group. Committee Member. 2009 – Present.

Critical Care Trauma Centre, Victoria Hospital (LHSC).

- Awards Committee. Member
- Call Models Working Group. Member.

London Health Sciences Centre: Critical Care Division

- Critical care Residency Program. Member. 2005 – Present.
- EPO/OPS Study Safety Board. Member. 2009 – Present.

London Health Sciences Centre: Critical Care Division

- Finance Committee. Member. 2011 – Present.
- Program Committee. Member. 2002 – Present.

London Health Sciences Centre

- Central Line Infection Working Group. Member.
- CCTC Recruitment and Retention Shared Leadership Core Team. Member. 2005 – Present.
- Defibrillator Renewal Working Group. Member.
- Oncology Perioperative Care Committee. Member. 2007 – Present.
- Operating Room Executive Committee. Member. 2007 – Present.
- Maternal Emergency Response (Post M2P2). Member.
- Medical Advisory Committee: Leadership Subcommittee. Member.
- Pregnant Patients with Critical Illness Pathway Group. Member. 2009 – Present.
- Ultrasound Interest Group. Member.

Royal College of Physicians and Surgeons of Canada.

- Canadian Ambulatory Anesthesia Research and Education Committee. Member.
- Corporate Affairs Committee. Member. 2006 – Present.

Schulich School of Medicine & Dentistry, Western University.

- Postgraduate Policy Renewal Committee. Member. 2011.
- Postgraduate Appeals Committee. Chair. 2011.
- Undergraduate/Postgraduate Awards Committee. Member. 2012.

St. Joseph's Health Care London. Perioperative Care Medical Director. 2012- Present.

- Medical Emergency Response Committee (MERC). Member. 2005 – Present.
- Medical Emergency Response Subcommittee: Two-tiered response planning. Chair. 2011 – Present.
- Medical Emergency Response Team. Chair. 2003 – Present.
- Operating Room Executive Committee. Alternate Chair. 2006 - Present.
- Perioperative Committee. Co-Chair.
- Perioperative Grand Rounds. Organizer.
- Perioperative Model of Care Evaluation Committee. Member. 2004 – Present.

- Preadmission Improvement Committee. Member. 2004 – Present.
- Step-Up Care Unit. Medical Director.

Invited Lectures

Schulich School of Medicine and Dentistry, Western University. Faculty Development Workshop: Teaching in a Clinical Setting. Workshop Organizer and Lecturer. 2012 Sep.

Ganapathy, Sugantha

Department of Anesthesia & Perioperative Medicine, Western University. 2012 – Present. Member.

- Acute Pain Committee
- Research Committee

Orthopedic Anesthesia Pain Rehabilitation Society. 2012 – Present. Board Member.

Invited Lectures

9th Annual International Symposium of Ultrasound for Regional Anesthesia and Pain Medicine (ISURA), Toronto, ON. 2012 Jun.

- Session Moderator: Innovation and Miscellaneous Topics; Master Class.
- Workshop Demonstrator: Pain Medicine Program: Morning Workshops; Challenging Cases, Upper and Lower Limbs; Workshop II.

Granton, Jeff

Association of Canadian University Departments of Anesthesia (ACUDA). Education Committee. Member. 2009 – Present.

- 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

Department of Anesthesia & Perioperative Medicine, Western University: Department Council. Member. 2010 – Present.

London Health Sciences Centre. Critical Care Division

- Cardiac Surgery Recovery Unit. Education Director.
- Finance Committee. University Hospital. Member. 2006 – Present.
- ICU Education and Research Committee. Physician Representative. 2010 – Present.
- Medical/Surgical Intensive Care Unit. Education and Research Committee. Physician Representative. 2010 – Present.

- Quality Improvement for Medical/Surgical Intensive Care Unit. University Hospital Coordinator. 2005 – Present.
- Resident Training Committee: University Hospital. Member. 2006 – Present.
- Transfusion Practices Committee (LHSC and ST. JOSEPH'S). Critical Care Representative. 2006 – Present.

Royal College of Physicians and Surgeons of Canada

- Anesthesia Speciality Committee. Western Program Representative. 2009 – Present.
- Critical Care Speciality Committee. Canadian Critical Care Society Representative. 2010 – Present.
- Western University Schulich School of Medicine and Dentistry
- Critical Care Western Residency Training Committee. Committee Member.
- Postgraduate Appeals Committee. Committee Member. 2011 – Present.

- Postgraduate Education Committee. Chair. 2010 – Present.

Gros, Michelle

Department of Anesthesia & Perioperative Medicine, Western University.

- Anesthesia Record Committee. Member. 2011 – 2012.
- Undergraduate Education (UGE). Victoria Hospital Coordinator.

London Health Sciences Centre.

- Quality Assurance City-wide Committee. Member. 2010 – Present.
- Sleep Apnea Committee. Chair. 2012 – Present.
- UGE Surgical Education Committee. Member. 2011 – Present.

Royal College of Physicians and Surgeons of Canada: Postgraduate Education Program. Examiner. 2012 – Present.

Gverzdys, Rooney

The Kuwait Institute of Medical Specialization (KIMS). Examiner in Anesthesia, and Representative of the Royal College International.

Department of Anesthesia and Perioperative Medicine, Western University.

- Postgraduate Education Committee. Member.
- Victoria Hospital: Site Coordinator for Anesthesia Residents

Harle, Chris

AMOSO Governance Committee. Member 2012.

CAHO: Adopting Research To Improve Care (ARTIC) Program. Anesthesia ‘Champion’ for LHSC. 2012 Sep.

Department of Anesthesia and Perioperative Medicine, Western University. University Hospital Site Chief.

- Anesthesia Associates Practice Plan, Financial Management Committee. Vice Chair.
- Department Council. Member.
- Quality Assurance Committee. Member.

London Health Sciences Centre (LHSC)

- City-wide Perioperative Committee. Member. 2012
- City-wide Perioperative Executive. Member 2012
- Profound Medical Working Group.

University Hospital, LHSC

- Central Line Working Group. Member. 2012
- Donor Management Committee. Member 2012.
- Perioperative Blood Conservation Program. Member.
- Perioperative Site Committee. Member. 2012
- LHIN: Southwestern Ontario Hip Fracture Improvement Committee. Member. 2012

Invited Lectures

Southwestern Ontario Anesthesia Meeting, Western University. 2012 Oct. Co-Organizer, and Workshop Demonstrator.

Herrick, Ian

Association of Canadian Academic Departments of Anesthesia (ACUDA), Continuing Education and Professional Development Committee. 2008 – Present.

Department of Anesthesia and Perioperative Medicine, Western University.

- Audit Group: Hypothermia Management. Co-Chair. 2012
- City-Wide Anesthesia Quality Assurance Committee. Chair. 2008 – Present.
- Continuing Medical Education Program. Director.
- OSA Policy Working Group. Co-Chair. 2012.

London Health Sciences Centre (LHSC).

- Citywide Credentials Committee. Member. 2012.
- Citywide Professional Staff and Human

Resources Committee. Member. 2012.

- Quality and Patient Safety Committee. Member. 2011 – Present.
- Office of the Chief Coroner of Ontario, Patient Safety Review Committee. Toronto, ON. 2007 – Present.

Schulich School of Medicine and Dentistry, Western University.

- Conditions for Appointment – Role Model, Leadership and Contributions Review Committee. Member.
- Continuing Medical Education Advisory Committee (ACCME). 2008 – Present.

Thames Valley Hospitals. HUGO (Healthcare Undergoing Optimization) Physician Advisory Committee. 2012 – Present.

Invited Lectures

ACUDA Annual Meeting. Invited Speaker: Plenary Session: Performance Metrics and pt Outcomes. 2012 Jun.

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.
- City-wide Laser Safety Committee. Member. 2012 – Present.
- New Technology Assessment Team (University Hospital). Member. 2012 – Present
- New Technology Assessment Team (Victoria Hospital). Member. 2012 – Present.

Iglesias, Ivan

Department of Anesthesia and Perioperative Medicine, Western University. 2012.

- Resident Airway Coordinator (UH).
- TEE Program. Specialty and Site Specific Rounds Coordinator.
- Undergraduate Education Program. Citywide Director.

Schulich School of Medicine and Dentistry, Western University.

- Resuscitation Medicine Elective (4th year). Course Coordinator.

- Undergraduate Medical Education, Clerkships and Electives Committee (CEC). Member.

Invited Lectures

CSTAR Workshop, London Health Sciences Centre, London, ON. 2012 Aug. Workshop Demonstrator: Critical Care Echocardiography.

Southwestern Ontario Anesthesia Meeting, Western University. 2012 Oct. Co-Organizer, and Workshop Demonstrator.

Jones, Philip

Association of Canadian Departments of Anesthesia (ACUDA): Perioperative Anesthesia Clinical Trials (PACT) Group. Member.

Canadian Anesthesiologists' Society (CAS)

- Ethics Committee. Committee Member.
- Research Committee. Committee Member.

Department of Anesthesia & Perioperative Medicine, Western University.

- Cardiac Anesthesia Committee. Member.
- CSRU Committee. Member.
- Department Council. Member. 2008 – Present.
- Department Research Committee. Member.
- Finance Management Committee. Member. 2009 – 2012.

London Health Sciences Centre

- City-wide Laser Safety Committee. Member. 2004 – Present.
- Drugs and Therapeutics Committee. Chair. 2011 – Present.
- Department of Pharmacy. Residency Committee. Member. 2011 – Present.
- Health Sciences Research Ethics Board (HSREB) Committee. Member.

Invited Lectures

Cardiac Team Meeting, The London Club, London, ON. 2012 Jun. Invited Speaker: The value of post-protamine ACT.

Health Sciences Research Board. 2012 Jul. Invited Speaker: The definition and utility of open data.

Katsiris, Sandra

Association of University Departments of Anesthesia (ACUDA). Member. 2011 – Present.

Department of Anesthesia & Perioperative Medicine, Western University.

- Academic Affairs Committee. Member. 2011 – Present.
- Department Council. Member. 2009 – Present.

- Quality Assurance Committee. Member. 2008 – Present.
- Cardiac Anesthesia Rotation for Residency. Coordinator
- 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.
- Perinatal Mortality Review Committee. Member. 2010 – Present.
- Obstetrics/Neonatal Quality Review Committee. Member. 2009- 2012

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.

Ontario Health Technology Advisory Committee Expert Panel for Cesarean Section Rate Review in Ontario. Member. 2013 - current

Ontario Office of the Chief Coroner. Maternal and Perinatal Death Review Committee. Member. 2007 – Present.

Royal College of Physicians and Surgeons of Canada

- Anesthesiology Specialty Committee. Member. 2011 – Present.
- Examination Committee in Anesthesiology. Member. 2009 – Present.
- Oral Examination Board in Anesthesiology. English Chair. 2011 – Present.
- Oral Examination Board. Member. 2005 – Present.
- Written Test Committee. Member. 2005 – Present; Chair Supervisor. 2011 – Present.

Lavi, Ronit

Department of Anesthesia & Perioperative Medicine, Western University

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.

Invited Lectures

OMA: Ontario Anesthesia Meeting. 2012 Sep. Invited Lecturer: Perioperative Management of Patients with Renal Dysfunction.

Southwestern Ontario Anesthesia Meeting: Airway Workshop. 2012 Oct. London, ON. Workshop Demonstrator.

Mack, Peter

Department of Anesthesia and Perioperative Medicine: Undergraduate Education Program. Site Coordinator for University Hospital.

Medical Council of Canada: LMCC Part II Exams. Examiner.

McConachie, Ian

Canadian Anesthesiologists' Society

- Abstract Review Committee. Member. 2009 – present

Department of Anesthesia & Perioperative Medicine, Western University

- Finance Management Committee. Member. 2011 – Present.

London Health Sciences/St. Joseph's Health Care London.

- Joint Credentials Committee. Member. 2011 – Present.
- Joint Medical Advisory Committee. Member. 2010 – 2012.

St. Joseph's Health Care London

- Hospital Board. Board Member. 2011 – 2012
- Governance Committee. Member. 2011 July – 2012 July.
- Professional Staff Organization. President. 2011 July – 2012 July

Invited Lectures

2nd International Conference on Recent Advances in Anaesthesiology (INCRAA – SCCC). 2012 Oct. Department of Anesthesiology, All India Institute of Medical Sciences, New Delhi, India. Invited Speaker.

- Carbs and Proteins – starches and albumin for resuscitation [lecture].
- Intravenous Lidocaine: The Big Freeze [lecture].
- Oh Sweet Mystery of Life: Perioperative Management of Diabetes [lecture].

Southwestern Ontario Anesthesia Meeting: Airway Workshop. 2012 Oct. London, ON. Workshop Demonstrator.

McNamara, Jeffrey

London District Academy of Medicine. Vice President and Treasurer. 2011 – Present.

London Health Sciences Centre.

- Board of Directors. Member.
- Human Resources Sub-Committee. Member.
- Medical Affairs Executive Committee. Member.
- Professional Staff Organization (PSO). Vice President. 2012 – Present.
- PSO By-Law Working Group for 2012. Member. 2012.

London Health Sciences and St. Joseph's Healthcare London.

- Joint Medical Affairs Committee. Member.
- Joint Selection Committee for the Chief of the Department of Dentistry. LHSC Board Appointed Representative. 2012.

Morley-Forster, Pat

Academic Pain Clinic Directors of Canada. Member. 2004 – Present.

Canadian Journal of Anesthesia. Editorial Board. Editor. 2009 – Present.

Annual Meeting. Chicago, Illinois. 2012 Oct. Moderator and Symposium Chair: Does Cerebral Monitoring Improve Neurologic Outcome.

International Congress of Cardiothoracic and Vascular Anesthesia, and the New Zealand Annual Scientific Meeting. 2012 Nov. Auckland, New Zealand.

- Lecturer: What Ever Anesthetist and Intensivist Should Know About Brain Protection.
- Moderator: Poster Session.

International Meeting on Aortic Diseases. 2012 Oct. Liege, Belgium. Invited Speaker: Monitoring of the Cerebral Perfusion.

Canadian Pain Society. Neuropathic Pain Special Interest Group. Invited Member. 2005 – Present.

Department of Anesthesia and Perioperative Medicine, Western University. Chronic Pain Program. Director.

(...continued)





Dr. Ronit Lavi

# Lecture:

## Perioperative Management of Patients with Renal Dysfunction.

—Ronit Lavi, Invited Lecturer. Ontario Medical Association, Annual Meeting: 2012 Sep.

(continued...Morley-Forster, Pat)

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

- Anesthesiology Specialty Committee. Member. 2012 – Present.
- Pain Medicine Specialty Committee. 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.

**Morrell, Bobbi-Jo**

London Health Sciences Centre: Preadmission Clinic, including Nursing, Medicine, and Anesthesia. City-wide Director. 2012 Aug – Present.

Thames Valley Hospitals. HUGO (Healthcare Undergoing Optimization).

Perioperative Order Set Builds Group. Physician Lead. 2012 – Present.

Physician Advisory Committee. Member. 2012

**Murkin, John**

Blood Conservation using Antifibrinolytics in a Randomized Trial (BART) Steering Committee. Executive Committee Member. 2008 – Present.

Department of Anesthesia and Perioperative Medicine, Western University.

- Cardiac Anesthesia Academic Group. Member. 2006 – Present.
- Cardiac Anesthesia Fellows Steering Committee. Member. 2009 – Present

The Heart Surgery Forum periodical. Editorial Board Member. 2009 – Present.

McMaster Health Research Institute. Coronary Steering Committee. Member.

McMaster Health Research Institute. Coronary Steering Committee. Member.

National Heart, Lung and Blood Institute (NIH). Scientific Advisory Board. Member.

**Invited Lectures**

The Korean Society of Anesthesiologists Annual Meeting. 2012 Nov. Kwang Ju, Korea. Invited

Speaker: Shine a light: Non-invasive Near Infrared Spectroscopy Advances Clinical Monitoring and Profoundly Impacts Patient Outcomes.

**Nicolaou, George**

Department of Anesthesia and Perioperative Medicine. Western University: Victoria Hospital. Site Chief.

- Department Council. Member.
- Finance Committee. Member.
- Thoracic and Vascular Program. Director; Fellowship and Resident Coordinator; Course Coordinator.

The London & District Academy of Medicine. Member. 2005 – Present.

London Health Sciences Centres.

- Anesthesia Assistant/RT Role Review Project Team & Nurse Practioner Meetings. Member.
- Citywide Perioperative Executive Committee. Co-Chairman. 2011 – Present.
- CWPOC Procurement Committee. Member.
- Orthopedic Steering Committee. Member

**Invited Lectures**

International Forum of Cardiovascular Anesthesia and the 8th International Chinese Cardiovascular Anesthesia Forum. Beijing, China. 2012 Aug.

- Invited Speaker: Spinal Cord Protection During Thoracic Aortic Surgery.

(continued...Nicolaou, George)

- Session Moderator: Organ Protection Strategies in Cardiac Surgery.

Southwestern Ontario Anesthesia Meeting: Airway Workshop. 2012 Oct. London, ON. Workshop Demonstrator.

**Parkin, John**

Department of Anesthesia and Perioperative Medicine, Western University: St. Joseph's Health Care London. Resident Rounds Coordinator.

**Railton, Craig**

Department of Anesthesia & Perioperative Medicine, Western University.

- Journal Club. Co-Convenor.
- Quality Assurance Committee. Member. 2009 – Present.
- Research Committee. Member. 2011 – Present.

London Health Sciences Centre

- City-Wide Blood Transfusion Committee. Member. 2009 – Present.
- Clinical Pharmacology Resident Training Committee. Member. 2006 – Present.
- Drug and Therapeutics Committee. Member. 2011 – Present.
- Medication Reconciliation and Sustainability Committee. LHSC Physician Sponsor. 2012 – Present.
- Post-Doctoral Advisory Committee. Member. 2010 – Present.
- Research Ethics Review Board. 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.

**Invited Lectures**

Department of Clinical Pharmacology, Western University: Grand Rounds. Invited Lecturer: An English Gentleman, Flying, Death, and Surgery: An Overview of Neuromuscular Blocking Agent Pharmacology and Research Update.

**Ralley, Fiona**

Advisory Board for the Pathogen Inactivation Study Advisory Group (McMaster University). Member. October 2010 – Present.

Department of Anesthesia and Perioperative Medicine, Western University.

- Anesthesia Assistants Advisory Committee. Member. 2008 – Present.
- University Hospital. Anesthesia Assistants Program. Site Coordinator.

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.

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.

**Invited Lectures**

Patient Blood Management (PBM) Symposium. Toronto, ON. 2012 Sep. Invited Speaker: Erythropoietin and intravenous iron in patient blood management.

**Sharpe, Michael**

Canada Blood Services: Deceased Donation Advisory Committee (ODTEAC). Member. 2012 – Present.

Canadian Critical Care Society. Secretary. 2013 – Present.

- Working Group: Guidelines on the procedure of withdrawal of Life Sustaining Therapy. Member. 2013 – Present.

CIHR: Transplantation Research Committee. Member. 2012 – Present.

Critical Care Program, Western University.

- Critical Care Joint Council. Member. 2006 – Present.
- Critical Care Research Committee. Member. 2008 – Present.
- Postgraduate Education Committee. Member. 1993 – Present.

Critical Care Services Ontario: Coordinating Committee. Member. 2012 – Present.

Intensive Care Unit Program, Western University: Coordinator for Visiting Professors.

London Health Sciences Centre.

- Clinical Services Renewal Committee (Transplantation Section). Member. 2013 – Present.
- Organ Donor Management Committee. Chair. 2000 – Present
- Patient Access and Flow Steering Committee. Member. 2012 – Present.
- Respiratory Therapy Program – Critical Care. Medical Coordinator. 1997 – Present.

Ministry of Health and Long Term Care (MOHLTC): Province of Ontario Critical Care Strategy. Critical Care LHIN Leader for LHIN 2 (Southwest). 2007 – Present.

Regional Physician Leaders and Chiefs of Staff One Number Committee. Member. 2010 – Present.

**Invited Lectures**

IV Neuro Congress. Mendellin, Colombia. 2012 Dec. Invited Speaker.

- DCD (lecture).
- Inhalation Anesthesia for Refractory Status Epilepticus (lecture).
- Critical Care Canada Forum. Toronto, ON. 2012 Oct. Invited Speaker: Growing DCD in Ontario

**Simon, Gary**

London Health Sciences Centre

Pediatric Symptom Management and Supportive Care. Member. 2010 – Present.

Perioperative Blood Conservation Committee. Member. 2004 – Present.



Dr. Vanessa Fantillo

**Singh, Indu**  
Association of Canadian Universities Departments of Anesthesia (ACUDA) : Research Group. Member. 2003 – Present.

Department of Anesthesia and Perioperative Medicine, Western University.

- Obstetric Anesthesia Program. Subspecialty Coordinator.
- Postgraduate Education Committee. Member.
- Quality Assurance Committee. Member. 2005 – Present.

London Health Sciences Centre

- Managing Obstetrical Risk Effectively Core Team. Member. 2005 – Present.
- SRTP Advisory Board. Clinical Member. 2009 – Present.

Schulich School of Medicine and Dentistry: Research Training Program. Clinical Member.

St. Joseph’s Health Care London

- Hospital Medication Committee. Member. 2003 – Present.
- P & T Committee. Clinical Member.

**Sischek, William**  
Department of Anesthesia & Perioperative Medicine, Western University.

Citywide Clinical Coordinator

St. Joseph’s Health Care London. Site Chief

Finance Management Committee. Chair. 2007 – Present

Anesthesia Associates. Executive. 2007 – Present

Schulich School of Medicine and Dentistry, and London Health Sciences Centre: Joint Ophthalmology Selection Committee. Elected Faculty Representative. 2012.

**Invited Lectures**  
Department of Psychiatry, Western University: Regional Symposium. London, ON. 2012 Dec. Invited Speaker: Anesthetic Considerations for Electroconvulsive Therapy.

**Smith, David**  
Department of Anesthesia, El-Salud, Arequipa, Peru. 2012. Lecturer and Preceptorship.  
The Kuwait Institute of Medical Specialization (KIMS). Examiner in Anesthesia, and Representative of the Royal College International.

**St-Amand, Marc**  
Department of Anesthesia and Perioperative Medicine, Western University: Anesthesia Associates Executive Committee. Member. 2012

Royal College of Physicians and Surgeons of Canada: Oral Exam Committee. Member. 2012.

**Taneja, Ravi**  
Canadian Anesthesia Fellowship Steering Committee. Member. 2009 – Present.

Department of Anesthesia and Perioperative Medicine, Western University.

- Cardiac Anesthesia Committee. Member. 2004 – Present.
- Cardiac Anesthesia Fellowship Program. Coordinator. 2009 – Present.
- Department Council. Member. 2012 – Present.

London Health Sciences Centre: University Hospital.

- Critical Care Program: Residency Training Committee. Member. 2004 – Present.
- CSRU Committee. Member. 2009 – Present.
- ICU Consultant Committee. Member. 2004 – Present.
- ICU Research Committee. Member. 2009 – 2012; Chair. 2012 – Present
- Lung Inflammation Research Group. Founding Member. 2012 – Present

**Turkstra, Tim**  
Canadian Anesthesiologists’ Society: Airway Focus Committee. Member. 2012.

Department of Anesthesia & Perioperative Medicine, Western University.

- Airway Residency Rotation. Coordinator.
- Journal Club. Co-Convenor.

Schulich School of Medicine & Dentistry, Western University

- National Curriculum Committee. Member.
- Patient-Centered Care and Integration and Application (PICCA). Facilitator/Coordinator. 2010 – Present.
- Southwestern Ontario Anesthesia Airway Conference. Instructor and Course Organizer. 2005 – Present.

**Invited Lectures**  
16th Annual Society for Airway Management Scientific Meeting. Toronto, ON. 2012 Sep. Invited Speaker: “My patient has a difficult airway letter from EGH (Elsewhere General Hospital). I’m going to intubate him awake (Law) vs. I’m going to intubate him asleep (Turkstra)”.

Southwestern Ontario Anesthesia Meeting: Airway Workshop. 2012 Oct. London, ON. Workshop Demonstrator.

**Vanelli, Anthony**  
**Invited Lectures**  
Southwestern Ontario Anesthesia Meeting: Airway Workshop. 2012 Oct. London, ON. Workshop Demonstrator.

**Watson, James**  
Canadian Anesthesiologists’ Society. Ontario Division Director and 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.

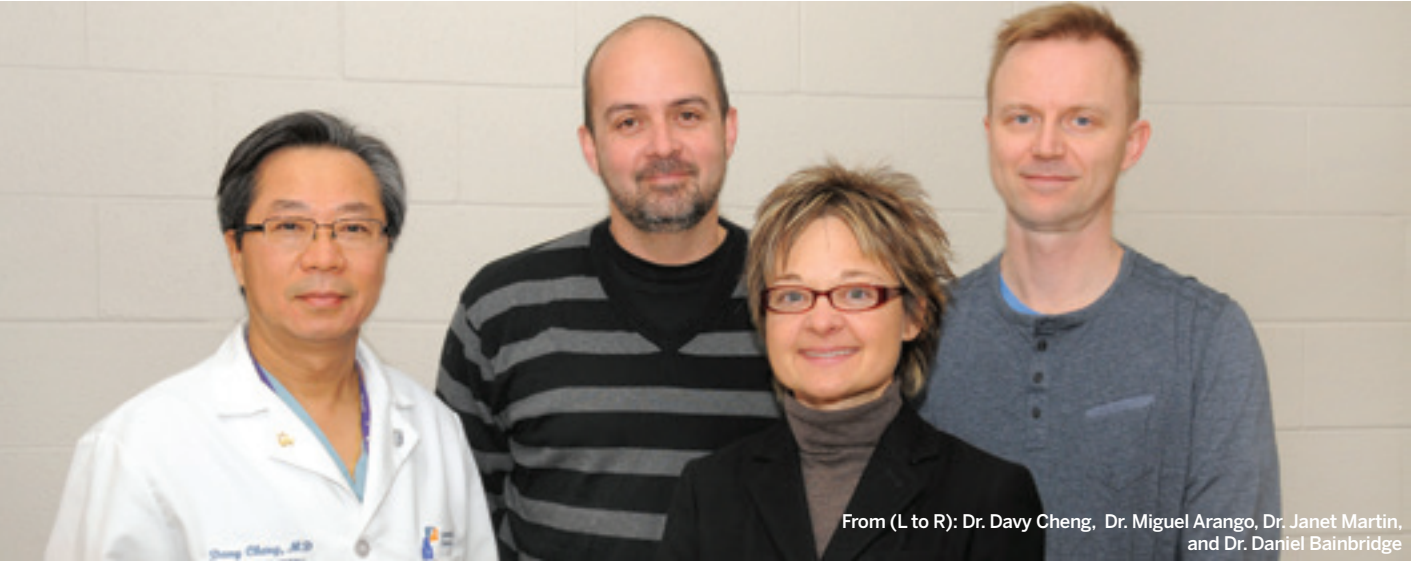
London Health Sciences Centre. Anesthesia Assistants Program. Director. 2007 – Present.

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



From (L to R): Dr. Davy Cheng, Dr. Miguel Arango, Dr. Janet Martin, and Dr. Daniel Bainbridge

# Making Headlines: Dramatic Decline in Anesthetic Mortality over the Past 50 Years

Thursday, October 4, 2012

Research from Dr. Daniel Bainbridge and colleagues in Western’s Department of Anaesthesia and Perioperative Medicine, Dr. Davy Cheng, Dr. Janet Martin, and Dr. Miguel Arango, has shown that survival rates after a general anaesthetic and within 48 hours of surgery have dramatically improved worldwide over the past 50 years. His research is published in the high-profile journal, The Lancet.

The researchers used data from 87 studies spanning back to the 1930s to analyse trends in death due to anaesthesia and soon after surgery involving more than 21.4 million anaesthetics given in countries around the world. Despite operating on more patients considered high-risk or who need more complicated surgeries now than in the past, the likelihood of dying after a general anaesthetic has dropped by roughly 90%— from an estimated 357 per million before the 1970s to 34 per million in the 1990s–2000s. During the same period, the risk of dying from any cause within 48 hours of surgery (perioperative mortality) has decreased by about 88%— from an estimated 10 603 per million before the 1970s to 1176 per million in the 1990s–2000s.

Dr. Bainbridge, an associate professor at Western’s Schulich School of Medicine & Dentistry and a scientist with Lawson Health Research Institute, says the dramatic decline is due to several factors including better equipment in the O-R, better recognition and treat-

ment of patient disease, safe surgical checklists, and better hospital infrastructure. Dr. Janet Martin, Dr. Davy Cheng and Dr. Miguel Arango were also involved in the study.

“Although this declining pattern was evident in both developing and developed nations, the greatest and most progressive decline has been in developed countries. Overall rates of perioperative and anaesthetic-related mortality have consistently been much higher in developing countries and remain two to three time higher than in developed nations”\*, explains Dr. Bainbridge. He says evidence-based interventions need to be put into practice to reduce the disparities between high-income and low-income countries.

“Although anaesthetic mortality remains low compared with traffic fatalities or suicide, it still remains high compared with death caused by air travel, which is a commonly used yardstick to benchmark the risk of anaesthesia.”

Dr. Bainbridge adds, “we know people are afraid of flying because of the risk of death even though that risk is low, and has been steadily going down. We also know people who come in for surgery are afraid of dying from the anaesthetic or from the surgery, and we’re able to show the same thing, that the rates have been steadily going down and the risk is extremely low.” Still he says, there’s room for improvement. “Even though we know the risk is low, we continue to improve the standards and the safety for patients so they can be more comfortable and confident when they come for surgery.”

## Published Research:

Bainbridge D, Martin J, Arango M, Cheng D. Perioperative and anaesthetic-related mortality in developed and developing countries: a systematic review and meta-analysis. Lancet. 2012 Sep 22;380(9847):1075-81.



# Research and Academic Excellence

Publications, Grants and Funding



Dr. John Murkin

## Publications

PEER-REVIEWED

Adams C, Guo LR, Jones PM, Harle C, Brown JW, Gammie JS, Kiaii B. Automated coring and apical connector insertion device for aortic valve bypass surgery. *Ann Thorac Surg* . 2012 Jan; 93 (1): 290-3.

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Adhikary SD, Armstrong K, Chin KJ. Perineural entrapment of an interscalene stimulating catheter. *Anaesth Intensiv Care*. 2012; 40 (3): 527-30.

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parturients: A systematic review and meta-analysis. *Acta Anaesthesiol Scand*. 2013 Apr;57(4):417-30.

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Ganapathy S. Spinals, Epidurals and Lumbar Plexus Blocks in Orthopedic Surgery [editorial]. *Canadian Orthopedic Association Bulletin*. 2012 Spring: 27-8.

Ganapathy S. Wound/intra-articular infiltration or peripheral nerve blocks for orthopedic joint surgery: efficacy and safety issues. *Curr Opin Anaesthesiol*. 2012 Oct;25(5):615-20.

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Hall TH, Dhir A. Anesthesia for liver transplantation. *Semin Cardiothorac Vasc Anesth*. 2013 Sep;17(3):180-94.

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Dr. Craig Railton



Dr. Shalini Dhir



Dr. Arif Al-Areibi



Publications [continued]

Milne AD, Cave AL, Brousseau PA, Hung OR. The effect of sterilisation on the light intensity of the reusable trachlight. Anaesthesia. 2012 Jan;67(1):40-2.

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Murkin JM. "Primum non nocere": The role of hydroxyethyl starch 130/0.4 in cerebral resuscitation. Can J Anaesth. 2012 Dec;59(12):1089-94.

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Nalamachu S, Morley-Forster P. Diagnosing and managing postherpetic neuralgia. Drugs Aging. 2012 Nov;29(11):863-9.

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Tran TH, Al-Harfi I, Harle CC, Kahr WH, Morrison GC, Kornecki A. Coagulation assessment in children with diabetic ketoacidosis. Pediatr Crit Care Med. 2013 Mar;14(3):256-60.

Winquist E, Bell CM, Clarke JT, Evans G, Martin J, Sabharwal M, Gadhok A, Stevenson H, Coyle D. An evaluation framework for funding drugs for rare diseases. Value Health. 2012 Sep-Oct;15(6):982-6.

Young GB, Sharpe MD. Donation after cardiac death: enter the neurologist [commentary]. 2012 May;11(5):385-6.

BOOK CHAPTERS

Clarke C, 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, 2012.

Herrick IA, Gelb AW. Ischemic Cerebrovascular Disease. In: Newfield P, Cottrell JE, eds. Handbook of Neuroanesthesia (5th ed). Philadelplia: Lippincott Williams & Wilkins, 2012: 179.

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ABSTRACTS

Jones P. Dexmedetomidine in management of agitated delirium in the postoperative cardiac surgery patient [abstract]. 2012 Oct. Canadian Cardiovascular Society (CCS) Annual Meeting [presented].

Fortier L, McKeen D, Turner K, de Medicis E, Warriner B, Jones P, et al. The RECITE study: a prospective, blinded, multi-site study of the incidence and severity of residual neuromuscular blockade in Canada. 2012 Jun. Euroanesthesia.

Kidanel B, Chadi SA, Di Labio A, Mele T, Murkin J, et al. Development of a point of care model to predict intensive care unit admission [presented]. European Society of Intensive Care Medicine. 2012 Oct. Lisbon, Portugal.

Ralley F, et al. One Intraoperative Dose of Transexamic Acid is Safe and Effective in Revision Total Knee Arthroplasty [presented]. 22nd AAHKS Annual Meeting. Toronto, ON. 2012

Grants and Funding

PEER-REVIEWED

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 2 of 2] of \$2600.

Bainbridge D (Co-investigator), et al.

Canadian Foundation for Innovation: Image-Guided Minimally Invasive Intervention and Simulation.

2012: \$644, 401 [Year 4 of 4] of \$2 577, 602

Crumley T, Cherry R, Antoniou A.

Women's Development Council, London Health Sciences Centre: Multidisciplinary Crisis Resource Management Training using In-Situ High Fidelity Simulation.

2012: \$9,900 [Year 1 of 3] of \$31,600.

Dhir S & Sharma R

Anesthesia Internal Research Fund: Incidence of hemidiaphragmatic palsy after single shot interscalene block for pain relied in shoulder surgery.

2013-2015: \$10,000 [Year 1 of 2]

Rotenberg B, Fuller J (Co-investigator).

AHSC AFP Innovation Fund Project: Applying the evidence in perioperative medicine: Changing admission criteria for surgical patients with sleep apnea.

2012 – 2013: \$16,250 [Year 2 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 2 of 4] of \$139,554.

Ganapathy S

Physician's Services Incorporated Foundation (PSI): Comparison of Visibility of Echogenic and Standard Non-Echogenic Block Needles and Catheters During Ultrasound Guided Sciatic Blocks. A Randomized Double-blind, prospective study.

2011-2013: \$17,144 [Year 2 of 2].

Harle C, Sischeck B, Cheng D, Nicolaou G, Jones P, Jansen S

Anesthesia Internal Research Fund: A survey of the management of narcotics in the operating rooms of Canadian academic health sciences centres.

2013-2015: \$5,500 [Year 1 of 2]

Hegazy A, Jones P, Champion L, et al.

Anesthesia Internal Research Fund: Therapeutic hypothermia after PEA cardiac arrest, does it work? A case-control study.

2013-2015: \$9,250 [Year 1 of 2]

Jones P.

AMOSO Opportunities Fund: Randomized Isoflurane and Sevoflurane Comparison in Cardiac Surgery: A prospective randomized clinical trial (RISCCS).

2010 – 2013: \$32,500 [Year 3 of 3]

Martin J, Cheng D

Schulich School of Medicine and Dentistry Dean's Research Grant Initiative: Transforming Early Successes into a Sustainable Program of Cross Departmental Health Technology Assessment, Evidence-Based Decision-Making, and Knowledge Translation.

2012 – 2015: \$190,000 [Year 1 of 3] of \$570,000

Mele T, Murkin J.

Physician's Services Incorporated Foundation (PSI): Tissue Near Infrared Spectroscopy (tNIRS) in the Assessment and Management of Critically Ill Patients.

2012 - 2014: \$84,500 [Year 2 of 2] of \$168,500.

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 2 of 2] of \$10,000

Railton C. Principal Investigator.

Department of Anesthesia and Perioperative Medicine, Internal Research Fund: Is there an adverse drug reaction between Renin-Angiotensin System Blockade and Inhaled Anesthetics? – A Pilot Study.

2012 – 2014: \$5000 [Year 2 of 2] of \$10,000

Reider M, Railton C (Co-investigator).

MITACS: The Application of a Wireless Sensor Technology for Vital Statistics in Children and Adults.

2012 - 2014: \$75,000 [Year 2 of 2] of \$150,000.

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: \$32,500 [Year 3 of 3] of \$97,500

Lingard L, Schulz V, et al.

Canadian Insititute 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] of \$232,048

Schulz V.

AMOSO AFP Innovation Fund: Palliative Care on the Heart Failure Team: Mapping Patient and Provider Experiences and Expectations.

2012: \$143,587, 2013: \$90,594

Sen M, Schulz V (Co-investigator).

AMOSO Opportunities Fund: Assessment and Management of Delerium in the Intensive Care Unit: A Quality Improvement Initiative.

2009 – 2012: \$10,833 [Year 3 of 3] of \$32,499

Tyml K, Sharpe M.

A novel model of sepsis in the elderly: mechanism and treatment of microvascular dysfunction.

• Heart and Stroke Foundation of Ontario. 2012 - 2015: \$137,622

• University of Western Ontario: Academic Development Fund. 2011 – 2013: \$103,340.

Sharpe M (Principle Investigator).

UWO Critical Care Research Fund: Pilot Study of Vitamin C in sepsis.

Jesse and Julie Rasch Foundation. 2011-2013: \$138,238

Ellis GE, Goldman D, Jackson D, Sharpe M, Tyml K.

Canadian Insititute of Health Research Grant (CIHR): A systems approach to sepsis: Pathological versus Adaptive Microvascular Responses

2009 - 2013: \$128,566 [Year 4 of 5] of \$624,830

Taneja R.

AMOSO: Heparin Induced Coagulopathy in Cardiac Surgery – A Proof of Concept Study.

2012: \$32,500 [Year 2 of 2] of \$65,000.

Taneja R.

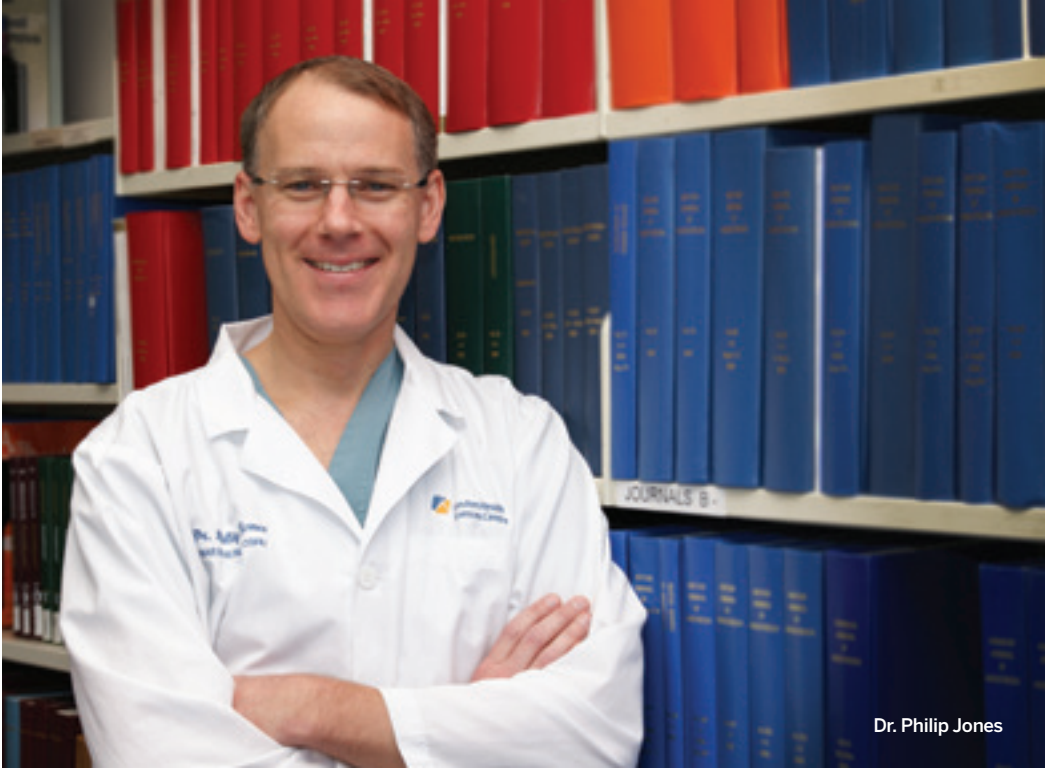
Critical Care Research Grant. \$1500.

INDUSTRY GRANTS / NON-PEER REVIEWED

Bainbridge D, Murkin J

ORNIM Medical: Intraoperative NIRS-based CBF in Comparison to TCD Cerebral Flow Velocity: A Correlation Analysis.

2013: \$50,000

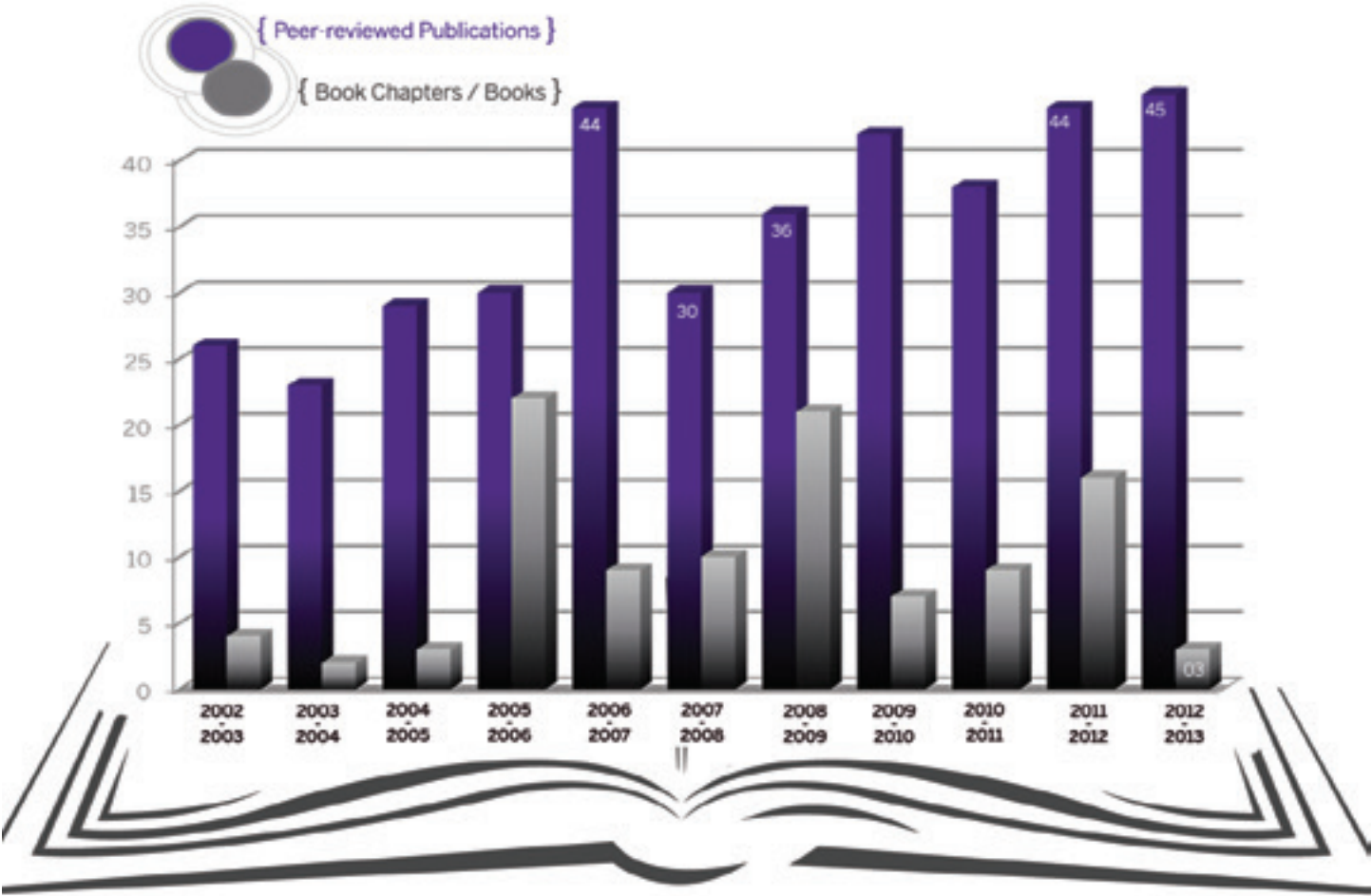


Dr. Philip Jones



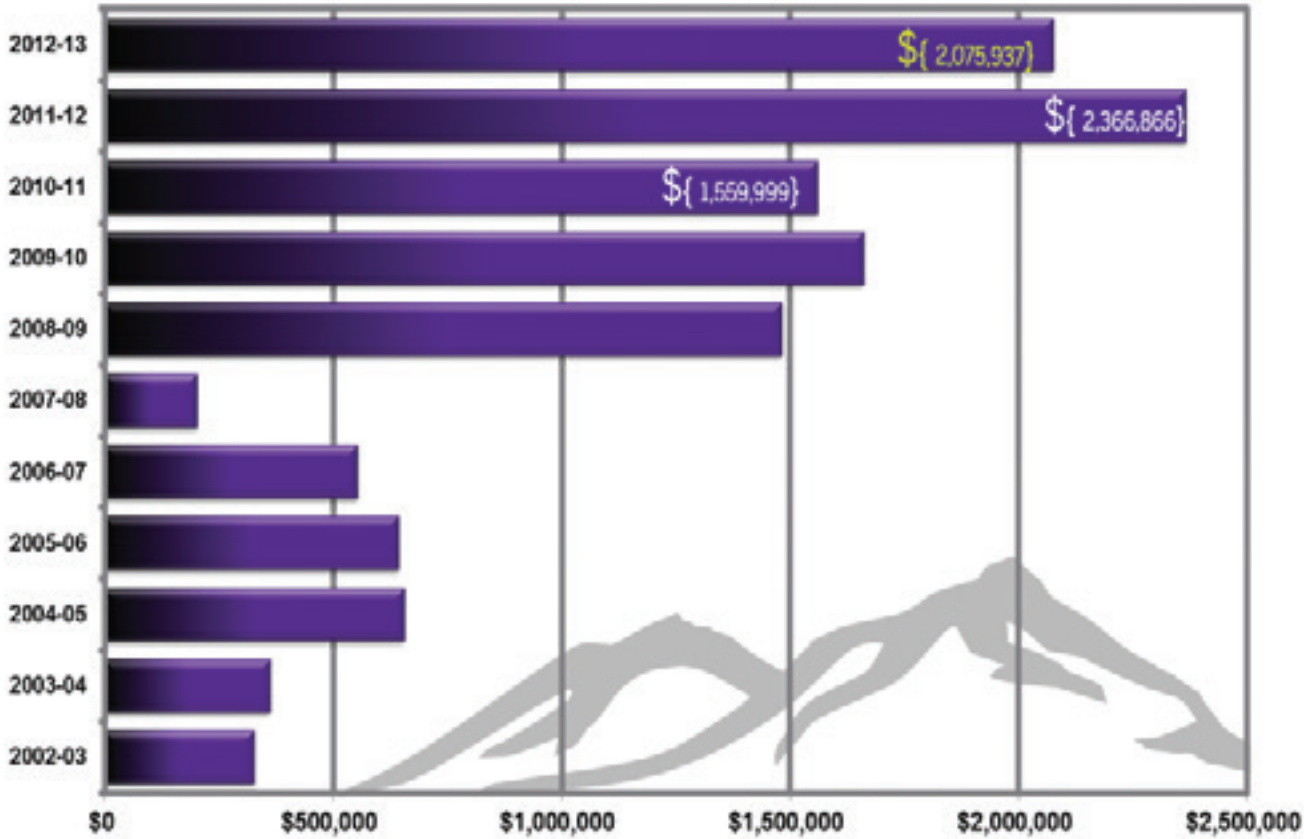
# Peer-reviewed Publications

Totals per annum



# Peer-reviewed, Non-Industry Grants and Funding

Totals per annum



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