# anesthesia & perioperative medicine

Schulich School of Medicine & Dentistry Western University London Ontario Canada

#### 2015 Annual Report











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### message from the 2015

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 (35,000 surgical procedures per annum) at the London Teaching Hospitals (London Health Sciences Centre – University Hospital and Victoria Hospital, and St Joseph's Health Care London).

Our Department is among the top five academic anesthesiology departments in Canada and has an international reputation for academic excellence in Research and Education. A few highlights in 2015 include a historical first Royal College Certification of a Pain Medicine resident trainee in the Pain Medicine Residency Training Program (First established in Canada) in the Department of Anesthesia & Perioperative Medicine, Western University; and the Centre of Medical Evidence, Decision Integrity, Clinical Impact (MEDICI) is consulted by the World Health Organization to lead guideline development in perioperative surgical patients suspected of Ebola Virus Disease infection.

We deliver 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. We sought to increase the scope of our work in 2015, and we expanded our anesthesia services and teaching to two Dental OR suites at the Schulich School of Medicine and Dentistry.

## Our 83 faculty, 46 residents and 20 clinical fellows are committed to patient-centered quality care.

The Cardiac Anesthesia Program continues to be amongst leading research programs in the clinical advancement of minimally invasive and robotic cardiac surgery internationally. The Comprehensive Pain Program is a leading multidisciplinary research and clinical program, and has been instrumental in establishing Pain as a subspecialty at the Royal College of Physicians and Surgeons in Canada. The **Evidence-Based Perioperative Clinical Outcomes** Research (EPiCOR) Program and the Centre for Medical Evidence, Decision Integrity, and Clinical Impact (MEDICI) have established our Department and Western University as an international and national evidence-based knowledge translation centre with high impact to health care decisionmaking and patient care. The Department is also well known for its clinical and research excellence in neuroanesthesia, transplantation, critical care, perioperative blood management and pain.

The Department provides clinical training and didactic teaching to undergraduate (UGE) and postgraduate (PGE) trainees in anesthesia and allied health care fields 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 offers manifold opportunities for education research in this area.



The Women and Children's Hospital at LHSC is also the tertiary centre for over 6,000 obstetric delivery and pediatric/neonatology care at Southwestern Ontario.

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. We have received many honours for our ongoing efforts including the Canadian Anesthesiologists' Society CAS Gold Medal (Davy Cheng, 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 (Arif Al-Areibi, Jeff Granton), CAS Research Awards (Daniel Bainbridge, Ronit Lavi, Collin Clarke), YWCA Women of Distinction Award (Su Ganapathy), the Hind Ratten Award (Jewel of India) (Achal Dhir), Western Silcox-Fellow Mentorship Award (Lois Champion, Ivan Iglesias); Associate Editor of Canadian Journal of Anesthesia (Philip Jones).

Several of our faculty have been recognized for excellence such as Davy Cheng, who was inducted as Honorary Member of the German Society of Anaesthesiology and Intensive Care Medicine; Fellow of the Royal College of Anaesthetists in Ireland (John Murkin);theCanadianAcademyofHealthSciences(Davy Cheng); honoured with an Outstanding Contribution AwardforChineseAnesthesiologyinChina(DavyCheng); andhonouredwithCCPECredentials(DavyCheng)bythe CanadianMedicalAssociation(CMA)andtheCanadian SocietyofPhysicianExecutives(CSPE);electedasTrustee for the Society of Medical DecisionMaking (SMDM,Ava John-Baptiste).

They have been elected as Board of Trustees in the International Anesthesia Research Society (President-Elect, 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), Past President of the Association of Canadian University Departments of Anesthesia (Davy Cheng), Past OMA Anesthesia Chair (James Watson), OMA Honour of Excellence in Palliative Care (Valerie Schulz), LHINRegionalCriticalCareLead(MichaelSharpe),SJHC LondonMACAward(GeoffBellingham,BillSischek) and JointLHSC/SJHCMACAward(DavyCheng);Councilof the College of Nurses of Ontario (CNO) (elected Nurse Practitioner in Pain Program, Heather Whittle).

We 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 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 honour for medical achievements in Afghanistan with its highest survival rate in combat medical operation.

While I look back on the continuing successes of our Department in exemplary clinical deliverables and quality of care, expanded depth and breadth 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 Research Chair, Evidence-based Perioperative Clinical Outcome Research (EPiCOR) Western University, London, Canada

#### DEPARTMENT ORGANIZATION

2015 EXECUTIVE

Davy Cheng, Chair/Chief

William Sischeck, St. Joseph's Health Care London Site Chief, and City-wide Clinical Coordinator

Ramiro Arellano, University Hospital Site Chief

George Nicolaou, Victoria Hospital Site Chief

Lois Hayter, Manager Administration & Finance

#### DEPARTMENT COUNCIL

Davy Cheng (Chair) Ramiro Arellano, Ahmad, Mohamad Arango, Miguel Al-Areibi, Arif Armstrong, Kevin Bainbridge, Daniel Bellingham, Geoff Butler, Ron Cherry, Richard Dhir, Achal Gros, Michelle Herrick, Ian Katsiris, Sandra Murkin, John Nicolaou, George Sischek, William

#### ACADEMIC AFFAIRS COMMITTEE

Ronit Lavi, Chair Davy Cheng Ramiro Arellano

Fiona Ralley

Kevin Armstrong

Miguel Arango

Shalini Dhir

Andreas Antoniou

#### UNDERGRADUATE

Michelle Gros Jonathan Brookes Pravin Batohi Lori Dengler Charlotte Sikatori

#### POSTGRADUATE

Arif Al-Areibi, Program Director,

Andreas Antoniou, Associate Director

Davy Cheng, Chair of Department of Anesthesia and Perioperative Medicine Lori Dengler, Education Coordinator

William Schultz, Chief Resident

Peter Mack, Site Coordinator - University Hospital

Pod Armstrong, Site Coordinator - SJHC

Bobbi Jo Morrell, Site Coordinator - Victoria Hospital

Jonathan Brookes, Resident Research Coordinator

Richard Cherry, Simulation and Information Technology Director

Nicole Campbell, Community (St. Thomas) and SWOMEN

Ed Roberts, Community (Windsor) and SWOMEN

Colin Phillips, Resident Representative

Nicole Quigley, Resident Representative

#### CONTINUING MEDICAL EDUCATION

lan Herrick, Chair

Lee-Anne Fochesato

#### FELLOWSHIP

Miguel Arango, Program Director Andrea Fragassi, Program Coordinator

Achal Dhir, Liver Transplant

George Nicolaou, Thoracic and Vascular

Indu Singh, Obstetric

Pat Morley-Forster, Pain Management

Ramiro Arellano, Cardiac

Richard Cherry, Simulation

Su Ganapathy, Regional

#### 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 Railton Indu Singh Timothy Turkstra

#### Lee-Anne Fochesato

#### AAPP FINANCE MANAGEMENT COMMITTEE

William Sischek (Chair)

Davy Cheng

Ian McConachie

Lois Hayter

Sandra Silverthorn

Jason Hoogstra

Marc St-Amand

Ron Butler

George Nicolaou

#### ANESTHESIA QUALITY ASSURANCE, CITY-WIDE

lan Herrick, Director

Geoff Bellingham (SJHC)

Indu Singh (SJHC)

Michelle Gros (VH)

Ronit Lavi (UH)

Craig Railton (VH)

Anne Marie Mcllmoyle (Director, Perioperative Services, SJHC)

#### SITE ROUNDS COORDINATORS

Achal Dhir (UH)

Gary Simon (VH)

Paidrig Armstrong (SJHC)

#### Shalini Dhir (Regional)

#### EQUIPMENT Jason Hoogstra

#### JOURNAL CLUB CONVENERS

Philip Jones

Timothy Turkstra

#### ADMINISTRATIVE SUPPORT STAFF

Ola Bienkowski

Kathy Bilton

Lori Dengler

Lee-Anne Fochesato

Andrea Fragassi

Kim Harrison

Brie McConnell

Shannon McConnell

Jessica Moodie

Nicole Moyer

Cathy Pollard

Sarah Rayner

Jiyon Ryu

Charlotte Sikatori

Amanda Schwindt

Linda Szabo

Christina White

Cathy Worsfold

# new faculty

#### DR. EKTA KHEMANI

START DATE: AUGUST 1, 2015 Dr. Khemani completed her residency at University of Toronto in 2014 followed by a fellowship at the Hospital for Sick Children in Toronto. In addition she completed a Master of Science at the Institute of Medical Sciences at U of T in 2005. Over the past year, she has completed a Certificate in Patient Safety and Quality Management and recently won Best Poster and Presentation at the University of Calgary Patient Safety and Quality Improvement Research Day. Ekta has presented numerous papers, and authored several publications. Since 2013 Dr. Khemani has participated in the National Assessment Collaboration where she examined IMG's during their clinical exams and has served on several committees as an examiner. interviewer and selection committee member. She will be highly involved in our Department's Quality Assurance Program and we are happy to welcome her in our department.

#### **DR. MATTHEW MCFARLING**

**START DATE: AUGUST 10, 2015** Dr. McFarling returned to us from the Department of Cardiac Anesthesiology at the University of Ottawa's Heart Institute where he served as a clinical fellow in 2014. Dr. McFarling received his MD in 2009 from Michael G. DeGroote School of Medicine at McMaster University and completed his residency with us at Schulich School of Medicine & Dentistry from 2009-2014. Previously Dr. McFarling was a Staff Respiratory Therapist at McMaster Children's Hospital, Joseph Brant Memorial Hospital and Skyservice International Air Ambulance. Matthew has also been involved in several research projects in collaboration with faculty from our department; co-authoring a Vascular Surgery Editorial in Anesthesia for the High-Risk Patient, in 2013. In 2011, as co-applicant alongside Dr. Lavi, he was granted an Internal Research Fund for Assessing the Cricothyroid Membrane with Ultrasound study. We welcome Matthew back to our Department as a Consultant.

#### DR. GOPAKUMAR SUDHAKARAN NAIR

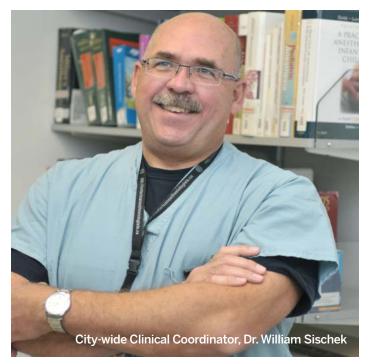
START DATE: FEBRUARY 1, 2015

Dr. Nair received his MD in Anesthesia from Gujarat University in India in 2007. He joins us from Seattle Children's Hospital following a fellowship in Pediatric Anesthesia. He completed his residency at the Cleveland Clinic in Ohio from 2009-2014. From 2007-2009 Dr. Nair was a Fellow in Obstetric and Ambulatory Anesthesia at the University of Toronto. Gopa has several publications in Journals such as the British Journal of Anesthesia and Canadian Journal of Anesthesia. Dr. Nair also authored a book chapter in a textbook for Medical Students at the University of Toronto in 2008. At the 2008 Annual IARS Meeting in San Francisco, Gopa received the best paper discussion in the ambulatory section. His current research interests include mentoring controlled trials such as: Lumbar Plexus vs. Fascia Iliac block for Post-Operative Pain Management, Anesthesia related pharmacologic considerations in a patient with mitochondrial disease and cytochrome P450 enzyme deficiency and pediatric ambulatory peripheral nerve cathetersa retrospective cohort analysis. Dr. Nair is an avid presenter with many poster presentations at Annual Anesthesia Meetings such as: ASA, ASRA, IARS, SPA and Society for Obstetric Anesthesia and Perinatology. We are happy to welcome Gopa to our team!

### report from the city-wide clinical coordinator vs to a close, we are seeing the

As 2015 draws to a close, we are seeing the culmination of almost five years' efforts towards full city-wide integration of staff and services. The clinical academic staff functions principally from one of the two acute care hospital groups at either the University or Victoria Hospital. Between them the two groups cover the clinical and academic commitments of the city including St. Joseph's Health Care of London Hospital, an ambulatory hospital specializing in upper limb, eye, urology and breast surgery services in addition to ambulatory Medicine and Pain Services.

Growth has continued in the Department on several fronts, with the addition of varied staff, 2015 saw the arrival of three new staff: Dr. Gopa Nair, a pediatric specialist trained as a resident at the Cleveland Clinic, an Obstetric and Ambulatory fellow at the University of Toronto and a subspecialty pediatric fellowship at the Seattle Children's Hospital; Dr. Ekta Khemani, a graduate of the University of Toronto with training in Quality Management and Certification in Patient Safety; and Dr. Matt McFarling, a former resident of the program who returned following subspecialty fellowship training in Cardiac Anesthesia and certification in transesophageal echocardiography at the Ottawa Heart Institute. In addition to these individuals the Department continues to recruit actively to all sub-specialty programs. The expanding out-of-OR services in addition to new clinical commitments in the recently opened Schulich School of Medicine and Dentistry dental suite continue to present us with challenges and opportunities. Our current staff complement of over 85 clinicians city wide has ample room to expand to meet the demands being seen in the growing and complex world of our University-based department.

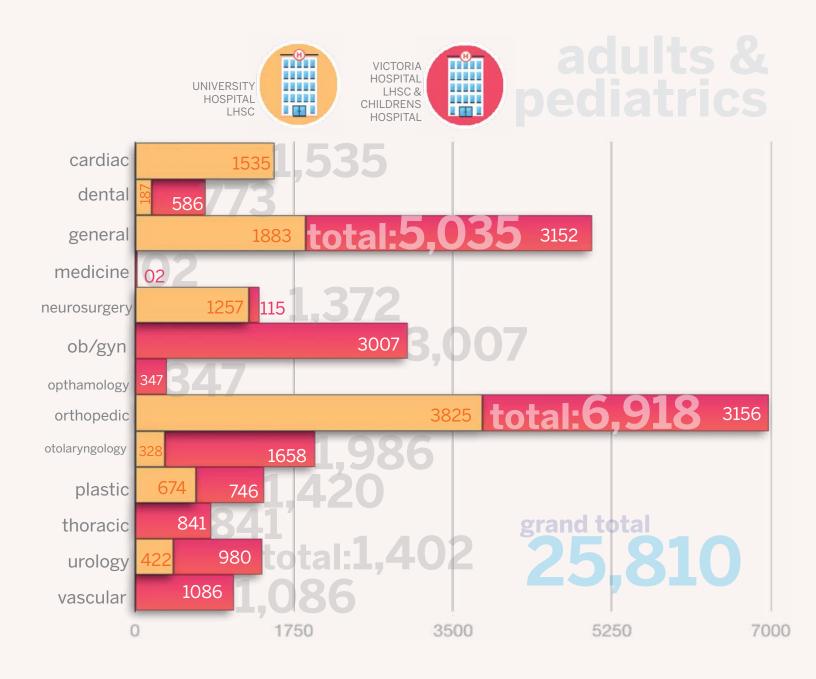


On a related note, the Department practice plan evolved to a partnership structure this year, after many years as an association of clinicians. This change marks the dissolution of the Anaesthesia Associates of London, Canada, an organization in continuous existence since the 1950's. The formation of the formal partnership is expected to further facilitate the important academic and clinical work of the Western University Department of Anesthesia and Perioperative Medicine and provide a powerful force to drive the "business of medicine" for the Department members and their employees.

Hopefully 2016 will see the successful continuation of our growth and faculty recruitment to meet the everincreasing clinical, research and teaching needs of our vibrant, expanding university department.

### **Clinical stats:** London Health Sciences Centre Iondon health sciences centre

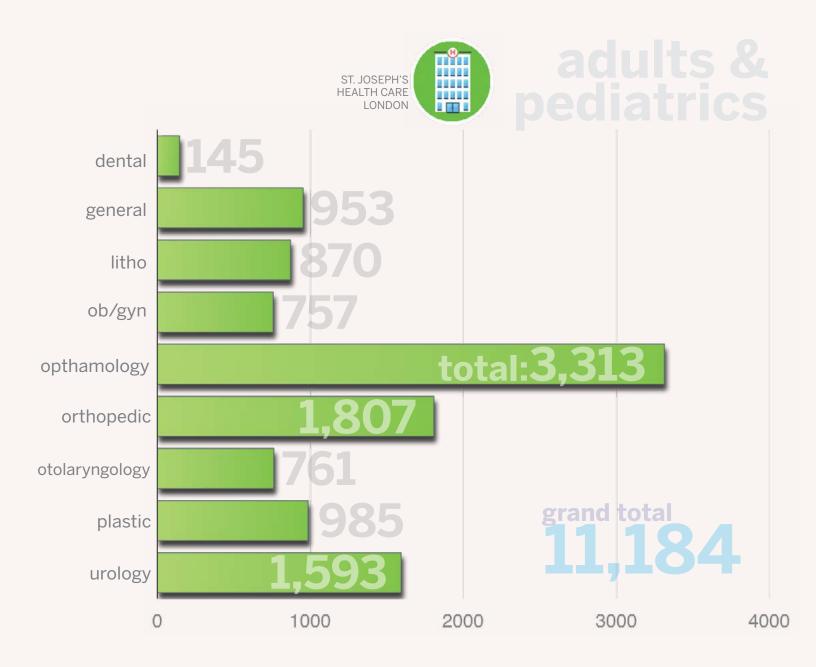
Total number of clinical and surgical procedures requiring anesthetic services in 2015, featuring LHSC University Hospital, and LHSC Victoria and Children's Hospital





### st. joseph's health care london

Total number of clinical and surgical procedures requiring anesthetic services in 2015, featuring St. Joseph's Health Care London



# quality Report from the QA Committee assurance

#### **DR. IAN HERRICK, PROGRAM DIRECTOR**

The Department of Anesthesia and Perioperative Medicine Quality Committee complements the key role of the individual practitioner in delivering safe, high quality care with the following mandate:

- Assist the Chief/Chair and Site Chiefs with monitoring and promoting high quality anesthesia care.
- Selectively monitor and/or respond to opportunities to enhance the quality and safety of care.
- Provide a forum for the 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 quality framework and relevant to the quality or safety of anesthesia care.

This year, the Quality Committee welcomed Lee-Anne Fochesato to the position of Coordinator. Lee-Anne`s position includes support for Research, Quality and Continuing Education.

The Quality Committee also welcomed Dr. Aiswarya Chandran Pillai who provided data analysis support.

#### **COMMITTEE MEMBERS**

Dr. Jonathan Brookes, Dr. Geoff Bellingham, Dr. AiswaryaChandranPillai,Ms.Lee-AnneFochesato, Dr. Ian Herrick (Chair), Dr. Ekta Khemani, Dr. Ronit Lavi, Ms. Brenda Maxwell, Ms. Lori O`Brien, Dr. Bethany Oeming, Dr. Raju Poolacherla, Dr. Nicole Quigley, Dr. Craig Railton, Dr. Indu Singh, Dr. Magda Terlecki

#### **HIGHLIGHTS FOR 2015**

#### **Clinical Surveillance**

The Committee undertook several projects in 2015:

- 1. Continuing quality assurance surveillance / audit activity.
- 2. Development of a surveillance program focused on patient satisfaction at SJHC with evaluation of NRCC patient satisfaction data that may be relevant to anesthesia and addition of anesthesia questions to the postdischarge follow-up survey currently used at SJHC for ambulatory surgery patients.
- 3. Future Needs evaluation of QA data needs as the London Hospitals progress with the implementation of the electronic health record.



#### **Research / Audit**

- 1. Re-audit of intraoperative temperature management at UH in conjunction with PACU staff and 3M Canada (data collection and analysis).
- 2. Audit of Enhanced Recovery After Surgery (ERAS) protocol compliance at VH and exploration of Quality Improvement initiatives underway – Dr. Ekta Khemani and Dr. Daryl Grey.

#### Education

- Education review of the CanMEDS 2015 Patient Safety and Quality Improvement Expert Working Group Report outlining how competencies related to safety and quality improvement are incorporated into the CanMEDS framework and milestones.
- Collaborative link to PGE Quality Improvement subcommittee chaired by Dr. Khemani
- 3. Promote quality and safety competency among trainees with the assignment of a teaching block in the postgraduate academic program in 2015 and additional blocks for the 2016 academic program.

# Reports from the **C**inica sites

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



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

#### Dr. William Sischek, Site Chief

We continue to have a very vibrant and productive hospital at St. Joseph's Health Care of London. The hospital has developed its surgical, outpatient and community programs in keeping with the role that was defined for it many years ago. We are now almost five years since the final phase of the Hospital Restructuring plan that was laid in the early part of the millennium. The 2015 Accreditation Canada review of St. Joseph's led to it being awarded exemplary standing, a prestigious status reserved for only a small number of hospitals each year.

The Roth-MacFarlane Hand and Upper Limb Centre continues to excel in clinical and research productivity and along with the Ivey Eye Institute accounts for much of the surgical activity at the hospital. The many varied opportunities for regional anesthesia and perioperative pain services provided in this rich surgical environment has fostered a strong clinical, teaching and research unit for the Department. Keeping pace with an ever-expanding need for chronic pain management the RCPSC accredited Pain Residency program at St. Joesph's is the first of its kind in Canada.



L to R: Dr. Davy Cheng, 2015 Pain Residency Graduate, Dr. Michael Pariser, and Dr. Geoff Bellingham

Dr. Geoff Bellingham, the first program director, has done an admirable job and in the second year of the program is anticipating the graduation of the program's first two trainees.

In 2016 the hospital is anticipating increased fiscal challenges. As always, it is looking for ever greater efficiencies in the field of Ambulatory Surgery and Anesthesia and plans are going forward to achieve these. While doing this, St. Joseph's continues to adhere to the values on which it was founded in 1888 and continue to serve it today.



#### UNIVERSITY HOSPITAL, LHSC

#### Dr. Ramiro Arellano, Site Chief

The University Hospital is a major quaternary referral center and teaching facility within Western University. Consultants provide anesthesia for cardiac surgery, neurosurgery, general surgery, orthopedic surgery, sports medicine, plastic surgery, urological surgery and ear nose and throat surgery. University Hospital is a regional transplantation center and the Department of Anesthesia and Perioperative Medicine provides services for cardiac transplantation, liver transplantation and kidney and pancreas transplantation. In addition, we also provide anesthetic support for procedures in interventional radiology, cardiac catheter and electrophysiology suites. Departmental members also provide clinical services in the medical and surgical critical care units and the cardiac surgery recovery unit as well as ongoing support for a busy pre-admission clinic. We continue to work to enhance the regional anesthesia program and acute pain service. We have a dedicated perioperative Transesophageal Echocardiography Service.

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.

Anesthesia at the University Hospital is practiced using the Anesthesia Care Team model with the support from Anesthesia Assistant colleagues in the Operating Rooms, the Block Room and in our Out-of-Operating Room anesthesia. Administrative assistants supporting the Departmental Chair, fellowship program, residency program, undergraduate education, and clinical program are situated at University Hospital. In addition, research assistance is provided by an on-site departmental librarian and research assistant.

The University Hospital site is the base for many ongoing research projects in cardiac anesthesia, neuro-anesthesia, transplant anesthesia and regional/acute pain management.

#### VICTORIA HOSPITAL, 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. We also have a well-established palliative, 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 wellestablished anesthesia simulator program.

The operating suites at Victoria Hospital have undergone major renovations and reconstruction.

We now have eighteen state of the art operating suites equipped with the latest anesthesia and surgical technological advances.

#### ANESTHESIA OPERATING ROOM RESOURCES

Anesthesia resources include a transesophageal echocardiography machine with 3D capabilities, two transthoracic echocardiography machines, multiple ultrasound machines for vascular access and for regional anesthesia and state of the art airway equipment. Furthermore, Victoria Hospital is increasing its ability to provide SSEP monitoring for complicated Adult and Pediatric patients.

#### 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.

#### PEDIATRIC ANESTHESIA

This pediatric division is under the guidance of Program Director, Dr. Mohamad Ahmad, with input from members of the Pediatric Anesthesia Subspecialty Group. We currently support three to four dedicated pediatric surgery operating rooms on a daily basis. In addition, we are increasing our involvement in 'out-of-OR' settings which include endoscopy/colonoscopy, MRIs, CT scans, interventional radiology, diagnostic/therapeutic lumbar punctures, bone marrow aspirates and any other procedure that is amenable to sedation. We have implemented a 'Parental Presence at Induction' Program in conjunction with the hospital's 'Child Life Program' and have expanded paediatric preoperative assessment and postoperative pain management services. Perioperative Pain management, in paediatric patients, is offered in many forms including; PCA, epidurals, single-shot nerve blocks and/or indwelling regional block catheters. We have developed the first paediatric, multi-disciplinary chronic pain program in Southwestern Ontario.

Interested staff continue to participate in the nationwide telemedicine conferences hosted by the Hospital for Sick Children, Toronto, Ontario. Other educational activities in pediatrics include a monthly journal club in collaboration with McMaster University, Hamilton. We also have weekly pediatric rounds to discuss interesting cases and topics. Recently, we have established a multidisciplinary paediatric simulation academic program to deliver simulation-based crisis management training to anesthesia and paediatric residents and fellows, as well as to the nursing staff.

#### **REGIONAL ANESTHESIA**

While in its early stages, Victoria Hospital is in the process of establishing a formal regional program for both pediatric and adult patients. We are exploring the creation of a multidisciplinary block room with state-of-the-art imaging and all of the necessary supporting equipment and staffing. We have developed patient information pamphlets explaining the role of paediatric regional anesthesia in pain management, postoperative care after regional anesthesia and on what to do if there are any concerns. We are also developing a paediatric home regional anesthesia program, where we can send paediatric patients home with continuous peripheral nerve blocks and have a system for regular follow up.

#### **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.

Recently, we have established a multidisciplinary obstetrical simulation academic program to deliver simulation-based crisis management training to anesthesia and obstetrical residents and fellows, as well as to the nursing staff.

#### SIMULATION

The Simulation Program continues to thrive and expand under the guidance of Dr. Richard Cherry. The program delivers 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.

#### QUALITY ASSURANCE

Dr. Ekta Khemani is a new hire for the Department of Anesthesia and Perioperative Medicine at LHSC whose mandate is to help further advance and improve our Quality Assurance program. After completing her Masters of Medical Sciences and residency in Toronto, Dr. Khemani completed a one year certificate in Quality Improvement and Patient Safety at the University of Calgary, where she won first prize for best quality improvement project.

Dr. Khemani currently sits on the Victoria Hospital perioperative quality council and the Department of Anesthesia Quality Assurance committee. She is also the recipient of the mini fellowship award for Six Sigma in healthcare. Her current projects include a multidisciplinary quality improvement initiative in ERAS, examining quality indicators in anesthesia care, and developing a QI curriculum for residents and fellows.

#### 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 two nurse practitioners that help with all aspects of pain including research and opioid addiction. A pain database has been developed for recording patient data, which are used for quality assurance and research purposes. Our interventional pain management program is well established and has expanded to include pediatric patients.



#### UNDERGRADUATE AND POSTGRADUATE (RESIDENCY, AND PAIN MEDICINE RESIDENCY) PROGRAMS, CONTINUING MEDICAL EDUCATION, AND FELLOWSHIP







### Medical Sciences Building

#### PAIN MEDICINE RESIDENCY PROGRAM

#### Dr. Geoff Bellingham, Director

Western University successfully completed its inaugural year of Pain Medicine resident training in June 2015 within the Department of Anesthesia and Perioperative Medicine. The Pain Medicine Residency program follows successful completion of Royal College entry specialties including anesthesia, physical medicine and rehabilitation, neurology, and psychiatry. Our first trainees to enter the program have done so after completion of Royal College certified anesthesiology programs.

The foundation of clinical training has been maintained at the Pain Clinic located at St. Joseph's Health Care, which achieved accreditation for operational excellence in the fall. The multidisciplinary nature of the clinic includes social work, physiotherapy, psychology, interventional pain techniques, and exposure to consultants from different specialties, all of which have provided a rich learning environment for our residents to achieve competency in the CanMEDs roles.

The St. Joseph's Pain Clinic has allowed our trainees to work within the biopsychosocial model of pain management, the current gold standard of patient care.

In addition to this, the program has offered diverse training opportunities as the residents have gained exposure to consultation liaison psychiatry, addiction medicine programs at the Windsor Campus, cancer pain management at the London Regional Cancer Center, and functional neurosurgical clinics at University Hospital.



Dr. Pat Morley-Forster (left), and Dr. Michael Pariser

Feedback from our initial residents has been excellent. As training has progressed, success of the program is reflected in the growth of their skills and knowledge as pain management specialists. We have seen our residents develop in their ability to lead and collaborate as advocates for those in pain. This is reflected in their scholarly work from developing an information night program for new patients and their families to performing quality assurance analysis on the interventional techniques being performed by the clinic.

The Pain Medicine Residency Committee wishes to thank our Program Administrator, Lori Dengler, for the time and effort put forth establishing the administrative frameworks to run the curriculum. As Lori transfers to her new role of Program Administrator for the Anesthesia & Perioperative Medicine Residency, we welcome Charlotte Sikatori as the Pain Medicine Residency's new Program Administrator.

The work of the Pain Medicine Residency Committee has been effective at achieving the goal of launching Canada's first Pain Medicine Residency. We look forward to improving the program further for future trainees and will continue to act as leaders and collaborators for Pain Medicine education in Canada.

#### UNDERGRADUATE EDUCATION

#### Dr. Michelle Gros, Director

Anesthesia is a mandatory two-week core rotation that all third-year medical students complete as part of their surgery block at Western. Six students are on Anesthesiaatanyonetimethroughoutthecity.Typically, two students are assigned to one of the three teaching hospitals in London. We have increased the flexibility so that the clerks spend time at more than one hospital. This allows for better exposure to the wide variety of anesthetics delivered at the different sites.

Clerks spend each day of their rotation assigned to a staff supervisor, providing for exceptional one-onone teaching. The clerks also spend one day of their rotation in the cataract suite where they are paired with a staff anesthesiologist for the day to develop IV insertion skills. This is a favourite day of the rotation for many of the clerks.

The medical students are all given an updated medical student handbook to read during their rotation and a list of learning topics to read about and discuss with their supervising anesthesiologists during their rotation. We have also added useful learning tools and links to our website and encourage the students to use these as well.

The Anesthesia Bootcamp in the CSTAR Simulation Centre continues to be very well received by the students. Each group of students spends one day of their rotation in the simulator with a simulation fellow. They are introduced to some basic skills and aspects of our specialty, so that when they come to the operating room, they feel more comfortable with the basics of anesthesia. Presentations 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 are very enthusiastic about this highlyrated opportunity, and state that it has eased their 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 all given the opportunity to meet with the program director to discuss the program at Western during their rotation. They are also given more flexibility to see different aspects of anesthesia such as acute and chronic pain, and obstetrical anesthesia just to name a few.

For the 2014-2015 academic year, we had 134 clerks, 22 Western elective students, 27 visiting elective students, and 31 observers rotate through our program at Western.

We would like to thank Lori Dengler for all of her valuable work as Undergraduate Education Coordinator over the past year and we would like to welcome Charlotte Sikatori as the new Coordinator. She is quickly becoming a great resource for students rotating through Anesthesia.

### UNDERGRADUATE EDUCATION COMMITTEE:

Dr. Michelle Gros, Director and Victoria Hospital Site Rep

Dr. Pravin Batohi, SJHC Site Coordinator

Dr. Jonathan Brookes, University Hospital Site Coordinator

Charlotte Sikatori, Undergraduate Education Coordinator

# newsmakers

#### CANADIAN MEDICAL HALL OF FAME AND TD DISCOVERY DAYS IN HEALTH SCIENCES 2015 - MAY 1, 2015

On May 1, 2015, a group of high school students and teachers from London and surrounding areas paid a visit to SimMan and friends with the Department of Anesthesia and Perioperative MedicineatUniversityHospital'sCSTARSimulation facility.

Director of Undergraduate Education for Anesthesia, Dr. Michelle Gros and simulation fellow Dr. Arwa Alzarahni led a simulation demonstration which immersed the students in the daily experience of the anesthesiologist in the operating room.

Students were able to listen to normal and abnormal breath and heart sounds, understand patient monitoring equipment, and participate in simulated patient history taking, physical examination, and anesthesia induction.

Working with Anesthesia residents Dr. Ranko Bulatovic and Dr. Bethany Oeming, they met AI, the Airway Head task trainer, and were led through and conducted simulated intubation and bag-masking technique - their biceps will attest to what a great workout it can be!

A project created by the Canadian Medical Hall of Fame, these visits to medical facilities throughout the catchment help students gain a clear picture of what it would be like to be a health professional by giving them the opportunity to interact with researchers, clinicians and educators in their real-life work setting.

Everyone here had a great time with the students and we hope they enjoyed their visit and their experience as an anesthesiologist. Perhaps we will be seeing them again sometime soon as Schulich students!



Dr. Michelle Gros (far right) assists a student with airway intubation



PGY2, Dr. Bethany Oeming (left), and Dr. Ranko Bulatovic (PGY4)

#### POSTGRADUATE EDUCATION PROGRAM

#### Dr. Arif Al-Areibi, Director

The success continues for Western's Anesthesia Residency program with another outstanding year. 2015 has been a great success with many noteworthy achievements.

Our department, with its accomplished, highlyqualified faculty and superior leadership support, continues to successfully drive one of the largest training programs in Canada.

#### PROGRAM LEADERSHIP

With clear goals of aspiring for excellence and providing the highest quality training structure and environment, we continue to design optimal opportunities for our trainees to earn their place amongst the most qualified clinicians and educators in the profession. The last year saw the implementation of six new subcommittees that will work very closely with the Core Post Graduate Committee to accentuate the importance of learner-centred curriculum and diversity in the workplace. This includes the Quality Improvement Subcommittee, one of the first QI subcommittees for residency education in Canada. These new subcommittees will open doors for more creative and thoughtful educational ideas, with more leadership roles for our trainees and teachers.

#### These subcommittees are:

- 1. Evaluation Subcommittee
- 2. Academic Mentoring Subcommittee
- 3. Academic Half Day Subcommittee
- 4. The Royal College Examination Preparation Subcommittee
- 5. Quality Improvement Subcommittee
- 6. Residents Wellness Subcommittee

The resident members of the Core Post Graduate Committee and Subcommittees continue to play an important role in all aspects of our training program and their contributions are an important factor in creating our collegial educational environment. The new additions and developments to our leadership program will also create the required structure to accommodate the anticipated implementation of CBD (Competency By Design) by the Royal College of Physical and Surgeons of Canada.

#### EDUCATION PROGRAMS:

With a talented team of 46 program residents, we provide the highest level of medical training nurtured by an interdependent learning environment, and welcome numerous trainees from other services including the Physician Assistants from the Canadian Forces.

As a result of the dedicated efforts of our consultants and residents, in May 2015 we introduced one of the first Canadian Perioperative Ultrasound rotations. This is now one of the most highly rated rotations in our program.

We continue to develop our administrative structure and evaluate its efficiency. In 2015, we started working on a state of the art electronic database that will allow our program leaders to improve communication with trainees and teachers and will also have a positive impact on our evaluation process.

We continue our leadership at Western in simulation and training in Crisis Resources by highly skilled educators who maintain an unparalleled level of excellence and who are also involved nationally in developing the Canadian Simulation program.

Along with the new, state of the art, simulator, we have the structure that will allow us to maintain a meaningful presence in this field.

Our department offers a wide variety of subspecialty training opportunities in anesthesia, with a large case volume which allows us to be among the top Canadian training programs in resident clinical exposure. In addition, our residents regularly participate in national and international electives, including medical missions, with ongoing support from faculty and departmental leadership.

### research

Our trainees continue to pursue and work on high quality research projects which they have presented at both the national and international level. We are committed to supporting and encouraging resident research and provide administrative and financial support to all residents who are participating in research projects, including in-training Masters degrees.

#### MCMASTER-WESTERN RESEARCH DAY

Congratulations to our residents, Dr. Farah Manji, Dr. Caitlin Gallagher, and Dr. Jordan Leitch (second place finish) for their outstanding presentations at this years' Mac-Western Research Day.

This competition continues to be an enriching and rewarding opportunity for our residents to examine different research methods and presentation methods (oral presentation, poster, case reports) and gain a broader scope of research in Anesthesia.

#### CANADIAN ANESTHESIOLOGISTS' SOCIETY

At this year's Annual Meeting of the Canadian Anesthesiologists' Society (CAS) in Ottawa, Ontario, from June 19–22, our department was represented by six program residents led by **Dr. Jordan Leitch (PGY1), and Dr. Farah Manji** (PGY4) who placed 2nd and 3rd respectively. Dr. Leitch's project "FMRI of peripheral neuropathic pain in the human spinal cord and brainstem". had already garnered a great deal of attention, placing second at the Mac-Western Resident Research Day competition on Friday June 12th.

#### MARC 2015

This has been a remarkable year for academic achievement on the part of our department residents.

Drs. Hesham Youssef, Don Nguyen, Amanda Jasudavisius, Colin Phillips, and Jennifer Smallwood all presented outstanding research at MARC. Dr. Jordan Leitch began a stellar competition year as she took home first place in the Pain section.

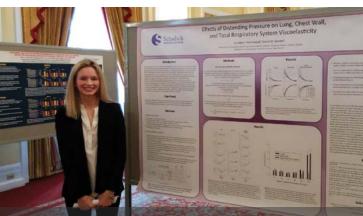
In 2017, we will have the honour of hosting this competition and look for an even more notable presence by our current cohort of trainees.



Smallwood (PGY4), and Jon Brookes



At MARC 2015 : Dr. Don Nguyen (PGY4) with research poster, "Onset of labour epidural analgesia with low dose bupivicaine and varying doses of fentanyl: a randomized double blinded clinical trial".



At MARC 2015 : Dr. Jennifer Smallwood (PGY4) with research poster, "Effects of distending pressure on lung, chest wall, and total respiratory system viscoelasticity."



At MARC 2015 : Dr. Hesham Youssef (PGY5) with research poster, "Sedation for emergency percutaneous coronary intervention"

### Finally, a special thank you to our program leaders for their dedication and great contribution to the successful year:

PROGRAM DIRECTOR: Arif Al-Areibi

ASSOCIATE PROGRAM DIRECTORS: Jeff Granton and Andreas Antoniou

DEPARTMENT CHAIR: Davy Cheng

PROGRAM ADMINISTRATORS: Linda Szabo and Lori Dengler

RESEARCH COORDINATOR: Ronit Lavi and Jonathan Brookes

VH SITE COORDINATOR: Bobbi Jo Morrell

UH SITE CO-ORDINATOR: Peter Mack

SJHC SITE CO-ORDINATOR: Pod Armstrong

SIMULATION/IT: Richard Cherry

CHIEF RESIDENT: Farah Manji

JUNIOR RESIDENT REPRESENTATIVES: Nan Gai and Kyle Fisher

FELLOWSHIP COORDINATOR: Miguel Arango

ACADEMIC MENTORING SUBCOMMITTEE: Jeff Granton

EVALUATION SUBCOMMITTEE: Vanessa Fantillo

EXAMINATION PREPARATION SUBCOMMITTEE: Michelle Gros

RESIDENTS WELLNESS SUBCOMMITTEE: Kristine Marmai

ACADEMIC HALF DAY SUBCOMMITTEE: Steve Morrison

And another special thank you to our team of residents for their positive contribution to our training program as leaders and excellent learners.

# residents

BANASCH, Matthew | PGY5

BAIRAGI, Ranjana | PGY3

BEBBINGTON, Fraser | PGY5

BEHBEHANI, Hasan | PGY2

BROWN, Lukas | PGY2 JR. RESIDENT REP

BULATOVIC, Ranko | PGY4

CHIN, Melissa | PGY5

CHONG, Matthew | PGY2

CHOW, Mike | PGY3

DAHROUJ, Dalal | PGY4

FISHER, Kyle | PGY3 JR. RESIDENT REP

FREYTAG, Alex | PGY4 FRIDFINNSON, Jason | PGY4

GAI, Nan | PGY4

GALLAGHER, Caitlin | PGY3

ISMAIL, Mohamed | PGY4

JAKOBOWSKI, Luke | PGY3

JASUDAVISIUS, Amanda | PGY5

JIANG, Jessica Ming |PGY4

KHALAF, Roy | PGY4

LAPIERRE, Danielle | PGY3

LEE, Hwa | PGY3

LEEPER, Terrence | PGY2

Leitch, Jordan | PGY1

LIN, Bill | PGY5 LUDWIG, Nathan | PGY5

MANJI, Farah | PGY5

MELTON, Natalie | PGY3

MOHAJER, Kiarash |PGY2

NGUYEN, Don | PGY4

OEMING, Bethany | PGY2

PHILLIPS, Colin | PGY5

PIRANI, Zameer | PGY2

QUIGLEY, Nicole | PGY4

REWARI, Abhitej | PGY5

SCHULTZ, William | PGY4 CHIEF RESIDENT

SMALLWOOD, Jennifer | PGY4 TERLECKI, Magda | PGY3

TRYPHONOPOULOS, Takis | PGY2

YOUSSEF, Hesham | PGY5

**GRADUATING** AL-GHAZALY, Samer

CUSANO, Fiorenzo

LOUGHEED, Sean

SCHINDEL, Marc

THORNTON, Alistair

VERGEL DE DIOS, Jennifer

VETHANAYAGAM, Adrian

PAIN RESIDENTS BADER, Amjad

PARISER, Michael



Resident Farewell & Celebration 2015: 1) Dr. Arif Al-Areibi (left) congratulates 2015 graduate, Dr. Samer Al-Ghazaly ; 2) Roy Khalaf (PGY4), Nicole Quigley (PGY4), and Caitlin Gallagher (PGY3); 3) Dr. Steven Morrison, Academic Half-day Coordinator; 4) Resident day-trip at ASA 2014, New Orleans; 5) Dr. Arif Al-Areibi and 2015 graduate, Dr. Mark Schindel; 6) L to R: Hesham Youssef (PGY5), Jordan Leitch (PGY1), Zameer Pirani (PGY2), Ranjana Bairagi (PGY3), Abhitej Rewari (PGY5); 7) Abhitej Rewari (left) and Amanda Jasudavisius; 8) Dr. Bobbi-Jo Morrell (left) and Dr. Arif Al-Areibi congratulate graduate, Dr. Sean Lougheed; 9) L to R: Dr. Bobbi-Jo Morrell, Dr. Peter Mack, and Dr. Arif Al-Areibi present graduate Dr. Adrian Vethanayagam with his degree.

Many thanks to Dr. Jennifer Vergel del Dios for her photography!







SCHULICH SCHOOL OF MEDICINE & DENTISTRY 25











#### CONTINUING MEDICAL EDUCATION

#### Dr. Ian Herrick, Director Ms. Lee-Anne Fochesato, Coordinator

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

In addition, the CPD Program hosts several lectureships and accredits local, national or international conferences and workshops supported by the Department and organized by its members. In 2015, the Department had the honour of hosting a number of distinguished guests including:

- Dr. David Mazer, Vice Chair, Research, Department of Anesthesia, University of Toronto; Anesthesiologist, St. Michael's Hospital, Toronto, for City-Wide Grand Rounds
- Dr. Julie K. Marosky Thacker, Assistant Professor of Surgery, Duke University; School of Medicine Medical Director, Evidence Based Perioperative Care, Duke Hospital and Health System, for City-Wide Perioperative Rounds
- Dr. Pirjo Manninen, Associate Professor of Anesthesia, University of Toronto, for the 2015 Aitken Memorial Lectures

Other major activities for 2015 include:

- Conversion to a new CPD database and evaluation platform (Qualtrics) adopted by the Schulich School of Medicine and Dentistry which greatly improved accessibility using mobile devices and enhanced data analysis capabilities
- Preparations for centralized management of accredited CPD activities across the department (common platform for notification, evaluation and tracking CPD credits).
- Audit of accredited departmental CPD activity.
- Continuing efforts to establish infrastructure to support expansion of videoconferencing for departmental CPD activities.

The CPD Program would like to acknowledge the following individuals for their contributions to the program in 2015:

- This year we welcomed Dr. Peter Mack in the role of CPD site coordinator for UH and thanked Dr. Achal Dhir for his support and many contributions as he stepped down from the role.
- We also welcomed Ms. Lee-Anne Fochesato who joined the CPD Committee as Coordinator a position that spans Research, Quality and Continuing Professional Development.
- Thanks to Ms. Brie McConnell and Ms. Jiyon Ryu, our departmental librarians, for their invaluable assistance and support for the transition to Qualtrics.

#### CITY-WIDE GRAND ROUNDS - 2015

#### **FEBRUARY 17, 2015**

Speaker: Dr. Ava John-Baptiste, Anesthesia and Perioperative Medicine

Title: Clinical Impact of Disinvestment In Hydroxyethyl Starches (Hes) for Patients Undergoing Cardiac Surgery: A Research Protocol

#### MARCH 19, 2015

Speaker: Dr. David Mazer, Vice Chair, Research, Department of Anesthesia, University of Toronto; Anesthesiologist, St. Michael's Hospital, Toronto

Title: Transfusion triggers in cardiac surgery

#### APRIL 20, 2015

Speaker: Nancy Butterworth, RN

Title: Unintended Hypothermia: The Importance of Maintaining Normothermia

#### JUNE 10, 2015

Speakers: Drs. Colin Philips, Caitlin Gallagher, Farah Manji, Ilana Sebbag; Anesthesia and Perioperative Medicine

Title: Preview of Resident and Fellow Presentations for the Upcoming CAS Meeting

#### NOVEMBER 18, 2015

Speaker: Dr. Ian McConachie, Anesthesia and Perioperative Medicine

Title: Fluid Overload is a Polite Term for Drowning

#### PERIOPERATIVE ROUNDS - 2015

#### **JANUARY 21, 2015**

Speaker: Dr. Valerie Schulz, Anesthesia and Perioperative Medicine

Title: Discussing the Dilemma of DNR in the OR

#### MAY 20, 2015

Speaker: Dr. Julie K. Marosky Thacker, Assistant Professor of Surgery, Duke University School of Medicine; Medical Director, Evidence Based Perioperative Care, Duke Hospital and Health System

Title: Implementation of enhanced surgical recovery protocols

#### **SEPTEMBER 16, 2015**

Speaker: Naveed Mazhar RPh, St. Joseph's Healthcare London

Title: Medicines in Surgery

#### WORLD ANESTHESIA DAY 2015

#### OCTOBER 14, 2015

Speaker: Dr. Davy Cheng, Anesthesia and Perioperative Medicine

Title: Cardiac Anesthesia & Surgery: Past, Present and Future

Speaker: Dr. Bob Kiaii, Chair/Chief Cardiovascular and Thoracic Surgery, University of Western Ontario

Title: The Future of Cardiac Surgery

#### AITKEN LECTURES DECEMBER 15, 2015 – 2015 AITKEN LECTURE

Speaker: Dr. Pirjo Manninen, Associate Professor of Anesthesia, University of Toronto

Title: Awake Craniotomy: The Past, Present and Future

#### DECEMBER 16, 2015 – THE 2015 AITKEN MEMORIAL LECTURE IN NEUROANESTHESIA

Speaker: Dr. Pirjo Manninen, Associate Professor of Anesthesia, University of Toronto

Title: Challenges for the Anesthesiologist in Airway Management in Neurosurgical Patients

#### FACULTY DEVELOPMENT

Several departmentally sponsored faculty development workshops were offer this year including:

- "Acuity Star Training" (November 5, 2015)
- "How to get Promoted

   A Workshop for Clinical Academics" (September 17, 2015).
   Both workshops were sponsored by the Academic Affairs Committee and the SSMD CPD Office.
- The Perioperative Ultrasound Western Workshop made its annual debut this year, and was focused on transthoracic echocardiography and point-of-care lung and pleural ultrasound imaging.

#### **FELLOWSHIP**

#### Dr. Miguel Arango, Director

Fellowships in cardiac, neurosurgical, transplantation, regional, obstetrics, acute pain, simulation and vascular and thoracic anesthesia are offered each year at the London Health Sciences Centre and St. Joseph's Health Care London. Fellowships are 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 2015, THE DEPARTMENT HAD 17 CLINICAL FELLOWS, BROKEN DOWN AS FOLLOWS:

Cardiac	3 Fellows	Vascular	1 Fellow	
Neuro	2 Fellows	Simulation	2 Fellows	
Regional	3 Fellows	General	2 Fellows	
Obstetrics	2 Fellows	Transplant	1 Fellow	



### news

#### OBSTETRICAL FELLOWS PRESENT RESEARCH AT THE 47TH SOAP ANNUAL MEETING

The SOAP meeting is an internationally recognized meeting for obstetric anesthesia research. In the upcoming 47th Society of Obstetric Anesthesia & Perinatology (SOAP) Annual Meeting, Dr. Fatemah Qasem and Dr. Ilana Sebbag, both Obsetric Anesthesia Fellows in the Department, presented their research, formal discussion during the oral/poster presentation session.

ANESTHESIA AND ANALGESIA FEATURES NEW RESEARCH FROM OBSTETRIC FELLOW, DR. ILANA SEBBAG

Dr. Ilana Sebbag, OB Anesthesia Fellow, was featured on CTV news in June of 2015, to discuss her latest research entitled, "A prospective observational comparison between arm and wrist blood pressure during scheduled cesarean delivery," which has now been published and can be found in Pubmed.

NEUROANESTHESIA FELLOW DR. ANGELA BUILES AND MAYO CLINIC RESEARCHERS PUBLISH ULTRASONOGRAPHY STUDY IN ADVANCES IN ANESTHESIA

Dr. Angela Builes. Neuro Anesthesia Fellow, published the study entitled "Currently Practical Applications of Ultrasonography in Surgical Anesthesia" in the journal, Advances in Anesthesia, along with Mayo Clinic Researchers, RA Ratzlaff and JL Diaz-Gomez.

ACUTE PAIN FELLOW, DR. MARIA LOPERA VELASQUEZ PRESENTS AT ASRA'S 14TH ANNUAL PAIN MEDICINE MEETING

Congratulations to Acute Pain fellow, Dr. Maria Lopera Velasquez (pictured left), for presenting at this year's Annual Pain Medicine Meeting! Dr. Lopera presented the systemtatic review that she coauthored with Dr. Qutaiba Tawfic, "Interventions to reduce chronic post-surgical pain after mastectomy: a systematic review".

Pictured: Dr. Maria Lopera Velasquez (centre), and Nurse Practitioners, Heather Whittle (left), and Charlotte McCallum

fellows

#### ALFARO, HILDA General Colombia

ALGHAZALY, SAMFR General

ALRAFFA. ABDULLA Simulation Fellow. Saudia Arabia

ARIAS. ISABEL Neuroanesthesia. Colombia

ALRAFFA. ABDULLA Simulation Fellow

ALZAHRANI, ARWA Simulation, Saudi Arabia

BHARDADWAJ, SUPARNA General

**BUILES. ANGELA** Neuroanesthesia. Colombia

CARR, ADRIENNE Transplant

CATALAN, GRACE Simulation Philippines

DANYAN AL-SALAH, FATEMAH Transplant. Saudi Arabia

ELDEYASTY, BASEM Research/ Transplant

FLIER. SUZANNE is doing a one vear Cardiac Fellowship. She is from The Netherlands where she has just completed her Anesthesiology Training in April 2014. She also has a Masters in Epidemiology and is completing her

GONZALEZ. **NELSON** is doing a one year Cardiac Fellowship. He is from Colombia working as an Anesthesiologist at Hospital San Vicente de Paul.

HSU, GINA Regional

DAVID Regional. Northern Ireland, United Kingdom

**KISHORE, KAMAL** India. Transplant

LEE, DENNIS Vascular/Thoracic Australia

LIMA. RONALD Cardiac, Brazil

MAGSAYSAY. PAULINE Regional. Philippines

OASEM. FATEMAH is doing a one vear Obstetrical Fellowship. She is from Kuwait.

SADKHAN. HUSSEIN Transplant. Iraq

SAEED, RASHA Cardiac, Sudan

SAL RAMESH General, India SEEBAG. ILANA **Obstetrics** Brazil

SHARMA, MOUVFFN Obstetrics. India

VELASQUEZ, MARIA LOPERA General Colombia

VERGEL DE DIOS. **JENNIFER** General Fellowship

VILEGAS, ISABEL Neuroanesthesia. Colombia



PhD GIRALDO.

MAURICIO JAVIER Neuroanesthesia Colombia

where he is

JOHNSTON,

# clinical academic programs



#### 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 1400 patients that undergo Cardiac Surgery including: coronary bypass, valve replacements, heart transplantation, minimally invasive and robotic cardiac surgery, trans-catheter valves and 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. Resident trainees from anesthesia, cardiac surgery, cardiology, and critical care rotate through the unit along with cardiac anesthesia fellows.

The CSRU also 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.



#### ANESTHESIA ASSISTANTS

#### Dr. James Watson, Program Director

The Department of Anesthesia and Perioperative Care continues 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 care 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 and reliable assistance in these challenging environments. In September 2008, Fanshawe College in London initiated a training program for Anesthesia Assistants. The seventh class began in September and was fully subscribed. 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 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 have found this to be a rewarding training experience. Enrolment 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 working conditions for anesthesiologists.



After completing a fellowship in Simulation in 2015, Dr. Grace Catalan (far left) returned to the Philippines where she has launched the first surgical simulation program in the country

#### ANESTHESIA AND CRITICAL CARE TEACHING THROUGH SIMULATION (ACCTTS)

Dr. Richard Cherry, Director

#### ACCTTS FACULTY: R CHERRY (DIRECTOR), A ANTONIOU, I BRUNI, R BUTLER, L CHAMPION, B CHURCH, J GRANTON, S MORRISON, G NAIR, D SOMMERFREUND

2015 was another remarkable and successful year for the ACCTTS team. Notably, in December, the program delivered its 200th PGE Anesthesia simulation day since the inception of the program in 2006.

This milestone marked over 8000 anesthesia trainee hours of instruction provided through this program. The quality and impact of the simulation training program continues to drive excellent reviews from our residents and is often cited as a significant attraction for potential trainees considering Western in our CaRMS matching process.

In 2015, the program made strategic expansion in our delivery to include dedicated interprofessional thoracic, and pediatric simulation offerings.

We welcomed Dr. Gopa Nair and Dr. Dave Sommerfreund to the ACCTTS team as leads in the pediatric simulation venture.

We deliver exceptional undergraduate training in the Anesthesia Clerkship Boot Camp. In 2015 we broadened and strengthened the faculty base for this program to include fellow instructors from diverse clinical specialties within our department. ACCTTS faculty continue to assist and instruct in the CSTAR IPE Summer School, Surgery.

#### [ACCTTS continued]

PGY1 Simulation and in the annual Emergencies in Otolaryngology course. We continued to create and deliver interprofessional simulation experiences for obstetrical emergencies under the guidance of Dr. Andreas Antoniou.

Engaged and capable faculty are the key to a successful education program and our department continues to support and encourage ACCTTS faculty to enhance their simulation educator skills. Our new faculty have committed themselves to this important task.

Dr. Steve Morrison was recognized with a Schulich School of Medicine & Dentistry Faculty Development Mini-Fellowship to pursue his simulation development at the Center for Medical Simulation at Harvard University. This is an exceptionally competitive fellowship and Dr. Morrison is to be congratulated in this success.

Drs. Nair and Sommerfreund participated in the first KidSim Debriefing workshop delivered in London by visiting expert faculty from the University of Calgary. ACCTTS is proud of our committed and diligent faculty.

Dr. Grace Catalan (Philippines) and Dr. Abdullah Alraffa (Saudi Arabia) completed their respective simulation fellowships in 2015. We are pleased with the broad influence the ACCTTS fellowship program is having through its trainees and proud to report that Dr. Catalan has returned to the Philippines and started the first simulation program in her home country!

The use of simulation for assessment continues to advance at the national level and we provide

multiple sessions to our fourth year and fifth year residents.

The standardized CanNASC scenarios have been developed in collaboration with other programs across the country and are positioned to provide objective assessment of resident performance in simulated clinical situations. This is a tremendous accomplishment for the academic anesthesia community nationally and ACCTTS is pleased to be a part of this. As we move towards a model of Competency Based Medical Education (CBME) in anesthesia, simulation will play a crucial role in assessment and we are positioning ourselves to help make this challenging transition in the training paradigm.

This important and timely area of research will continue with a Delphi approach to develop a standardized handover tool and subsequent refinement and validation of the tool in both simulation and clinical environment.



THE ACCTTS GROUP CONTINUES TO REPRESENT THE DEPARTMENT IN NOTABLE LOCAL AND NATIONAL SIMULATION LEADERSHIP ROLES:

Dr. Cherry - Chair of the Royal College Simulation Summit (@SimSummit 2015 Banff, Alberta),

Royal College Simulator Educator Training Course (instructor) and member of the Royal College Simulation Center Survey and Accreditation Committee.

Dr. Antoniou – CanNASC representative for Western

Dr. Church – Canadian Military Simulation instructor

We are very pleased with the research success of Dr. Farah Manji (PGY5). Under the supervision of Drs. Cherry and Antoniou, her research titled "Perceptions and Practice of Intraoperative Handovers" was awarded the third place prize in the Resident Research Competition of the Canadian Anesthesia Society Meeting in Ottawa.



Dr. Richard Cherry and PGY5, Dr. Farah Manji



(L to R): Drs. Jeff Granton, Farah Manji (PGY5), Abdullah Al Raffa, (Simulation fellow) Hesham Youssef (PGY5), Abhi Rewari (PGY5), Steve Morrison, Collin Phillips, and Nathan Ludwig (PGY5), in the sim-lab with Sim-Man front-row centre.

#### **OBSTETRIC ANESTHESIA** Dr. Sandra Katsiris, Director

The Obstetrical Anesthesia Program at Western University is housed in the Grace Donnelly Women's and Children's Health Pavilion, at London Health Sciences Centre, Victoria Hospital. The Obstetrical Anesthesia Subspecialty group cooperatively focuses their efforts on patient care, teaching, and research in the level 3 (tertiary) Obstetrical Care Unit (OBCU).

The Obstetrical Care Unit comprises a 21 bed Antenatal unit, 16 private Labour Birthing Recovery Rooms, 4 Operative Birthing Rooms as well as a 5-bay Post Anesthetic Care Unit. The OBCU accommodates both low-risk and high-risk pregnant women. The volume of deliveries for the city was over 6000 this past year. Approximately 60% of the deliveries were high-risk.

The epidural rate was similar to last year at approximately 75%, and our use of intravenous patient controlled analgesia for labour was approximately 6%. The cesarean section rate was comparable to previous years at 21%. Approximately 90% of cesarean sections continue to be completed under neuraxial anesthesia.

The core resident rotations through the Obstetrical Unit were fully subscribed again this year, with two residents most often assigned during each rotation block. In addition to core Western University trainees, there were also residents from other Canadian institutions, as well as international trainees that chose to come to London for elective experience in obstetrical anesthesia. Dr. Indu Singh has been coordinating these rotations.



Dr. Andreas Antoniou has coordinated multidisciplinary simulation sessions for the obstetrical care team. These sessions involve Anesthesiology, Neonatology, Nursing, Obstetrics, and Respiratory Therapy. The development of a simulation room onsite has allowed these sessions to reach a multitude of participants each time they are run.

As in past years, obstetrical anesthesia was a common theme in trainee presentations at regional, national and international meetings. Dr. F Qasam presented 'Onset of Labor Epidural Analgesia With Varying Doses of Fentanyl' and Dr. I. Sebagg presented 'Epidural Pressure Waveform to Confirm Correct Positioning of the Epidural Needle in Laboring Pregnant Patients' at both the Society for Obstetric Anesthesia and Perinatology Annual Meeting in Colorado Springs, and at the Canadian Anesthesiologists' Society Annual Meeting in Ottawa in 2015. There are a number of other ongoing research projects currently underway in the OBCU. There were also a number of obstetrical anesthesia publications in 2015.

The Obstetrical Anesthesia Fellowship Program had Drs. Qasam and Sebagg as clinical fellows this past year. Dr. Fatemah Qasem will be continuing her fellowship during 2015-2016, and Dr. Mouveen Sharma will be the new clinical fellow for 2015-2016.

### newsmakers

#### AT THE 47TH SOCIETY OF OBSTETRIC ANESTHESIA & PERINATOLOGY (SOAP) ANNUAL MEETING

Dr. Fatemah Qasem and Dr. Ilana Sebbag, both Obsetric Anesthesia Fellows in the Department, presented their research during the oral/poster presentation session.

Dr. Qasem's oral presentation, "Onset of labor epidural analgesia using different concentrations of fentanyl: A randomized double-blinded clinical trial". SUPERVISORS: Dr. Indu Singh, Dr. Kristine Marmai, Dr. Shalini Dhir, and Dr. Philip Jones CO-AUTHORS: Dr. Indu Singh, Dr. Don Nguyen, Dr. Ramesh Sai, Dr. Kristine Marmai, Dr. Ramina Adam, Dr. Shalini Dhir, and Dr. Philip Jones

Dr. Sebbag's poster was titled "Epidural pressure waveform to confirm correct positioning of the epidural needle in laboring pregnant patients". SUPERVISORS: Dr. Indu Singh and Dr. Kevin Armstrong

CO-AUTHORS: Dr. Indu Singh, Dr. Fatemah Qasem, Dr. Kevin Armstrong

Dr. Shalini Dhir's case report session was titled, "Management of labour and delivery in congenitally corrected transposition of great arteries".

In addition, we are thrilled to announce that a case report by Dr. Shalini Dhir and Anesthesia Residency Program Graduate, Dr. Jennifer Racine, has been chosen to be "Best Case Report Session" for this year's meeting!

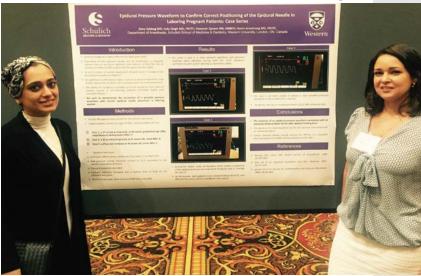
#### DR. IAN MCCONACHIE ATTENDS 1ST WORLD OBSTETRIC ANESTHESIA CONGRESS IN HYDERABAD, INDIA, AS CANADIAN REPRESENTATIVE | September 2015

Presented by India's Obstetric Association of Anesthesiologists, the 1st World Obstetric Anesthesia Congress was held in Hyderabad, India from September 11th-13th. This was a truly international event, with obstetric anaesthesia societies from across the globe viz. OAA (Obstetric Anaesthetists' Association, UK), SOAP (Society of Obstetric Anaesthesia and Perinatology, USA), OASAO (Obstetric Anaesthesia Society of Asia Oceania, Asia & Australia) joining the AOA (Association of Obstetric Anaesthesiologists, India) in the planning and presentation of this Congress.

Associate Professor, Dr. Ian McConachie, was invited by the Association to deliver a lecture, "Neuraxial blocks after spinal surgery." Dr. McConachie also participated in the panel debate, "Feeding during Labour," and was an instructor in a Cricothyrotomy workshop.

It was the first Congress of its kind by India's Obstetric Association of Anesthesiologists, and as there were over 1000 delegates in attendance from all over the world, it will undoubtedly not be the last.

PHOTOS: (TOP) Dr. Fatemah Qasem (left) and Dr. Ilana Sebbag with their poster at SOAP; (BELOW)Dr. Ian McConachie leads a workshop at the OSA Congress





#### PAIN MANAGEMENT

#### Dr. Pat Morley-Forster, Director

#### **CLINICAL CARE**

In 2015, there were 1683 referrals to the SJHC Pain Management Program and a total of 6,516 physician visits, and 722 psychology-related visits. We initiated a mandatory Patient Orientation Session for new patients, run weekly by one of the Pain Medicine residents, Dr. Michael Pariser. This has received very positive feedback, and has led to a reduced "No Show" rate for first-time consults and higher satisfaction with the encounter.

Clinical staff continued to grow with the addition of Dr. Rachel Reardon from the Department of Physical Medicine and Rehabilitation, and Karen Hobby, a physiotherapist.

Services offered are: Pain assessment (physical and psychological assessment, identification of successful past treatment modalities, diagnosis, and development of a plan of care based on patient goals); pharmacotherapy, interventional treatments (epidural steroid injections, radio frequency ablation, etc.); intravenous infusions; and individual and group cognitivebehavioral therapy.

We continue to work on development of care pathways based on evidence-based practices, and discharge planning back to community care. In 2016, we plan to create a transition care pathway from the Pediatric Chronic Pain Program at London Health Sciences Centre to St. Joseph's Adult Pain Management Program.

In September, St. Joseph's Health Care underwent accreditation. The Pain Clinic was designated as one of the target areas to receive close scrutiny from the accreditation team. This required a great deal of work on the part of our RN's, Cathy Rohfritsch and Cathy Lowery, to update policies and procedures and optimize patient safety protocols. Exemplary Accreditation standing was awarded to the health centre.

One of the accreditors quoted a Pain Clinic patient as saying: "They gave me a second life. The pain is manageable. I would refer this place to anyone...they make miracles happen."

#### RESEARCH

Trainee grants of up to \$10,000 are available annually from the Earl Russell Chair in Pain Management and Research to provide seed funding for pain research projects initiated by trainees registered at Western University or Lawson Health Research Institute. The recipient for 2015 was Dr. Anusha Ratneswaran, a PhD candidate in the Department of Physiology and Pharmacology for a proposal examining pharmacological inhibition of the PPARdelta receptor after induction of osteoarthritis.

An Interdisciplinary Research Program is led by Dr. Dwight Moulin, the Earl Russell Chair of Research and Education in Pain Management. Further information is available in the Earl Russell Annual Report, available on www.westernpain.ca.

The results of our four year, multi-centre prospective Neuropathic Pain Database were published in September 2015 in the Journal of Pain (Long-Term Outcome of the Management of Chronic Neuropathic Pain: A Prospective Observational Study. Dwight E. Moulin, A. John Clark, Allan Gordon, Mary Lynch, Patricia K. Morley-Forster, Howard Nathan, Cathy Smyth, Cory Toth, Elizabeth VanDenKerkhof, Ammar Gilani, Mark A. Ware). There are now a number of articles in press utilizing data from this registry of almost 800 patients in Canada.

#### EDUCATION

#### UNDERGRADUATE

The Meds IV Pain Medicine Selective has been expanded to ten (10) classroom seminars of 1.5

hours each, involving a case-based approach and a mandatory case-based module for Meds IV focusing on chronic low back pain with concurrent addiction.

#### POSTGRADUATE

Teaching sessions for the Pain Medicine residents are held every second Wednesday. Within the Western Anesthesia Residency Program, six academic half-days covering a variety of acute, chronic and cancer pain topics were offered to the Senior Resident group.

Two new Pain Medicine residents will be starting first year of the Pain Medicine subspecialty in July, 2016.

Clinical Case Rounds discussing complex cases are held every three months in the Pain Clinic classroom at St. Joseph's Health Care on Wednesday morning from 0715-0815 and are open to all faculty and trainees.

CONTINUING MEDICAL EDUCATION

Monthly Interdisciplinary Pain Rounds were arranged again this year by the Earl Russell Chair, Dr. Dwight Moulin. There was a variety of external and local speakers. External speakers this year were Dr. Hance Clarke, Department of Anesthesiology,

University of Toronto, Dr. Dean Elterman, Department of Urology, University of Toronto, and Dr. Hans Katzberg,

Department of Neurology, University of Toronto. Email notificationiscirculated to all Department members and they are posted on www.westernpain.ca.

#### FUTURE PLANNING

Upon request of the Ministry of Health, a proposal has been submitted for increased staffing to support access to multidisciplinary pain care.

The overall goal is to allow the physicians to focus more on the medical aspects of care while the clinical provider team will focus on optimizing the benefits of these treatments through self-management and lifestyle behavioral changes.

Another key component of the funding is to provide salary support for a Data Analyst and Quality Evaluation Measurement Consultant. We anticipate funding to be approved as other tertiary Pain Clinics in the province have got their money.



#### **NEUROANESTHESIA**

#### Dr. Miguel Arango, Director

The Neuroanesthesia Program has had another successful year in 2015. Between July 1, 2014 and June 30, 2015, University Hospital had a total of 1218 Neuro cases and Victoria Hospital had 269.

The program had two Neuroanesthesia fellows and eight residents completed a neuroanesthesia rotation.

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

CLINICAL London Health Sciences Centre is a national referral centre for the management of patients with cerebral aneurysms and arteriovenous malformations. In recent years, it has been discovered that surgery for Intractable Epilepsy has valuable therapeutic potential and this has resulted in epilepsy surgery becoming one of the "fastest growth areas" in neurosurgery. Patients are 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 endoscopicneurosurgery, craniotomies for tumors and hemifascial spasm, carotidendarterectomy, and spinal instrumentation.

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

#### NON-ANESTHESIA EXPERIENCE Residents/

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

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

#### RESEARCH/ACADEMIC ACTIVITIES The

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

#### PALLIATIVE MEDICINE

#### Dr. Valerie Schulz, Director

Dr. Valerie Schulz is practicing in Palliative Medicine, in the Department of Anesthesia & Perioperative Medicine, London Health Sciences Centre, Professor, Western University and London Health Sciences Centre (LHSC). Through the support of this department she has been able to contribute to clinical, educational, research and academic advances in Palliative Medicine during 2015.

Dr. Schulz participates clinically in LHSC's Critical Care Units, and in the renal dialysis unit at University Hospital.

This service considers an approach to symptom management and goals of care and treatment options for patients with life threatening and/or life limiting illnesses.

Discussions with the new Heart Failure Clinic at St. Joseph's have resulted in Palliative Care being asked to join the initiative in 2016.

Perioperative Care leadership, in collaboration with Dr. Schulz, has begun to explore the concept of Palliative Care in the Perioperative Period. A perioperative palliative care committee is being developed to begin conversations in 2016. Some of the inaugural concepts to be explored are to understand frail patients at predictable risk of dying being cared for in the perioperative period and to understand concept of procedures or interventions for frail patients.

Provincially, Dr. Valerie Schulz was invited to join Ontario Palliative leaders on the inaugural Provincial Hospice Palliative Care Clinical Council. This Clinical Council collaborates with the Provincial Hospice Palliative Care Steering Committee to develop strategic, scalable recommendations to systematically advance Palliative Care across Ontario. In addition Dr. Schulz is the Co-Chair of the Ontario Renal Network (ORN) Palliative Care Working Group. This group has been established to lead the Palliative Care component of the next ORN Plan.

Nationally, Dr. Schulz participates on the Working Group in Palliative Medicine at the Royal College of Physicians and Surgeons of Canada's to develop the subspecialty certification in Palliative Medicine.

Drs. Valerie Schulz and Lorelei Lingard at the Centre for Research and Innovation (CERI) Western, provide 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 ongoing project. This year's research focus created partnerships and dissemination of results at local, provincial, national and international conferences.

Palliative Care is advancing at a rapid pace across Ontario and Canada, and Dr. Valerie Schulz has dedicated her career to this laudable cause.

These contributions to Palliative Medicine were made possible through the support of Western's Department of Anesthesia & Perioperative Medicine.



#### **PEDIATRIC ANESTHESIA**

#### Dr. Mohamad Ahmad

Pediatric anesthesia in London continued to develop in 2015 with multiple initiatives completed and in progress. Dr. Lynn Coveney, my predecessor as director of the pediatric anesthesia program, retired this year. In addition to being a great clinician, teacher and mentor, Dr. Coveney was an ambitious and innovative administrator. Her accomplishments were many in her eight-year tenure. She improved pediatric patient safety and quality of care. She expanded the scope of pediatric out-of-operating room procedures at LHSC especially sedation for oncology procedures and the Minor Procedure Room. She introduced pediatric anesthesia call and encouraged subspecialization so that London kept up with pediatric centers across the country. She spearheaded the introduction of anesthesia assistants into our clinical work. She reached out to other pediatric programs both within London and across the country. She introduced nursing inservices to train PACU, PMDU and ward nurses in the principles of pediatric anesthesia. As a result, the profile of our program improved tremendously. She worked to encourage our residents to pursue pediatric fellowships as well as to recruit fellowshiptrained pediatric anesthesiologists. The most enduring contribution Dr. Coveney made was to make our program function as a true program, functioning at a level greater than the sum of its individual members.

Dr. Gopa Nair joined our department in February after finishing a pediatric fellowship in Seattle. Since then, he has greatly expanded our pediatric regional anesthesia program and provided excellent teaching to our residents.

In 2015, we introduced a once-monthly pediatric anesthesia journal club. It is well attended with over a dozen attendees each time and is telecast through the internet. Dr. Nair has been instrumental in facilitating it. Dr. Raju Poolacherla completed pediatric chronic pain training at The Hospital for Sick Children. He then initiated a multidisciplinary pediatric chronic pain program at Victoria Campus. It has expanded to a full-day Friday clinic.

Dr. David Sommerfreund attended a pediatric perioperative ultrasound course in Boston and is planning to introduce it into clinical practice here. He also continues to develop the pediatric acute pain program with educational and research initiatives. Dr. Sommerfreund also participated in a pediatric surgery outreach program in South America.

In 2015, we developed our first LHSC pediatric anesthesia handbook for our residents. It has been well received especially in its electronic format. We also developed an electronic resident evaluation system but the department-wide VENTIS system is expected to come into use soon. Some members of our program attended a pediatric simulation workshop this year with a view to start a pediatric anesthesia simulation program. We sought to obtain new airway equipment as well.

Most encouraging is the continued interest our residents have in pediatric anesthesia. Three residents are currently planning pediatric fellowships and one has been accepted to The Hospital for Sick Children for July 2016.

Academically, our goals for 2016 are to complete two research studies we have initiated involving pediatric acute pain and sedation for MRI. We hope to add other projects and eventually present and publish our results. We wish to focus on the use of new technology. We also plan to expand our journal club by inviting other centres to join by teleconference. Clinically, we plan to conduct some qualityimprovement projects as well as expand the use of regional anesthesia and perioperative ultrasound.

### newsmakers

The first Pediatric Chronic Pain Clinic was held at Victoria Hospital LHSC, on Friday, May29<sup>th</sup> 2015. This clinic will be the first of its kind in Southern Ontario. Pediatric Anesthesia will be leading the clinic, supported by Psychologists, Psychiatrists, and Physiotherapists.

NEW PEDIATRIC CHRONIC PAIN PROGRAM TAKES AN INTERDISCIPLINARY APPROACH TO HELP CHILDREN MANAGE PAIN

#### **DECEMBER 1, 2015**

Children's Hospital at London Health Sciences Centre is offering a collaborative approach to helping the 10-15 per cent of children and adolescents who are suffering from complex chronic pain. The Pediatric Chronic Pain Program utilizes an interdisciplinary model to provide children and families with a care plan to manage, or relieve, their chronic pain.

Children and youth up to and including 17 years of age, and their families, can be referred to the program by their current care teams and are assessed by a team of health care providers including a psychiatrist, psychologist, anaesthesiologist, pharmacist, physiotherapist, nurse practitioner, and registered nurse within the same day. Health care providers utilize a number of tools including visuals and rating scales to help assess the pain because children often have difficulty verbalizing what they are feeling. Importantly, they take care in acknowledging that the pain is real.

"Chronic pain becomes truly problematic when it begins interfering with the child's life. They may begin to miss school and withdraw from activities, which can lead to feelings of isolation and the beginnings of difficulties with mood and anxiety," says Dr. Jennifer Crotogino, Psychologist, LHSC. "There is also often an impact on the family as they try to manage their child's pain, including sleep issues, elevated levels of stress and time off work."

An interdisciplinary model ensures that the medical, emotional and functional aspects of the child are examined. "Our clinic blends the pharmacological, physical, and psychological aspects called the "3P" approach to create a treatment plan that families and their care teams can use to treat their child's complex chronic pain," says Dr. Raju Poolacherla, Paediatric Anaesthesiologist, LHSC.

Currently accepting referrals, the Paediatric Chronic Pain Program runs one day per week. The interdisciplinary team assesses one to two new patients per week at two hours each and two to three followup patients at 45 min each. Yearly, the program expects 200 to 250 clinic visits, with 50-60 new cases per year. The entire team provides an initial assessment but further visits with individual health care providers are available as needed. As the program grows, information and treatment groups for parents. children and teens are expected to be added to provide more options to families wanting help with pain.



"We are filling a need within our region. These children are already receiving existing treatment, but we work in partnership with families and their current health care team to provide recommendations that can lead to a better quality of life for the child," says Dr. Javeed Sukhera, Child and Adolescent Psychiatrist, Child and Adolescent Mental Health Care Program, LHSC.

The program takes an individualized approach to each patient and develops a tailored toolkit to be implemented by families and health care providers that includes different pain management techniques and coping mechanisms such as proper breathing techniques and cognitive behavior therapy. The program includes medication therapies, active rehabilitative services, psychological and/or psychiatric services, group therapy and interventional services.

\*\*Courtesy of <u>LHSC News</u>

#### PERIOPERATIVE PATIENT BLOOD MANAGEMENT

#### Dr. Fiona Ralley, Director

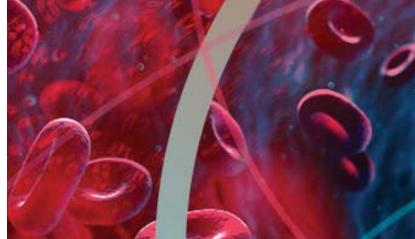
The perioperative patient blood management (PPBM) program continues to expand its services to any surgical specialty where a surgical procedure has an anticipated chance of a patient receiving a blood transfusion of greater than 10%. Classically it has directed the majority of its efforts to orthopedic, cardiac and vascular patients. However this year gynecological, colo-rectal and hepatobilary surgery has been encouraged to consult the program when indicated.

Total perioperative patient care continues to focus mainly on the ONTraC targeted surgical procedures (orthopedic, cardiac, and gynecological), as well as patients refusing blood transfusion. With preoperative hemoglobin optimization continuing to be the core of the nurses' work for any patient referred to the program. Thus, the PPBM program continues to see from 200-250 patients a month, with approximately 2–3% receiving either intravenous iron and or erythropoietin.

The number of orthopedic patients seen in the pre-admission clinic (PAC) with clinical anemia (i.e. Hb<130g/L) has been greatly reduced since the introductionofreportingofoutpatientclinichemoglobin andferritintestingviathehospitalS-drive, which enables identifying iron deficient and anemic patients as early as possible in the preoperative time period (up to three months prior to surgery).

This allows for the use of oral iron supplementation as the primary treatment modality for the anemia.

Implementation of this early screening program resulted in a decrease in the number of orthopedic



patients with hemoglobin lower than 130 g/L at the time of their PAC assessment compared to a control group prior to implementation. There was also a significant decrease in the use of erythropoietin and/or IV iron pre-operatively in the patients in the early screening program. Initially started in the orthopedic outpatient clinic in late 2012 this service has now been offered to other specialties including cardiac, gynecological and general surgery. It is hoped that after a recent presentation to the perioperative committee of LHSC describing the excellent results seen in the orthopedic patients, that this will be adopted by these services.

One vs. two unit red blood cell (RBC) transfusion continues to be monitored by the program as part of a LHSC Medical Advisory Committee Quality Indicator. This is in preparation for the possible introduction of mandatory reporting of these numbers in the future as requested by the Ontario Transfusion Quality Improvement Plan for 1 unit RBC transfusion being developed by Ontario Regional Blood Coordinating Network. There has been some significant improvement in this area over the past year so that the numbers at LHSC are approaching those recommended by the National Advisory Committee for Blood Products. Education is being continued to maintain these numbers.

As in previous years the members of the PPBM program have been active both nationally and internationally, including visiting lectureships,



presentations at meeting, abstract and manuscript publications and research projects.

During the past year three major studies have been completed including a multidisciplinary study on the use of a point of care algorithm in guiding transfusion decisions in cardiac surgical patients, a study on the comparison of intra articular tranexamic acid vs. intravenous tranexamic acid in patients undergoing total hip joint replacement, as part of a Master of Surgery thesis, and a review of the impact of early patient screening in orthopedic patients on the incidence of preoperative anemia. All the studies have manuscripts in progress.

In collaboration with Orthopedic Surgery Resident Dr. S. Neely, research project "Is there a role for pre-operative iron supplementation in patients preparing for a total knee or total hip arthroplasty?" Patients seen in pre-admission clinic (PAC) between Jan 1, 2009 and March 31, 2010 represented the control group (hemoglobin optimization strategies implemented at PAC). The treatment group, patients seen in PAC between October 1, 2012 and December 31, 2013 received screening blood work when booked for surgery, and oral iron supplementation was given to patients with hemoglobin of less than 135g/L or ferritin less than 100ug/L. Implementation of this early screening program using oral iron supplementation resulted in a decrease.

As always the PPBM 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. In addition information can be obtained from our hospital website at: www.lhsc. on.ca/bloodmanagement in the number of patients with hemoglobin lower than 130 g/L at the time of PAC assessment. There was also a significant decrease in the use of Eprex and IV iron preoperatively in the patients in the early screening program.

One verses two unit red blood cell (RBC) transfusion reported to MAC as a quality indicator; as of January 1, 2015 data percentage parameters for red, yellow and green designations were revised to less than 50, 50 to 64 and 65 or greater respectively. The revision is in keeping with the Ontario Transfusion Quality Improvement Plan for 1 unit RBC transfusion being developed by Ontario Regional Blood Coordinating Network.

#### REGIONAL ANESTHESIA (RA), ACUTE PAIN SERVICE (APS) & COMPREHENSIVE PAIN MANAGEMENT PROGRAM (CPMP)

#### Dr. Kevin Armstrong, Director

2015 marks the end of an era for the regional program at Western. Su Ganapathy, who was instrumental in a number of endeavours, retired. Since completing her regional anesthesia fellowship training in 1993, she has been prominent on the national and international stage. Her contributions include numerous publications, the establishment and development of a training program for residents and fellows, multiple learning workshops, the introduction of advanced clinical techniques, and exceptional clinical care for a large number of patients. Two more important contributions are her foresight into the use of ultrasound for regional anesthesia, and her collaborative work beyond the department. Under her guidance we became early adopters of this US technology, which is state of the art.

Together with the Department of Anatomy and Cellular Biology and the Robarts Research Institute, many fruitful collaborative projects resulted. Obviously this paragraph cannot do justice to her career here at Western; however together with George Varkey, Su is someone to whom all who practice regional anesthesia owe a debt of gratitude.



Dr. Sugantha Ganapathy

As we enter 2016, the regional anesthesia and acute pain service continue to be busy environments regarding patient care. These services provide care for a large number of patients at the three acute care hospitals in London. Regarding education, residents and fellows gain exposure, experience, knowledge and skill in the practice of regional anesthesia at the SJHC and UH sites. Residents and to limited degree fellows, have educational opportunities at the VH site. The regional anesthesia groups have been quite productive in the area of research over the past year (see publication list).

For a number of years there has been a vision to harness the expertise of services with knowhow in pain management and apply this to pain management in the perioperative period. The identified services are Chronic Pain, Acute Pain, Palliative Care, and Regional anesthesia. With the support of the CPMP, three program were initiated and show great promise for the future. Under the leadership of Collin Clarke, the intrathecal catheter placement and management for palliative pain management is well underway with a projected growth for 2016. Under the leadership of Raju Poolacherla the pediatric chronic pain management program has been implemented at the VH site. Qutaiba Tawfic, one of our newer physicians has initiated the Acute Pain Management fellowship. For 2016 we are expecting to enhance the academic deliverables for such a program.

Our support from nursing includes our Nurse Clinician Heather Fisher and our Nurse Practitioners Heather Whittle (VH) and Charlotte McCallum(UH). As the roles of the programs expand, these individuals will play a significant role in both clinical care, as well as education.

#### **REGIONAL ANESTHESIA**

Regional anesthesia and analgesia, in the form of peripheral nerve block, is well established in the clinical care of perioperative patients at SJHC and UH. There continues to be interest in introducing regional anesthesia to the VH site. At this time, Gopa Nair, with his pediatric colleagues are working towards the expanded use is some regional for pediatric patients. With the retirement of Su Ganapathy and John Parkin, and the lost of Rakesh Vijayashankar we currently have eight faculty members who provide clinical care, educational opportunities and participate in research at the SJ and UH sites. This creates a number of challenges. In the coming months we will be actively recruiting consultants with the skill set to fulfill the academic mission of the department.

At SJHC, the clinical load of the Hand and Upper Limb Centre (HULC), results in a high volume of clinical work, educational opportunities, and research involving the brachial plexus. The presence of the breast care program is an opportunity to increase our activity in trunchal blockade, namely paravertebral blocks.

At UH the general surgery, orthopedic and plastic surgery populations provide a high volume of clinical work, educational opportunities, and research involving truchal blockade and lower limb regional analgesia. The UH block room continues to evolve. We continue to work towards an effective model in these financially challenging times.

#### ACUTE PAIN MANAGEMENT

The clinical load at both UH and VH sites continue to be highly subscribed. There are 100 to 150 primary clinical visits per week by the APS team at both sites. Additionally there are supplemental visits by of nurse clinicians and on call residents. At SJHC, the numbers are much smaller and often involve regional analgesia. "CPOE" (computer provider order entry) has been in place for over a year at this point, and I believe that the workflow for APS consultants is working reasonably well.

#### COMPLEX PAIN MANAGEMENT PROGRAM

There is an ever increasing need for innovative strategies to manage the pain of patients presenting for surgery. Some patients have generalized chronic pain, others have pre-existing chronic pain at the site of surgery, and others develop chronic post surgical pain. The extent of these problems are variable and difficult to predict.

We continue to work towards pain management pathways that draw on the expertise of those who work in regional anesthesia, acute pain management and chronic pain. These pathways are expected to improve the care for all patients but especially those higher risk for chronic postsurgical pain.

Such changes have the potential to improve patient care, offer learning opportunity for our trainees, and opportunities for research and audit activity. Involvement of the chronic pain residency will add positively to this program.

#### **THORACIC & VASCULAR ANESTHESIA**

#### Dr. George Nicolaou

The academic Thoracic and Vascular Anesthesia Program continues to thrive and grow at an exponential pace 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 multi-disciplinary and morbidity and mortality 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 coexisting diseases including severe cardiorespiratory compromise. These patients have an extensive preoperative evaluation by anesthesia and/or internal medicine, cardiology and respirology. We have developed a multi-disciplinary perioperative high-risk clinic for optimization and follow up of these patients. The Thoracic and Vascular Surgical Programs have their own postoperative stepdown monitored units with invasive monitoring capabilities.

THORACIC SURGERY The robotic (da Vinci robot) and video-assisted thoracic surgical (VATS) programs 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 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 thoracoabdominal 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 thoracoabdominal 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. We presented our results on spinal cord protection strategies at the 2012 International Forum of Cardiovascular Anesthesia in China.

#### 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;
- Comparing Transcutaneous to Transdural Near-Infrared Spectroscopy for Detection of Regional Spinal Cord Ischemia in a porcine model;
- Biochemical markers of spinal cord ischemia in patients
- undergoing thoracic aortic endovascular repair;
- Malignant Pleural Effusion Thoracoscopic Outpatient Pleurodesis. A feasibility trial.

RESIDENT 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, transesophageal echocardiography and point-of-care ultrasonography 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

FACULTY: DR. W DOBKOWSKI, DR. A. VANNELLI, DR. M ST-AMAND, DR. R ARELLANO AND DR. S MORRISON

The liver transplantation program continues to provide excellent clinical care to patients for liver transplantation, liver resections and major Hepatobiliary surgeries. CIHI recently published results of orthotopic liver transplantation in nine centres across Canada for 2009 – 2013. Our results for onemonth, one-year and two-year patient survival were better than rest of Canada and were significantly improved in the sickest patients (Status 3F, 4 and 4F).

Drs. Marc St-Amand and Ramiro Arellano joined the group while Drs. Harle and Ralley decided to step down. We thank Drs. Ralley and Harle for their services, dedication and contribution to this specialty. Dr. Dobkowski also decided to stop doing liver transplants as a step towards his retirement. No words can describe Dr. Dobkowski's passion and commitment to this exciting specialty. He has agreed to lend his helping hand even after his retirement and we thank him for decades of excellent patient care, teaching and leadership.

From January to December 2015, we provided anesthesia for 56 liver transplantations including many critically ill recipients from the ICU. 43 livers came from brain dead donors, 10 were donations after cardiac death and three were living related liver transplants.

During the same period, our group also provided services to about 100 major liver resections including several ALPPS procedures. The group is also involved with preoperative assessment and optimization of patients before they are listed for liver transplant.

We also run a successful fellowship program with two fellows. Dr. Kamal Kishore completed his transplant fellowship and was the only fellow for one year.

He is now doing cardiac fellowship. Dr. Nelson Gonzalez and Dr. Hussein Sadkhan joined 'Liver transplant' fellowship in July 2015 while Dr. Bassem joined as a research fellow.

### Aside from getting excellent clinical training, fellows are also involved with research and academic activities.

We are trying to incorporate Trans Esophageal Echocardiography basic training for liver fellows. We also conduct monthly PBLDs and journal clubs. Liver Transplantation Anesthesia group attends Bon-Mots Transplant rounds regularly and participates in 'Liver assessment' and 'M & M' rounds conducted by Transplant surgeons & Hepatology colleagues.

We presented an interesting and clinically challenging case report of liver transplantation and tuberculosis at the annual meeting of 'International Liver Transplantation Society' in Chicago, USA.

The project on Infusion of ketamine and Lidocaine for pain management after major liver resection is nearing its completion. A multidisciplinary research project using ROTEM technology in major liver resections has just begun and we have started recruiting patients for the project of 'Peripheral circulation during end stage liver disease'.

For several years, Dr. Dhir and Dobkowski have been collaborating and organizing 'Transplant symposium / session' during the CAS annual conferences.

The session targets non-transplant anesthesiologists across Canada and focuses on transplant related issues. 2015 was no exception and the 'Transplant symposium' in CAS Ottawa was a huge success. A case report of 'Successful hepatectomy using venovenous bypass in a patient with carcinoid heart disease with severe tricuspid regurgitation'was published in the Journal of Cardiothoracic and Vascular Anesthesia, August 2015.

Dr. Dhir delivered invited lectures on 'Pulmonary problems in liver disease' in 2015 CAS in Ottawa and on 'Peri-operative renal issues in Liver Transplant recipients' and 'Acute renal failure post transplant - what matters' in New Delhi, India. Dr. Dhir was also a panelist on 'Challenging case of liver transplant' and chaired a session on 'Combined vs Sequential Liver Kidney Transplant' in the same symposium. Dr. Dhir also conducted a breakfast session on 'Cardiac surgery in a patient with ESLD' in Indian Association of Cardiac Anesthesiologists annual conference in Jaipur, India.



Ramiro Arellano, and Steve Morrison

[Dec 2015] Long-time friends and colleagues of Dr. Wojciech Dobkowski gather to celebrate his illustrious career, and wish him all the best in his retirement





Dr. Janet Martin, Program Director Dr. Davy Cheng, Medical Director

The Centre for Medical Evidence, Decision Integrity & Clinical Impact (MEDICI) was established in 2011 with the support of the Schulich School of Medicine & Dentistry, London Health Sciences Centre, St. Joseph's Health Care London, and Lawson Research.

**MEDICI** incorporates:

- HiTEC (High Impact Technology Evaluation) Centre), a hospital-based, evidence-based health technology assessment unit which serves hospitals and regional health in London, Ontario and beyond.
- EPiCOR (Evidence-Based Perioperative Clinical Outcomes Research Group), which supports research synthesis and clinical research with a focus on anesthesia, surgery, perioperative medicine, and critical care for local, national, or international settings.
- Know4Go, a framework to support decisionmakers and policy-makers to contextualize and synthesize evidence, economics, SLEEPERs, and forgone opportunities to illuminate whether a decision should be a 'go' or 'no-go', or whether 'more research is required (and is worth it)'.

#### MEDICI has three key mandates:

- 1. PRACTICE & POLICY: To provide timely, contextualized evidence syntheses to enable real-world evidence-informed decision-making related to drugs, devices, procedures and programs with a special focus on:
  - hospital based decision-making at the local level. and with application also to regional, national, and international healthcare decision-making;
  - global surgery, anesthesia & perioperative care:

## MEDICI

- 2. EDUCATION: To provide educational and capacity-building opportunities in evidenceinformed decision-making, health technology assessment, health economics, health policy, and knowledge translation locally, nationally, internationally in the developed and developing world:
- 3. RESEARCH: 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 the developing and developed world.

#### **Ongoing MEDICI Research Programs:**

- Health Technology Assessment & Knowledge Translation (2013-2014 specific projects in collaboration with clinical programs including orthopedic surgery, cardiology, thoracic surgery, anesthesia, critical care, ENT surgery, ophthalmology, and mental health)
- Rapid Synthesis Methodologies to Support **Decision-Makers**
- Real World Robust Decision-Making
- Quantifying Opportunity Cost across Multiple **Competing Opportunities**
- Disinvestment-Reinvestment Methodology
- Evidence Contextualization
- Value of information Analysis
- Evidence Reversals
- Relevance of health economics in the hospital setting
- Know4Go Applications: Combining Evidence + Ethics + Economics + "Everything Else" to inform value in health care



In 2015, MEDICI was invited to contribute to a number of global surgery initiatives at the WHO in Geneva.

Janet Martin, Davy Cheng, and Jennifer Vergel de Dios published, "Survey of the capacity for essential surgery and anaesthesia services in Papua New Guinea", in collaboration with WHO GIEESC.

Dr. Martin and Dr. Cheng led the development of WHO Guidelines for Screening, Diagnosis, Triage, and Management of Patients Presenting for Surgery in the Context of Ebola Virus Disease (EVD) and Other Viral Haemorrhagic Fevers (VHF).

#### MEDICI is continuing to work with the WHO to:

- Develop evidence-informed contextsensitive guidelines
- Advocate for development of capacity for essential surgery, anesthesia, emergency and critical care in resourcepoor settings as a component of Universal Health Care
- Provide workshops and capacitybuilding in evidence-informed decisionmaking in essential surgery and anesthesia contextualized to resourcepoor settings

### highlights

#### DECEMBER 2015

Drs. Cheng and Martin were invited to the WHO's 10th anniversary of GIEESC, at WHO headquarters, Switzerland. Dr. Cheng represented the Department of Anesthesia and Perioperative Medicine, as well as the Scientific Affairs Committee of the World Federation of Societies of Anesthesiologists (WFSA). Dr. Martin chaired a working group on Data Metrics and Quality Indicators in Emergency and Essential Surgery and Anesthesia Care.

Desiree Sutton, MSc (epi) candidate, successfully defends her thesis on "Evidence Reversals", under the supervision of Dr. Martin.

Dr. Martin is Invited Professor at City University, London, UK to present "What proportion of evidence is valid and relevant?"

Dr. Martin contributes to "Hellish Decisions" course at Oxford University, Oxford, UK.

#### **NOVEMBER 2015**

Dr. Cheng and Dr. Martin lead the ISMICS conference on Transcatheter Aortic Valve Intervention (TAVI), based on MEDICI's series of meta-analyses on TAVI vs surgical aortic valve replacement in high-risk patients, and TAVI versus medical management in patients ineligible for surgery.

#### OCTOBER 2015

Dr. Martin presents MEDICI research on "Evidence: What Proportion is Valid and Relevant?" at the International Evidence-Based Health Care Conference in Sicily.

Dr. Martin completes her term on the Scientific Committee for the Evidence Based Health Care meeting in Sicily, Italy.

#### **SEPTEMBER TO DECEMBER 2015**

Dr. Martin delivers the case-based interactive Clinical Epidemiology course for the MSc(epi) program at the Epidemiology & Biostatistics Department, Western. Dr. Philip Jones is a frequent contributor to the course, with guest lectures on Diagnosis & Screening, Prognosis & Harm, and Clinical Trials & Evidence Integrity. The final exam was a lively court-case debate on a series of evidence-informed topics.

#### SEPTEMBER 2015

Dr. Ava John-Baptiste, Health Economist for MEDICI, elected as one of three Trustees for the Society of Medical Decision Making (SMDM).

Riaz Qureshi begins his research at MEDICI as a Masters student in epidemiology, under the supervision of Dr. Martin.

Dr. Jennifer Vergel de Dios joins MEDICI as Global Health Fellow.

Dr. Junsong Gong and Dr. Jingyi Li join as postdoc fellows

#### JULY 2015

Dr. Martin was invited to contribute to Advisory Panel on Healthcare Innovation (Chair, Dr. David Naylor; Deputy-Chair, Francine Girard). Special invitation from Honourable Rona Ambrose to contribute to the "Unleashing Innovation: Excellent Healthcare for Canada. Report of the Advisory Panel on Healthcare Innovation", submitted to the Honourable Rona Ambrose, Minister of Health.

#### **JUNE 2015**

The MEDICI team presents an interactive workshop on Anesthesia Evidence at the CAS Annual Meeting, Ottawa.

#### **SUMMER 2015**

Dr. Angel Zhu, Brenda Tibingana, Jessica Moodie, Amy Newitt and Peter Zhang (summer student) apply text mining to automate systematic review searching for Maternal-Neonatal Perioperative Mortality.

Atoosa Enzevaei, Critical Care Fellow, completes research rotation at MEDICI, contributing to Critical Care Evidence Validity & Relevance.

Dr. Matt Chong completes a research rotation at MEDICI, contributing to Anesthesia Evidence Validity & Relevance, and also multiple meta-analyses.

#### MAY 2015

Dr. Martin is Invited Professor at Barcelona University's School of Economics, to deliver a course on Health Technology Assessment & Decision-Making.

MEDICI presentation on Safe Surgery Checklist Relevance for Developed and Developing Countries at Euroanesthesia in Berlin is profiled in media outlets, including MedicalResearch.com, Medscape News, and AAAS.

#### **APRIL 2015**

Dr. Martin participates on two panels on 'HTA & Innovations in Decision-Making using Know4Go' at the Canadian Agency for Drugs and Technologies in Health Symposium.

Dr. Martin completes her term as Chair, HTA Exchange, and welcomes Dr. Murray Krahn, THETA as in-coming Chair.

#### **MARCH 2015**

Dr Cheng and Dr. Martin present an interactive workshop on "Anesthesia Evidence: Validity and Relevance" at the IARS Meeting in collaboration with Dr. Steven Shafer.

#### **JANUARY & FEBRUARY 2015**

Dr Cheng and Dr. Martin present the MEDICI team's evidence syntheses and guideline recommendations on implications for surgery services during Ebola outbreaks to members of West Africa and other member states of the GIEESC Working Group at the World Health Organization, Geneva.

Dr. Martin is reappointed as a member of the Committee to Evaluate Drugs (CED) at the Ministry of Health & Longterm Care (MOHLTC).

### team

Janet Martin, PharmD, MSc(HTA&M) PROGRAM DIRECTOR

Davy Cheng, MD, FRCPC MEDICAL DIRECTOR

Jessica Moodie, MLIS PROGRAM COORDINATOR & INFORMATION SPECIALIST

Ava John-Baptiste, PhD HEALTH ECONOMIST Avtar Lal, MD, PhD SYSTEMATIC REVIEWER

Brenda Tibingana SYSTEMATIC REVIEWER

Aiswarya Chandran, MD RESEARCH ASSOCIATE

Jennifer Vergel de Dios, MD, MPH RESEARCH FELLOW, GLOBAL HEALTH (Angel) Fang Zhu, MD, PhD POSTDOCTORAL FELLOW

Junsong Gong, MD, PhD POSTDOCTORAL FELLOW

Jingyi Li, MD, PhD POSTDOCTORAL FELLOW

Amy Newitt, MLIS RESEARCH ASSISTANT

Desiree Sutton, BSc, MSc(epi) candidate MASTERS STUDENT,

#### THESIS RESEARCH

Riaz Qureshi, BSc, MSc(epi) candidate

MASTERS STUDENT, THESIS RESEARCH

Peter Zhang, BSc, MD candidate SUMMER STUDENT

Matt Chong, MD, PGY2 MEDICAL RESIDENT



Medical Evidence Decision Integrity Clinical Impact

#### COURSES TAUGHT

MPH 9014U- "Health Economics", Master's in Public Health Program (Dr. Ava John-Baptiste)

EPI 9562A "Clinical Epidemiology", Master's in Epidemiology (Dr. Janet Martin)

HTA & Decision-Making, International Masters in Health Technology Assessment, School of Economics, University of Barcelona (Dr. Janet Martin)

#### WORKSHOPS PROVIDED

Ten workshops were provided at various local and international symposia, including IARS, CAS, SCA, HTA Exchange, CADTH, KT Canada, Clinical Update in Anesthesia, and HTAi as well as for local teaching venues (resident research day, academic half-days, etc). Popular workshops include:

- Know4Go: a framework for decision-making when resources are limited and options are many
- 2. Health Economics
- 3. Hospital-Based HTA
- 4. Statistics for the Terrified

- 5. Bias & Spin: Tips and Tricks for Discerning the Literature
- 6. Evidence-Based Decision-Making, HTA & Knowledge Translation
- 7. Perioperative & Anesthetic-Related Mortality
- 8. Stentless Valves versus Conventional Valves for Aortic Valve Replacement
- Multislice CT, MRI, TEE/ TTE Ultrasound, versus Angiography for Aortic DissectionSurgical AF Ablation (MAZE and related procedures)

#### evidence based perioperative clinical outcomes research (MEDICI-EPiCOR)



Evidence Based Perioperative Clinical Outcomes Research

EPICOR MEMBERS: Davy Cheng, Janet Martin, and Daniel Bainbridge

The Evidence Based Perioperative Clinical Outcomes Research (EPiCOR) Group is a multidisciplinary collaboration between Perioperative Medicine & Anesthesia, Surgery, Pharmacy, Medicine, and Pharmacology, housed within the MEDICI Centre, 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

- Levosimendan for Prevention of Arrhythmia and Death
- Dexmedetomidine for Prolonged ICU Sedation
- Dexmedetomidine for Awake Fibreoptic
   Intubation
- Dexmedetomidine for Craniotomy
- Dexmedetomidine for MAC
- Ketamine for Post-operative Analgesia
- 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

Blood Conservation & Fluid Management

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

Minimally Invasive & Robotic Surgical Methods

- Off-Pump versus On-Pump Coronary Artery
- Transcatheter Aortic Valve Implantation (TAVI)

Mini-Mitral Valve Surgery

- Mini-Aortic Valve Surgery
- Robotic Surgery

Bypass Surgery

- Endovascular versus Open Vein Harvest for CABG (EVH)
- Video-Assisted Thoracic Surgery (VATS)
- Thoracic endovascular Aortic Repair versus Conventional Open Repair (TEVAR)
- Minimally invasive versus conventional mitral valve surgery (MI-MVS)
- Transcatheter Aortic Valve Intervention Innovative Surgical & Imaging Techniques
- Stentless Valves versus Conventional Valves for Aortic Valve Replacement
- Multislice CT, MRI, TEE/TTE Ultrasound, versus Angiography for Aortic Dissection
- Surgical AF Ablation (MAZE and related procedures)

INTERNATIONAL GUIDELINES & CONSENSUS STATEMENTS

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 provide capacity-building in skills related to study design, statistical analysis, evidencebased decision-making, meta-analysis and systematic review, and GRADE'ing the evidence. The following areas have been addressed by consensus conferences led by EPiCOR/MEDICI:

- 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
- Transcathether aortic valve implantation (TAVI)



### publications & **FESEATC**

#### PUBLICATIONS PEER-REVIEWED

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#### MEDICI PUBLICATIONS

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### Grants and Funding

#### PEER-REVIEWED

BAINBRIDGE D & MURKIN J. ORNIM Medical: Intraoperative NIRS-based CBF in Comparison to TCD Cerebral Flow Velocity: A Correlation Analysis.

#### 2013-PRESENT: \$50,000

#### BAINBRIDGE D ET AL.

CIHR Grant: Transfusion requirements in Cardiac Surgery (TRICS III).

#### 2013-2016: \$711,173 OF \$2,133,521 [YEAR 2 OF 3]

BELLINGHAM G, TAWFIC Q, GREWAL R, SCHULZ V, CLARKE C & MURKIN J. Anesthesia Internal Research Fund (IRF): Near-Infrared Spectroscopic Measurement of Tissue Oxygen Saturation and the Vascular Occlusion Test During Immobilization, Carpal Tunnel Syndrome, and Pre- and Post- Stellate Ganglion Blockade for CRPS.

2013-2015: \$4,050 OF \$8,100 [YEAR 2 OF 2]

CHUI J, CRAEN R, HERRICK I, BOULTON M & PANDEY S. Lawson IRF: Goal-Directed Therapy in Endovascular Coiling of Cerebral Aneurysms - A Prospective, Double-Blinded Randomized Controlled Trial.

2015-2017: \$7,500 OF \$15,000 D'ARAGON F, COOK D, DHANANI D, HANNA S, LAMONTAGNE F, SHARPE M & FRENETTE J. Association Anesthesiologistes du Quebec: DONATE – Pilot Study.

2015-2016: \$20,000

DHIR S & SHARMA R. Anesthesia IRF: Incidence of Hemidiaphragmatic Palsy after Single Shot Interscalene Block for Pain Relief in Shoulder Surgery.

#### 2013-2015: \$5,000 OF \$10,000 [YEAR 2 OF 2]

ELLIS CG, DRANGOVA M, JANSSEN B, FOX-ROBICHAUD A, MARTIN C, FRASER D & SHARPE M. CIHR Grant: Noninvasive Functional Biomarker for Early Detection and Continuous Monitoring of Microvascular Dysfunction.

#### 2015-2017: \$106,483 OF \$212,966

FRECHETTE E, NICOLAOU G, ET AL. Lawson IRF: MAPLE TOP: Malignant Pleural Effusion Thoracoscopic Outpatient Pleurodesis. A Feasibility Trial.

2015-2017: \$7,500 OF \$15,000 FREEDMAN, RALLEY F, ET AL. MOHLTC On TraC Program: Chart Review of Utilization of Allogenic Blood Transfusion in High Blood Loss Elective Surgical Procedures for ONTraC Off-Site Database

2005-2015: \$85,00 OF \$850,000 [YEAR 10 OF 10]

GAI N, BAINBRIDGE D & LAVI R. Anesthesia IRF: Patent Foramen Ovale and Risk of Postoperative Delirium following Elective Hip and Knee Arthroplasty Surgeries.

#### 2014-2016: \$5,000 OF \$10,000 [YEAR 1 OF 2]

GANAPATHY S, FICHTINGER G, BORSCHNECK D & JAEGER M. CIHR/NSERC Collaborative Health Research Projects: Perk Tutor: Ultrasound-guided Needle Placement Training Platform.

#### 2013-2016: \$112,313 OF \$336,940 [YEAR 2 OF 3]

HARLE C, SISCHECK B, CHENG D, NICOLAOU G, JONES P & JANSEN S. Anesthesia IRF: A Survey of the Management of Narcotics in the Operating Rooms of Canadian Academic Health Sciences Centres.

2013-2015: \$5,500 [YEAR 2 OF 2] HARLE C & RALLEY F. CIHR Grant: Blood Conservation in Cardiac Surgery using a Novel Transfusion Algorithm based on Point of Care Testing.

#### 2014-2015: \$32,650 [YEAR 1 OF 1]

HERNANDEZ-ALEJANDRO R, RALLEY F, DHIR A & MORRISON S. Sanofi: Assessment for Postoperative Hypercoagulability using Rotational Thromboelastometry in Patients Undergoing Major Hepatic Resection for Cancer.

2014-2016: \$15,000 OF \$30,000 [YEAR 2 OF 2]

JOHN-BAPTISTE A, CHENG D, MARTIN J, ARELLANO R & JONES P. Anesthesia IRF: Clinical Impact of Disinvestment in Hydroxyethyl Starches for Patients Undergoing Cardiac Surgery.

#### 2014-2016: \$5,000 OF \$10,000 [YEAR 1 OF 2]

JONES P. Anesthesia IRF: International Surgical Outcomes Study (ISOS).

2014-2016: \$4,085 OF \$8,170 [YEAR 1 OF 2] JONES P, HEGAZY A, CHAMPION L, ET AL. Anesthesia IRF: Therapeutic Hypothermia after PEA Cardiac Arrest, Does It Work? A Case-Control Study.

2013-2015: \$4,625 OF \$9,250 [YEAR 2 OF 2]

LAVI R, MCFARLING M, RACINE J, MACK P, BAINBRIDGE D & IGLESIAS I.

Anesthesia IRF: Efficacy of Surface Landmark Palpation for Identification of the Cricoid Cartilage in Obstetric Patients: A Prospective Observational Study.

2014-2016: \$900 OF \$1,800 [YEAR 1 OF 2]

MACK P, QUIGLEY N, LAVI R, LAVI S, RACHINSKY M & SHOEMAKER K. Anesthesia IRF: Regional Changes in Upper Limb Perfusion following Brachial Plexus Block: A Pilot Study.

#### 2014-2016: \$5,000 OF \$10,000 [YEAR 1 OF 2]

#### 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 OF \$570,000 [YEAR 3 OF 3]

MEADE M, D'ARAGON F, RIBIE C, SHARPE M, BALL I, DHANANI S & HANNA S. Canadian Blood Services Kenneth J. Fyke Award: Prospective Observational Studyof Deceased Organ Donation Management in 2 ICUs. 2015-2016: \$90,525

MORLEY-FORSTER P, ST.LAWRENCE K, CLARKE C, DAVIS K, MACINTOSH B & MOULIN D. CIHR Operating Grant: Development of a Perfusion MRI Technique to Investigate Longitudinal Effects of Chronic Pain on Brain Function.

2011-2015: \$139,633 OF \$558,534 [YEAR 4 OF 4]

#### NAUDIE D & RALLEY F.

Resident Research Grant Support from Department of Surgery: Comparative Efficacy of Topical versus Intravenous Administration of Tranexamic Acid in Primary Total Hip Arthroplasty.

#### 2014-2016: \$2,500 OF \$5,000 [YEAR 1 OF 2]

PURANG A, GANAPATHY S, ARMSTRONG K & RACHINSKY M. CIHR Grant: Needle Guidance System for Neuraxial Analgesia and Anesthesia.

#### 2011-2015: \$34,888 OF \$139,554 [YEAR 4 OF 4]

SCHLACHTA C, CHERRY R, ET AL. ORF V Grant: Effective Systems for Procedure Specific Healthcare Simulation.

2010-2015: \$958,975 OF \$4,794,875 [YEAR 5 OF 5]

SEBBAG I, SINGH I & QASEM F. Anesthesia IRF: Efficacy of Pulsatile Pressure Waveform Presence to Confirm Correct Placement of Epidural Needle in Laboring Pregnant Patients: A Prospective Observational Cohort Study.

2014-2016: \$1,000 OF \$2,000 [YEAR 1 OF 2]

#### SHARPE M, MARTIN J, ET AL. Schulich Collaborative Research Seed Grant: Targeted Exercise Intervention to Reduce Morbidity in Sepsis.

2013-2015: \$22,500 OF \$45,000 [YEAR 2 OF 2]

SODENKOPPAM VIJAYASHANKAR R, GANAPATHY S, UPPAL V, MACDONALD S & HOWARD J. Anesthesia IRF: Ambulatory Continuous Adductor Canal Block to Facilitate Same Day Discharge following Total Knee Arthroplasty: A Pilot Study. 2014-2016: \$4,750 OF \$9,500 [YEAR 1 OF 2]



SONDEKOPPAM VIJAYASHANKAR R, GANAPATHY S, UPPAL V, BROOKES J, ET AL. Anesthesia IRF: Comparison of Efficacy and Safety of Perihamstring Local Anesthetic Injection to Obturator Nerve Block When Combined with Subsartorial Saphenous Block for Anterior Cruciate Ligament Repair. A Randomized Double Blinded Study.

#### 2013-2015: \$4,355 [YEAR 2 OF 2]

TANEJA R, FADEN L & LINGARD L. Anesthesia IRF: Advance Care Planning for Critical Care – A Prelude to Breaking Barriers.

2014-2016: \$5,000 OF \$10,000 [YEAR 1 OF 2] TAWFIC Q, MORLEY-FORSTER P, RAILTON C, URQUART B & BELLINGHAM G. Anesthesia IRF: Low Dose Oral Ketamine Adjuvant Therapy in Chronic Pain Patients - A Pilot Study to Assess Safety.

#### 2013-2015: \$5,000 OF \$10,000 [YEAR 2 OF 2]

TYML K, SHARPE M, ELLIS CG & WILSON J. Heart and Stroke Foundation: A Novel Model of Sepsis in the Elderly: Mechanism and Treatment of Microvascular Dysfunction.

2012-2015: \$45,874 OF \$137,622 [YEAR 3 OF 3] VEDAGIRI SAI R, SINGH I, JONES P, NGUYEN D & ADAM R. Anesthesia IRF: Onset of Labour Epidural Analgesia with Low Dose Bupivacaine and Different Doses of Fentanyl: A Randomized Double Blinded Clinical Trial.

#### 2013-2015: \$3,750 OF \$7,500 [YEAR 2 OF 2]

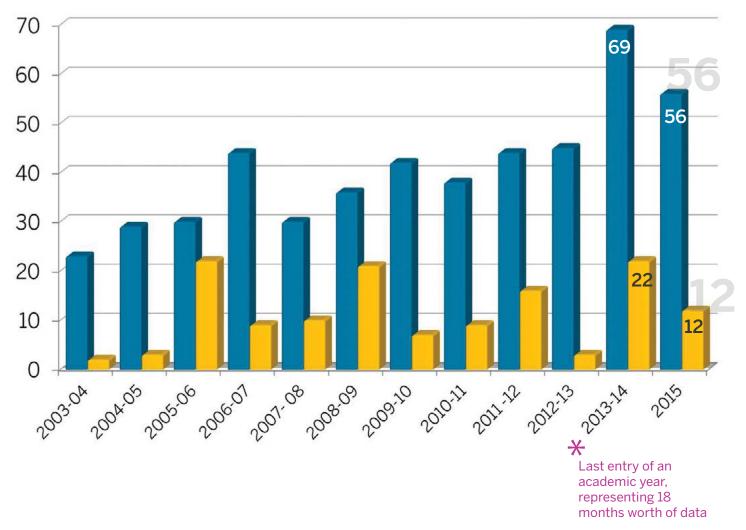
#### ZHOU R, CLARKE C, NICOLAOU G & FORBES T.

Anesthesia IRF: Comparing Transcutaneous to Transdural Near-Infrared Spectroscopy for Detection of Regional Spinal Cord Ischemia in a Porcine Model.

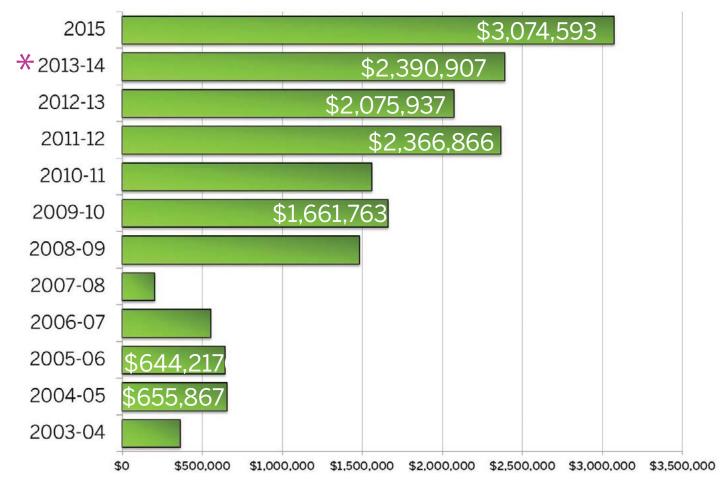
#### 2013-2015: \$3,993 [YEAR 2 OF 2]

## peer-reviewed totals

PEER-REVIEWED PUBLICATIONS PER ANNUM BOOKS AND BOOK CHAPTERS PER ANNUM



### non-industry **totals** grants & funding



2015 grant total \$3,074,593

#### CHAIR AND CHIEF, AND DISTINGUISHED **UNIVERSITY PROFESSOR, DR. DAVY** CHENG. IS THIS YEAR'S CAS GOLD **MEDALIST**

Each year the CAS formally recognizes its award winners' accomplishments and contributions to anesthesiology during the CAS Annual Meeting. In 2015, the ceremony was held in Ottawa on Monday, June 22<sup>nd</sup>.

The following awards will be presented: Honour Awards, including the Gold Medal, Research Recognition Award, Clinical Teacher Award, Clinical Practitioner Award, the John Bradley Young Educator Award, and the Emeritus Membership Award: Best Paper Awards: Residents' and Richard Knill Competitions; and the 2015 Research Program Operating Grants and Career Scientist Award.

The highest honour in awards for the CAS is the Gold Medal, which is why we are thrilled to announce that our Department Chair and Chief, Dr. Davy Cheng, will be this year's recipient.

Dr. Cheng is recognized as a world expert in perioperative outcomes and resource utilization in cardiac surgery/anesthesia, blood management, minimally invasive and robotic cardiac surgery, and perioperative evidence-based medicine. His pioneer work in fast track cardiac anesthesia and recovery has become the standard of cardiac anesthesia and recovery practice around the world. Dr. Cheng established the Evidence-Based Perioperative Clinical Outcomes Research Group (EPiCOR) and the MEDICI Centre (Medical Evidence,

## honours



Dr. Davy Cheng and CAS President, Dr. Susan O'Leary

Decision Integrity, Clinical Impact) at Western and the London Teaching Hospitals, and continues to release a number of pivotal publications to direct evidence-based medical and surgical practices. He is a recognized healthcare leader in the forefront of research, practice and healthcare policy. As Principal Investigator and Co-investigator, Dr. Cheng has been awarded over \$5.8M in peer-reviewed grants and over \$1.6M in non-peer reviewed grants. He has published over 144 peer-reviewed scientific papers in high impact journals and 45 book / chapters (h-index 43, i10-index 101). Dr. Cheng holds positions on several Editorial Boards including; anesthesia (CJA), cardiothoracic and vascular anesthesia (JCTVA) and cardiac surgery (INNOVATIONS). He Co-Chaired the Steering Committee and Expert Consensus Panel for the International Society for Minimally Invasive Cardiac Surgery (ISMICS) as well as the European Association of Cardiothoracic Society (EACTS) in practice guideline development. Dr. Cheng has been invited as a Visiting Professor to over 95 Universities, Cardiac Centers and Conferences nationally and internationally.

Please join us in congratulating Dr. Cheng as he is recognized for his outstanding contributions in leadership and professional and clinical excellence in anesthesia.

### Dr. Philip Jones is new Associate Editor of the Canadian Journal of Anesthesia

In December of 2014, the Board of the Canadian Anesthesiologists' Society convened to announce two newly appointed Associated Editors of the Canadian Journal of Anesthesia (CJA). Faculty Member and Associate Professor, Dr. Philip Jones, is now the Associate Editor for the CJA, and his appointment commenced January 2015.

The CJA is a critical piece of literature in the fields of research and practice in anesthesia. On behalf of the Department of Anesthesia and Perioperative Medicine, we would like to congratulate Dr. Jones on this esteemed appointment. We have no doubt that the CJA will greatly benefit from Dr. Jones' leadership and expertise.

March, 2015: Nurse Practitioner, Heather Whittle, is elected to the Council of the College of Nurses of Ontario (CNO)

The Department would like to congratulate Nurse Practitioner and Department Faculty, Heather Whittle, on her recent nomination and election to the Council of the College of Nurses of Ontario.

The College's Council sets the direction for the regulation of the nursing profession in Ontario. The Council establishes the goals, objectives and policies of the College according to the governing legislation. Decisions are made in the public interest with an understanding of the profession and the different settings in which nurses' practice.

### Dr. Ava John-Baptiste elected as Trustee for SMDM

This past September, Department Assistant Professor, Dr. Ava John-Baptiste, was elected as one of three Trustees for the Society of Medical Decision Making (SMDM). Within the Department, Dr. John-Baptiste is currently the Health Economist for the Centre for Medical Evidence, Decision Integrity, Clinical Impact (MEDICI). Dr. John-Baptiste will serve a three-year term for the SMDM. Prior to her role as a Trustee, Dr. John-Baptiste was a post-doctoral fellow for the SSMD and AHRQ (The Agency for Healthcare Research and Quality).

Her new position as Trustee provides Dr. John-Baptiste with the unique opportunity to represent and further the major research initiatives of Western's MEDICI Program on an international stage.

This October, Dr. John-Baptiste presented on Bayesian Statistics at the SMDS Annual Meeting in St. Louis. And we at the Department have no doubt that this will is just one of many opportunities for future growth and discourse for the MEDICI Program.

Congratulations to Dr. Ava John-Baptiste on her prestigious appointment.





UNDERGRADUATE TEACHER OF THE YEAR 2011–2012: Dr. Collin Clarke 2012–2013: Dr. Michelle Gros 2013–2014: Dr. Peter Lindsay 2014–2015: Dr. Peter Mack

> FELLOWS TEACHER OF THE YEAR 2011–2012: Dr. Su Ganapathy 2012–2013: Dr. Ramiro Arellano 2013–2014: Dr. Ramiro Arellano 2014–2015: Dr. Achal Dhir



1) CAS Awards winners, Jordan Leitch (PGY1, first place for Resident Research, Dr. Davy Cheng (Department Chair/Chief and CAS Department Gold Medalist), and Farah Manji (PGY5, thrid place in resident research); 2) L to R: Dr. Arif Al-Areibi, Dr. Jonathan Borger, and Dr. Farah Manji; 3) L to R: Dr. Arif Al-Areibi, Dr. Michelle Gros, and Dr. Peter Mack

## academic outreach faculty

Dr. Ahmad, Mohamad Associate Professor Director of Pediatric Anesthesia

Dr. Al-Areibi, Arif Assistant Professor Director of Postgraduate Education

Dr. Alhashemi, Jamal Associate Professor

Dr. Antoniou, Andreas Assistant Professor

Dr. Arango, Miguel Associate Professor Director of Neuroanesthesia and Fellowship Education Program

Dr. Arellano, Ramiro Associate Professor Site Chief, University Hospital

Dr. Armstrong, Kevin Associate Professor Director of Regional Anesthesia & Acute Pain

Dr. Armstrong, Paidrig Associate Professor Dr. Bainbridge, Daniel Associate Professor Director of Cardiac Anesthesia Dr. Banner, Robert Adjunct Professor

Dr. Batohi, Pravin Associate Professor

Dr. Bellingham, Geoff Assistant Professor Director of Postgraduate Pain

Medicine

Dr. Bhandari, Rakesh Associate Professor

Dr. Block, Gary Associate Professor

Dr. Borger, Jonathan Assistant Professor

Dr. Briskin, Alexander Associate Professor

Dr. Brookes, Jonathan Assistant Professor Director of Resident Research

Dr. Bruni, Ida Assistant Professor

Dr. Butler, Ron Associate Professor Director of Critical Care and Cardiac Surgical Recovery Unit Dr. Cave, Anita Assistant Professor

Dr. Champion, Lois Professor

Dr. Cheng, Davy Department Chair and Chief, and Distinguished University Professor

Dr. Cherry, Richard Associate Professor

Director of Anesthesia and Critical Care Teaching Through Simulation

Dr. Chui, Jason Assistant Professor

Dr. Church, Brian Associate Professor

Dr. Clarke, Collin Assistant Professor

Dr. Connolly, Enda Assistant Professor

Dr. Craen, Rosemary Associate Professor

Dr. Cuillerier, Daniel Associate Professor Dr. Dhir, Achal Associate Professor Director of Transplant Anesthesia

Dr. Dhir, Shalini Associate Professor

Dr. Dobowski, Wojciech Associate Professor

Dr. Fantillo, Vanessa Assistant Professor

Dr. Fuller, John Professor

Dr. Ganapathy, Sugantha Professor Director of Regional Anesthesia & Acute Pain Service

Dr. Gordon, Neil Adjunct Professor

Dr. Granton, Jeff Associate Professor

Dr. Gros, Michelle Associate Professor Director of Undergraduate Education

Dr. Gverzdys, Rooney Associate Professor Dr. Harle, Christopher Associate Professor

Dr. Hegazy, Ahmed Assistant Professor

Dr. Herrick, Ian Associate Professor

Director of Continuing Medical Education

Director of Quality Assurance

Dr. Hoogstra, Jason Associate Professor

Dr. Iglesias, Ivan Associate Professor

Dr. John-Baptiste, Ava Assistant Professor

Dr. Jones, Philip Associate Professor

Dr. Katsiris, Sandra Associate Professor Director of Obstetric Anesthesia

Dr. Khemani, Ekta Assistant Professor

Dr. Kumar, Kamal Assistant Professor

Dr. Lavi, Ronit Associate Professor Dr. Lindsay, Peter Adjunct Professor

Dr. Marmai, Kristine Assistant Professor

Dr. Martin, Janet Assistant Professor

Director of EPiCOR (Evidence Based Perioperative Clinical Outcomes Research) Program

see page 52

Dr. McCabe, Greg Associate Professor

Dr. McConachie, Ian Associate Professor

Dr. McKishnie, Jamie Associate Professor

Dr. McNamara, Jeffrey Associate Professor

Dr. McKishnie, Jamie Associate Professor

Dr. Mezon, Bernie Associate Professor

Dr. Millman, Logan Adjunct Professor

### notable

Dear colleagues,

Often, undergoing a hospital procedure can cause anxiety and fear. The following letter illustrates the positive difference it makes for our patients and their family when all members of a care team take the time to help understand and alleviate those fears. I would like to thank all those mentioned for providing such a positive care experience for this patient and her family.

We are writing to thank the amazing team that cared for our daughter during her knee surgery to repair a torn ACL. The lead physician, Dr. Getgood, set the tone for a positive patient care experience that focused on our daughter's needs and ensured a successful outcome.

Our daughter fears any medical procedures to the point where she did not even want to have surgery. She was very anxious leading up to the day of her surgery and her day-of-surgery arrival to surgical pre-op was filled with much stress and tears. From the moment we arrived at pre-op, she was treated with respect and compassion. As soon as we explained to pre-op nurse Deb her fear of needles, the IV pole and stand were removed from our daughter's bedside and when the nurse saw that our daughter could still see the equipment next to the nurses' station, she moved it completely out of sight.

Dr. Getgood took the time pre-surgery to speak with our daughter and us about the procedure and to calm her fears (thanks also to Devon, admin assistant, for always answering our questions and being so helpful!). Anaesthesiologist Dr. Morrison was wonderful and was able to take what started out as a clinical discussion regarding the anaesthetic procedure, to one of care and compassion when our daughter explained her fear of needles. Dr. Morrison reassured our daughter that the team would be gentle and the smallest needle possible would be used. He even made her laugh when he compared the pin prick to one of a very small mosquito. Several residents also came to speak with us and they were all superb....

Thank you to the fantastic surgical team and to Chris, Angelo, Celine and the outstanding group at Fowler-Kennedy for all of their physical therapy and rehabilitation expertise!

Thank you to all. I look forward to receiving more letters and celebrating YOUR continuing extraordinary successes, including those that illustrate the work you and your colleagues are undertaking to help LHSC achieve our strategic objectives.

Murray Glendining

President and CEO

Dr. Morley-Forster, Pat Professor Director of Pain Management Program see page 38

Dr. Morrell, Bobbi Jo Assistant Professor

Dr. Morrison, Stephen Assistant Professor

Dr. Murkin, John Professor

Dr. Nair, Gopakumar Sudhakaran Assistant Professor

Dr. Newton, Peter Associate Professor

Dr. Nicolaou, George Associate Professor Site Chief of Victoria Hospital Director of Thoracic and Vascular Anesthesia

Dr. Ower, Katherine Associate Professor

Dr. Parkin, John Associate Professor

Dr. Poolacherla, Raju Assistant Professor Dr. Rachinsky, Maxim Associate Professor

Dr. Railton, Craig Associate Professor

Dr. Ralley, Fiona Professor Director of Perioperative Patient Blood Management

Dr. Schulz, Valerie Professor Director of Palliative Medicine

Dr. Sharpe, Michael Professor

Dr. Simon, Gary Adjunct Professor

Dr. Singh, Indu Associate Professor

Dr. Sischek, William Associate Professor Citywide Clinical Coordinator Site Chief, St. Joseph's Health Care

Dr. Smith, David Associate Professor

Dr. Sommerfreund, David Assistant Professor Dr. St-Amand, Marc Associate Professor

Dr. Taneja, Ravi Associate Professor

Dr. Tawfic, Qutaiba Assistant Professor

Dr. Turkstra, Tim Associate Professor

Dr. Vannelli, Tony Associate Professor

Dr. Vijayashankar, Rakesh Assistant Professor

Dr. Watson, Jim Associate Professor

Dr. Wexler, Ron Associate Professor



Far from home on a cross-country trek, (L to R): Dr. Tim Turkstra, Dr. Miguel Arango, and Dr. Jon Brookes

For more information about our amazing faculty, visit us online!

www.schulich.uwo.ca/ anesthesia/people/faculty

# department vision & strategy map: 2015-2020

Thus, achieving our VISION.	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.								
	CLINICAL CARE OUTCOMES								
And, meet the needs of the PEOPLE we serve,	Best patient care experience		Optimal quality of and patient outcom across the perioper continuum		tcomes operative	Right Anesthesiologist (subspecialty), for the right patient needs, at the right time			
	IN ORDER TO ACHIEVE OUR OUTCOMES, WE MUST EXCEL AT								
So we can operate with EFFECTIVENESS & EXCELLENCE,		<b>'Surgical Home'</b> ership Assessing and managing risk across the perioperative continuum			Evaluation and management of pain and physical /psychological symptoms		Adhering to a subspecialty care and delivery model		
	Partnering with surgeons and other care providers	Managing patient flow and triage through the surgical experience			Transparent communication and teamwork		Simulation and experiential education		
And, build a	IN ORDER TO HAVE THE REQUIRED CAPACITY TO EXCEL, WE MUST								
STRONG & PREPARED department,	Recruit, develop and support faculty to be successful			Cultivate a positive workplace that enables wellness and work/life balance					
We use our RESOURCES wisely,	IN ORDER TO SUSTAIN OUR CAPACITY, WE MUST								
	Be fiscally accountable and disciplined				Diversify and expand our academic funding				
	OUR VALUES								
Guided by our VALUES,	We are: Student & Patient Fo	cused	Leade	ers		Resp	pectful		

#### OUR DEPARTMENT VISION

EDUCATION OUTCOM	MES		RESEARCH OUTCOMES					
Resident and fellow graduates are leaders n anesthesia and perioperative care for the 21st century	Faculty are exceptional educators	We are a leader in competency-based education	Recognized for research that improves patient care and safety	Top destination for developing trainees and new faculty into independent investigators positioned to succeed	Commendable research productivity in anesthesia and perioperative medicine			
Developing our faculty to be excellent educators	Innovative and relevant curriculum design and delivery	Educational supervision and assessment	Advancing scientific discovery and innovation - Periop Evidence-based HTA, Cardiac, Pain and Neuroanesthesia	Research design and coordination	Providing an environment that sets researchers up for success			
Simulation and experiential education	Distributed education within Southwestern Ontario	National and global healthcare outreach and educational impact	Grant writing and preparation	Collaborative multi- disciplinary teamwork and collaboration	Collecting, harvesting and using data to drive research			
	· · ·				4			
Create and sustain a confident, trust-based and inspiring culture			d empower faculty and sta	Mobilize value-added technologies, tools and equipment				
Collect and utilize his	gh quality data to inform ons	OUF	ply quality improvement , act) and best practice	productivity in clinic	Expect and measure effectiveness and productivity in clinical service, education and research			

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