

Our vision and mission, is to be an internationally acclaimed academic department in anesthesia, pain, and critical care.

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Connect With Us

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Send us a Tweet! @westernUanesth

Message from the Chair/Chief

Welcome to the Department of Anesthesia & Perioperative Medicine at the Schulich School of Medicine & Dentistry, Western University. It is with mixed emotions that I pen this message to my faculty, fellows, residents and staff. After serving for 16 years (2001-2017), the longest term as a Clinical Chair/Chief at Western and the London Teaching Hospitals, this will be my last Chair/Chief message to you in our Department Annual Report.

In 2001, when I accepted the challenges impact in Research and Education. to lead and transform the Department, We are now a destination of choice for I must admit it took me 2 terms (10 our faculty and fellows to excel in their years) to transform and consolidate a academic career and our residents to culture of academic excellence in our Department. I am fortunate also to have had the opportunity to work with a group of outstanding and committed faculty (particularly the Executives in all these years - Mary Lampe, Ian Herrick, Chris Harle, Wojciech Dobkowski, Neal Badner, John Parkin, John Fuller, Jim Watson, lan McConachie, George Nicolaou, Bill Sischek, and Ramiro Arellano) with our administrative staff team (Lois Hayter). Together we worked toward a common vision and mission in stabilizing, transforming and exceling to build this department into one of the world's top academic departments. In addition, I would like to sincerely thanks Dr. Marc St-Amand for his support; he has been instrumental in setting up our citywide academic practice plan.

Our Department is now amongst the top five academic anesthesiology departments in Canada and has an international reputation for academic excellence and acquire a first class learning experience to prepare for their professional future.

Our Department now has gained tremendous credibility and respect, while contributing at the Medical School and Teaching Hospitals along with the 14 Clinical Departments. We have grown the Department from 40 to 90 faculty members, from 23 to 45 residents and from 2 to 20 clinical fellows.

We now deliver a spectrum of medical care from conducting preoperative anesthesia assessments 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



care.

services and teaching.

the past 16 years (stories for another time), but the successes, achievements and development in our faculty, trainees and staff are what I am most proud of and treasure in my tenure as the Chair/ Chief of this world class Department. We are a citywide academic department with shared vision in an academic practice plan on a stable clinical and financial platform.

and impact at Schulich (UGME, PGME, CPD, Simulation, Decanal levels), AMOSO, senior administrative posts in Hospitals. at provincial, and national levels (OMA, MOHLTC), our professional societies and

management, post-anesthetic care unit, WHO). Here, I salute all of you who have cardiac surgery recovery unit, intensive walked an extra mile and selflessly care units and palliative medicine in acute contributed to our Department's success.

I would like to highlight a few of our faculty The scope of our work expanded further members' impactful accomplishments. when two new Dental OR suites at the Dr. Pat Morley-Forster, along with others Schulich School of Medicine and Dentistry in our Department, led the establishment were opened, requiring our anesthesia of the Pain Specialty Certification at the RCPSC, and we were the first Canadian anesthesia department to deliver a Pain Of course, I have worn many scars over Medicine Education Program. Our Centre for Medical Evidence, Decision Integrity, Clinical Impact (MEDICI) was selected as a World Health Organization (WHO) Collaborating Centre as a result of our study of Global Perioperative Surgery Care and Anesthesia. As a result, Western University became the first Canadian university to be named a WHO Collaborating Centre. Two of our faculty members were invited to pen White Papers: Valerie Schulz wrote a report Our faculty have significant contributions to the Canadian Parliamentary Committee on Palliative and compassionate Care, and Janet Martin reported on Health Technology Assessment in Canada.



principles and philosophies - The 5 "C" (credibility, commitment, character. collaboration, coach); the 5 "I" (inspire, We still have work to do to excel and to innovate, implement, integrate, impactful); sustain our capacity to achieve the best and TEAM (Together Everyone Achieves clinical, education and research outcomes More).

As a leader, you must have Insight, our departmental values of "student and Oversight and Foresight. If you are in my office, you will notice the quotes on the wall..."Leadership is a Choice, not a Position" by Stephen Covey; "Some is not Number, Soon is not a Time, Hope is not a Strategy" by Don Berwick; "Knowing is not enough, must Do" by Johann Von Goethe.

London Health Sciences Centre and St. Joseph's Health Care London, Western University, "is to be an internationally acclaimed academic department in anesthesia, pain management and critical care. We strive to provide exemplary patient

Often my colleagues and peers ask me care and foster excellence in anesthesia what my pearls or secrets of success in delivery, research and education at the transforming and leading an academic undergraduate and postgraduate levels, department are. I reflect to you the and in continuing medical education at regional, national and international levels".

> as stated in the strategic directives and goals. We must continue to be guided by patient focused, leadership, respectful, accountable, collaborative, innovative, inclusive, compassionate, and imaginative".

I am most delighted that our Department is in great hands with Dr. Homer Yang who we must Apply; Willing is not enough, we is one of the most seasoned academic clinician-administrators and was appointed as our Chair/Chief beginning in January The Vision and Mission of the Department 2018. I wish him the very best in leading of Anesthesia & Perioperative Medicine, our Department to a new level of success.



While I reflect on the continuing successes of our Department in delivering exemplary clinical and quality of care, expanding depth and breadth of our UGE and PGE education, advancing high impact multidisciplinary research, and the significant administrative contributions at the hospitals, University, OMA and MOHLTC, national, and international levels.

I wholeheartedly want to thank all of you who have contributed and worked along with me to make this the best job I have had in my professional career.



Best Regards. Davy Cheng, MD MSc FRCPC FCAHS CCPE







Department Organization

2017 EXECUTIVE

Davy Cheng, Chair/Chief (Term ended: June 30, 2017) Ramiro Arellano, (Interim Chair/Chief: Jan 1 2017 to Jul 31 2017)

Miguel Arango, (Interim UH Site Chief: Aug 1 2017 - Dec 31 2017)

George Nicolaou, Victoria
Hospital Site Chief
William Sischek, St. Joseph's
Hospital Site Chief
Lois Hayter, Manager
Administration & Finance

DEPARTMENT COUNCIL

Davy Cheng, Chair (January 1 to June 30, 2017)
Achal Dhir
Arif Al-Areibi
Daniel Bainbridge
Geoff Bellingham
George Nicolaou

Ian Herrick Indu Singh Kevin Armstrong Michelle Gros Miguel Arango

Mohamad Ahmad Ramiro Arellano, Interim Chair (July 1 to December 31, 2017)

Richard Cherry
Jeff Granton
Ruediger Noppens
William Sischek

ACADEMIC AFFAIRS COMMITTEE

Ronit Lavi, Chair Davy Cheng Miguel Arango Ramiro Arellano Shalini Dhir Ravi Taneja Ian Herrick Janet Martin Ola Bienkowski

UNDERGRADUATE EDUCATION

Michelle Gros, Director Pravin Batohi Jonathan Brookes Charlotte Sikatori McLain

POSTGRADUATE EDUCATION

Arif Al-Areibi, Program
Director
Anita Cave, Program Director
as of December 1, 2017
Andreas Antoniou, Associate
Director
Lori Dengler, Education
Coordinator
Kristine Marmai, Site
Coordinator - SJHC
Hilda Alfaro, Site Coordinator
- University Hospital

- University Hospital
Stephen Morrison, Site
Coordinator - Victoria Hospital
Jonathan Brookes, Resident
Research Coordinator
Richard Cherry, Simulation
and Information Technology

Director **Jennifer Vergel de Dios**, CBD Lead

Miguel Arango, Fellowship Director Lukas Brown, Chief Resident Zach Davidson, Senior Resident Representative James Pius, Junior Resident Representative

POSTGRADUATE PAIN MEDICINE EDUCATION

Geoff Bellingham, Chair
Jonathan Brookes
Collin Clarke
Heather Getty
Andreas Antoniou
Eldon Loh
Dwight Moulin
Raju Poolacherla
Shiraz Malik
Charlotte Sikatori McLean
Colin Phillips, Resident
Representative

CONTINUING MEDICAL EDUCATION

Ian Herrick, Program Director Lee-Anne Fochesato

FELLOWSHIP

Miguel Arango, Program
Director
Andrea Fragassi, Program
Coordinator
Achal Dhir, Liver Transplant
George Nicolaou, Thoracic
and Vascular
Indu Singh, Obstetric
Qutaiba Tawfic, Acute Pain
Hilda Alfaro, Cardiac
Ruediger Noppens, Neuro
Richard Cherry, Simulation
Shalini Dhir, Regional
Kevin Armstrong, Regional
and Acute Pain

CARDIAC SURGERY RECOVERY UNIT (CSRU) CONSULTANTS

Jeff Granton, Director Ron Butler Daniel Bainbridge Scott Anderson Davy Cheng Dave Nagpal Ahmed Hegazy Vince Lau Raymond Kao Rob Arntfield Marat Slessarey

RESEARCH COMMITTEE

Daniel Bainbridge, Chair Collin Clarke Craig Railton Indu Singh Janet Martin John Murkin Jonathan Brookes Lee-Anne Fochesato Miguel Arango Philip Jones Richard Cherry Ronit Lavi Timothy Turkstra

AAPP FINANCE MANAGEMENT COMMITTEE

Marc St-Amand, Chair Davy Cheng George Nicolaou Ian McConachie Jason Hoogstra Pravin Batohi Ron Butler David Sommerfreund Chris Harle Lois Hayter Pauline Bessegato

ANESTHESIA QUALITY COMMITTEE, CITY-WIDE

Ian Herrick, Chair
Geoff Bellingham
Jon Brookes
Catalina Casas Lopez
Melissa Chin
Rudy Noppens
Raju Poolacherla
Indu Singh
Ramesh Vedagiri Sai
Ray Zhou
Deepti Vissa, QI Fellow
Bethany Oeming, Resident
Magda Terlecki, Resident
Brenda Maxwell, OR
Leadership

Seetha Subramanian, Data Analyst

Lee-Anne Fochesato, Research/Quality Coordinator

ADMINISTRATIVE SUPPORT STAFF

Andrea Fragassi Brie McConnell Cathy Pollard Cathy Worsfold Charlotte Sikatori Christina White Courtney Harper **Heather Pierce** Jessica Moodie Kim Harrison Jackie McAllister Jayme Robbins Lee-Anne Fochesato Linda Szabo Lori Dengler Nicole Moyer Ola Bienkowski Sarah Rayner Shannon McConnell Sherry Gorog Magda Spasic

SITE ROUNDS COORDINATORS

Peter Mack (UH)
Gary Simon (VH)
Paidrig Armstrong (SJHC)
Shalini Dhir (Regional)

EQUIPMENT

Jason Hoogstra

JOURNAL CLUB CONVENERS

Philip Jones Timothy Turkstra

Schulich School of Medicine & Dentistry



Ahmad, Mohamad Al-Areibi. Arif Alfaro, Hilda Antoniou, Andreas Arango, Miguel Arellano, Ramiro Armstrong, Padrig Bainbridge, Daniel Banasch, Matthew Batohi, Pravin Bellingham, Geoff Biswas, Abhijit Block, Gary

Briskin, Alexander (Windsor)

Brookes, Jonathan

Borger, Jon

Bruni, Ida Cave, Anita Champion, Lois Cheng, Davy Cherry, Richard Chin, Melissa Chui, Jason Church, Brian Clarke, Collin Connolly, Enda Craen, Rosemary Cuillerier, Daniel Dhir, Achal Dhir, Shalini

Fantillo, Vanessa

Giraldo, Mauricio

Gonzalez, Nelson

Flier, Suzanne

Fuller, John

Gordon, Neil Granton, Jeff Gros, Michelle Harle. Chris Hegazy, Ahmed Herrick, lan Hoogstra, Jason Iglesias, Ivan

John-Baptiste, Ava (Basic

Sciences) Jones, Philip Katsiris, Sandra Kumar, Kamal Lavi, Ronit Lin, Cheng (Bill) Ludwig, Nathan Mack, Peter

Marmai, Kristine McCabe, Greg McConachie, Ian McKishnie, James McNamara, Jeff Martin, Janet (Basic

Sciences)

Morrison, Stephen Murkin. John Nagappa, Mahesh Newton, Peter Nicolaou, George Noppens, Rudy

Ower. Katherine Poolacherla, Raju Puentes, Wilfredo Rachinsky, Maxim

Railton, Craig

Rajarathinam, Manikandan

Schulz, Valerie Sebbag, Ilana Sehmbi, Herman Shah. Ushma Simon, Garv Singh, Indu Sischek, William Smith. David

Sommerfreud, David

St-Amand, Marc Taneja, Ravi Tawfic, Qutaiba Turkstra. Tim Vannelli, Tony

Vedagiri Sai, Ramesh Vergel de Dios, Jennifer

Watson, Jim Zhou, Rav

In Memoriam: Dr. Rooney Gverzdys

OFFICIAL LHSC COMMUNICATIONS **BROADCAST:**

Flags will be lowered to half-mast on Friday, Dec. 22, 2017, in honour of Dr. Rooney Gverzdys who passed away on Dec. 18 following a courageous and brave battle against cancer.

Dr. Gverzdys was a highly respected and revered clinical teacher, physician, mentor and friend since he was first appointed as a Lecturer in the Department of Anesthesia and Perioperative Medicine in October 1992. Throughout his career, he was actively involved in the Department of Anesthesia and Perioperative Medicine Postgraduate Education Program. From 1998 to 2002, he was a Royal College Examiner. He was selected as the Resident Teacher of the Year in 2013.

Dr. Gverzdys was the St. Joseph's and Victoria Hospital PGE Coordinator for many years, and contributed as a member of the PGE Committee.

Dr. Gverzdys was a loving husband and father of three boys and one daughter. Our thoughts and prayers are with his family and friends during this difficult time. His presence will be missed in our operating rooms at LHSC and St. Joseph's. It was an honour and privilege to have known him.



COMMUNICATION FROM DR. DAVY CHENG (DEC 2017):

I am so sorry to hear of this sad news of the passing of Rooney. Indeed Rooney was a wonderful colleague and friend. He contributed significantly to the growth of our education program. He devoted his passion in our patient care and the success of our residents and students.

Rooney will be missed by all of us...my thoughts are with his family...

Dr. Davy Cheng

LEARN MORE ABOUT ALL OF OUR

Read their biographies and their research

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

INCREDIBLE FACULTY

publications online

New Faculty

Schulich School of Medicine & Dentistry

Biswas, Abhijit

Subspecialty: Pediatric & Regional Primary Site: Victoria Hopsital (VH) & St. Joseph's Health Care London (SJHC)

Cases Lopez, Catalina

Subspecialty: (Quality & Patient Safety) Primary Site: University Hospital (UH)

Chin, Melissa

Subspecialty: (Quality & Patient Safety)

Primary Site: VH

Gonzalez, Nelson

Subspecialty: Transplant Anesthesia Primary Site: UH

.

Lin, Cheng (Bill)

Subspecialty: Regional Anesthesia

Primary Site: VH

Ludwig, Nathan

Subspecialty: Thoracic & Vascular

Primary Site: VH

Rajarathinam, Manikandan (Mani)

Subspecialty: Chronic Pain Primary Site: SJHC

Sehmbi, Herman

Subspecialty: Regional Anesthesia

Primary Site: UH

Shah, Ushma

Subspecialty: Pediatric Anesthesia

Primary Site: VH



Dr. Nelson Gonzalez





Dr. Catalina Casas Lopez



Dr. Bill Lin



Dr, Mani Rajarathinam



Dr. Ushma Shah

Welcome

Site Reports

St. Joseph's Health Care London

Dr. William Sischek, Site Chief

St. Joseph's Health Care London continues to provide a key and vital environment for the delivery of healthcare in London. Working with St. Joseph's as an innovative organization and a leader in ambulatory surgical services for the region, we continue to see growth and improved service to the patients of our community.

The Chronic Pain program, based out of SJHC, saw the retirement of Dr. Pat Morley-Forster, a long time member of the Department and exceptional contributor to the practice of Anesthesia and Chronic Pain Management, in 2017.

We subsequently expanded our staff numbers this past year to include Dr. Mani Rajarathinam. Dr. Rajarathinam joined us in London after completing his fellowship in Chronic Pain Management at McMaster University and has entered practice with us having a primary focus on his chronic pain practice. He joined Drs. Bellingham, Clarke, Ower, Tawfic and

Watson from the Department in providing care to the patients served in our clinic.

In 2017 many new staff joined us at both the University and Victoria Hospitals. These new consultant staff bring a diversity of subspecialty clinical skills and interests to the Department. In the context of serving the

Department of Anesthesia and Perioperative Medicine commitments to the surgical services at St. Joseph's, this means the high quality of patient care provided for the patients we serve is ensured going forward. It also means that the Department remains committed to its system based responsibilities to the health care in our region.

We continue to care for over 11000 surgical patients in the main OR's and support over 6000 gi endoscopy cases and approximately 4000 cataract patients per year.

University Hospital (LHSC)

Dr. Ramiro Arellano. Site Chief

2017 was an eventful year for Anesthesia and Perioperative Medicine faculty members at University Hospital.

There were several personnel changes, with Dr. Bernie Mezon and Dr. Fiona Ralley both retiring in 2017. However, we also welcomed three new faculty members to our site: Dr. Catalina Casas Lopez joined Quality and Patient Safety, Dr. Nelson Gonzalez joined Transplant, and Dr. Herman Sehmbi joined Regional Anesthesia.

In 2017 we successfully implemented new QA initiatives on handover of care in the Cardiac Surgery Recovery unit (CRSU) and the Post Anesthesia Care Unit (PACU).

Dr. Miguel Arango was again involved with Operation Walk, an initiative that began in 2006 and has provided nearly 800 free hip and knee replacement surgeries since then to patients suffering from debilitating bone and joint disease in Guatemala and Ecuador. Dr. Arango, who serves as the Anesthesia Director of the program, as well as sitting on the board of directors, has visited each country annually

to perform approximately 40 surgeries in one week. In 2017, two residents accompanied him on these trips: Dr. Bethany Oeming (PGY4) went to Ecuador and Dr. Daniel Szoke (PGY3) went to Guatemala. The department continues to support Operation Walk missions, and upcoming in April 2018, Dr. Arango will also be involved in the first Operation Walk mission in Colombia as Co-Director.

We hosted the second annual Basic Transesophageal and Critical Care Ultrasound training course at University Hospital in November, which was organized by Dr. Ahmed Hegazy. Participants learned to demonstrate the ability to obtain focused transthoracic echocardiography views, in addition to ultrasound views of the lungs, pleura, and airway for utilization in the perioperative setting. Other course objectives included learning to identify anatomical structures on ultrasound images, demonstrate techniques for optimizing image acquisition, and lastly to distinguish between focused perioperative ultrasound findings that are normal and pathological.

Looking forward, planning has been underway for a new type of surgery that we will begin performing at University Hospital, allowing us to purchase new, advanced airway, and ultrasound equipment. The Bariatric Surgery program is set to begin in the first quarter of 2018.





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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 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 and pediatric patients in the city of London. The site's emphasis is the clinical teaching of residents, medical students, fellows, and allied health professionals. This includes the use of a well-established anesthesia simulator program. The operating suites at Victoria Hospital 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 3-D 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. In the upcoming year, we are looking forward to the long awaited implementation of an electronic intraoperative anesthesia record.

THORACIC/VASCULAR ANESTHESIA

Both thoracic and vascular subspecialties have flourished and remain popular as resident rotations and 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. Preliminary results have shown that spinal oximetry detects decreases in spinal

cord blood flow early, allowing for the early initiation of preventive treatment spinal cord protection strategies. A previous project led to a change in the postoperative epidural analgesia solution utilized.

PEDIATRIC ANESTHESIA

This pediatric division is under the guidance of Program Director Dr. Mohamad Ahmad. with input from members of the Pediatric Anesthesia Subspecialty Group. We currently support at least 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 also implemented a 'Parental Presence at Induction' program in conjunction with the hospital's 'Child Life Program' and have expanded pediatric preoperative assessment and postoperative pain management services. Perioperative pain management, in pediatric patients, is offered in many forms including; PCA, epidurals, single-shot nerve blocks, and/or indwelling regional block catheters.

PEDIATRIC CHRONIC PAIN

We have developed the first pediatric, 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, ON. Other educational activities in pediatrics include a monthly journal club in collaboration with McMaster in Hamilton. We also have weekly pediatric rounds to discuss interesting cases and topics. Recently, we established a multidisciplinary pediatric simulation academic program to deliver simulation-based crisis management training to anesthesia and pediatric residents and fellows, as well as to the nursing staff.

REGIONAL ANESTHESIA

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

OBSTETRICAL ANESTHESIA

Dr. Indu Singh, the citywide obstetrical anesthesia director, has successfully introduced a citywide standardized obstetrical anesthesia care approach including standardized epidural solutions,





[Victoria Hospital (LHSC continued...]

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 continues to deliver simulation-based crisis management training to anesthesia, surgical 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. Melissa Chin, our new Quality Assurance lead at Victoria Hospital, is advancing and improving our Quality Assurance program. Dr. Chin completed her Quality Improvement Fellowship at Yale University and is, at the moment, working on improving the communication between perioperative staff during patient handovers in order to improve patient safety.

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, and allows for an increased utilization of our services. The anesthesia assistant program has been beneficial for all, is well supported, and continues to expand.

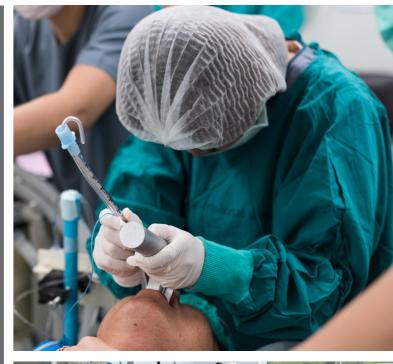
ACUTE AND CHRONIC PAIN

Our multi-disciplinary pain program is well established and growing. We have one nurse practitioner to help with all aspects of pain, including research and opioid addiction. A pain database has been developed for recording patient data, which is used for quality assurance and research purposes. Our interventional pain management program is well established and has expanded to include pediatric patients.

SURGICAL CENTER

London Health Science Centre (LHSC) is developing a new model of health care to address long patient wait times and organizational inefficiencies. For a number of years, LHSC's surgery program has experienced significant financial pressures and this project seeks to address the ongoing financial challenges through the implementation of innovative and efficient ways of delivering quality patient care for less complex surgical procedures.

Our pilot project has shown that streamlined surgical care for non-complicated OR procedures using regional anesthesia, standardized equipment, instrumentation, and disposables have shown decreased turnover time, more timely access to care and reduced length of stay in the hospital. This offers Anesthesia an opportunity to expand our Regional Anesthesia Program and increase our presence and leadership in the perioperative management of these patients.









Clinical Statistics

Adult Day/InPatient		LHSC Victoria Hospital	and Pediatric Day/InPatient
General Surgery	1,863	3,485	
Cardiac	1,582	04	
Dental	187	564	
Neurologic	1,278	293	
Obstetric and Gynecologic	0	3,216	
Ophthalmologic	0	393	
Orthopedic	4,352	3,410	
Otolaryngologic	322	1,694	
Plastic	677	809	
Thoracic and Vascular	4	1,902	
Urologic	504	1,071	

Total Surgical Procedures Requiring Anesthesia/Analgesia

10,769

16,841

Grand Total for 2016/17 Academic Year

27,610





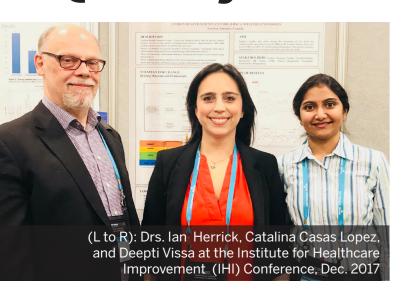
Inpatient and Outpatient	St. Joseph's Health Care London
General Surgery	811
Dental	146
Litho	828
Obstetric and Gynecologic	783
Ophthalmologic (OR) * Cataract Suite	3,418 4,762
Orthopedic	1,947
Plastic	969
Urologic	1,478

Total **OR** Surgical Procedures Requiring Anesthesia/Analgesia for 2016/17

15, 142



Quality Assurance



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

The Department of Anesthesia and Perioperative Medicine has an established tradition of high quality care. Complementing the key role of the individual practitioner in providing excellent care, the Department has an established quality improvement (QI) program and multidisciplinary Quality Committee with the following mandate:

- Assist Chief/Chair and Site Chiefs with monitoring and promoting high quality anesthesia care.
- Selectively monitor and/or respond to opportunities to enhance the quality and safety of care.
- Provide a forum for the post hoc systematic review of critical incidents and events impacting on 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 QI framework with relevance to the quality or safety of anesthesia care.

The Committee met bi-monthly.

HIGHLIGHTS FOR 2017

- The Quality Committee underwent substantial change this year as the program transitioned from site representation to a program-based focus with the identification of program QI Leaders across several programs (e.g., cardiac, neuroanesthesia, regional anesthesia, chronic pain, obstetrical anesthesia, etc). Program QI Leaders will work closely with the specialty program Directors to develop and promote quality improvement and patient safety within the specialty programs.
- This year, Drs. Catalina Casas
 Lopez and Melissa Chin were
 welcomed to staff positions in
 the Department of Anesthesia.
 Both Dr. Casas Lopez and Chin
 have specialized interest and
 advanced training in Quality and
 Patient Safety in healthcare.
- Dr. Chin completed an Anesthesiology
 Fellowship in Quality and Patient Safety at
 Yale University and is currently also pursing
 graduate studies at Yale in the Masters of
 Health Sciences program



- Dr. Casas Lopez completed certification in the Safety, Quality, Informatics and Health Leadership (SQIL) program at Harvard Medical School. She is currently pursuing graduate studies in the Masters of Applied Science in Patient Safety and Healthcare Quality program at the Johns Hopkins Bloomberg School of Public Health.
- Dr. Deepti Vissa was welcomed to the QI fellowship program as our second clinical fellow in quality improvement/patient safety. Dr. Deepti joined the program after completing a fellowship in regional anesthesia. She has completed basic certification in quality and patient safety through the IHI Open School program and the IHI Leadership and Organizing for Change Course.
- This year the Quality Committee supported two large, multidisciplinary improvement projects across the three

- London hospitals focused on enhancing communication at perioperative care transitions. The work was timely and positioned well to support hospital preparations for accreditation in light of new Required Organizational Practices (ROP) focused on this issue that have recently been endorsed by Accreditation Canada.
- In 2017, members of the Quality
 Committee supported quality
 improvement projects in several
 programs including Cardiac Anesthesia,
 Obstetrical Anesthesia, Regional
 Anesthesia, and Chronic Pain as well as
 the multidisciplinary initiatives aimed
 at enhancing communication during
 perioperative care transitions.

RESEARCH PUBLICATIONS AND SCHOLARLY ACTIVITY BY MEMBERS OF THE QUALITY COMMITTEE IN 2017 INCLUDE:

VISSA D. Perioperative handover – Talking to each other (better)! An I-CAN project. Poster display. Institute for Healthcare Improvement National Forum, Orlando, December 10-13, 2017.

ELSAHARTY A, SINGH I, MCCONACHIE I, VEDAGIRI SAI R. Development of a checklist to aid handovers in an obstetric post-operative care unit. Poster display. Canadian Anesthesiologists' Society Meeting, Niagara Falls. ON. June 23-26. 2017.

QASEM F, ELSAHARTY A, SHARMA M, SEBBAG I, KHEMANI E, SINGH I. Improving Patients' experience undergoing Spinal Anesthesia for cesarean delivery: A quality improvement initiative. Poster display. Society for Obstetrical Anesthesia and Perinatology, Bellevue, Washington, May 10-14, 2017.

ELSAHARTY A, QASEM F, SHARMA M, KHEMANI E, SEBBAG I, SINGH I. Assessment of interventions to decrease shivering in patients having elective cesarian delivery: A QI project. Poster discussion. Canadian Anesthesiologists' Society Meeting, Niagara Falls, ON, June 23-26, 2017.

CASAS C, KEEC, VISSAD, ADHIKARID, KIAIIB, NAGPALD, GOUGOULAIS B, WINTERBURN T, BROSNAN M, ZHOU R, ORENDOFF ROBSON L, BAINBRIDGE D, GRANTON J, ARELLANO R, HERRICK I. Improving the transition of care for postoperative cardiac surgical patients – making the handover better. Poster display. Institute for Healthcare Improvement National Forum, Orlando, December 10-13, 2017.

STEFANO OLGIATI, HERDY M, CASAS LOPEZ DC, SUBHASH BAVISKAR D, YOUCEF-KHODJA D. Do patients enable tech-enabled healthcare management? The Pincer-Brazil approach in settings characterized by a high degree of social, cultural and demographic heterogeneity. Oral presentation. European Academy of Management Conference (EURAM) 2017, Glasgow, June 22, 2017.

CASAS LOPEZ C. Improving the transition of care for postoperative cardiac surgical patients – making the handover better. Western University Department of Anesthesia Multidisciplinary Rounds, April 26, 2017.

VISSA D, CASAS LOPEZ C, ARELLANO R, HERRICK I. Perioperative handover – Talking to each other (better)! Western University Department of Anesthesia Grand Rounds, April 19, 2017.

CASAS LOPEZ C. A perspective on how to promote leadership, quality and safety in Anesthesia. Oral presentation. XXII Guayas Anesthesiology Meeting. Guayaquil, Ecuador, August 10-13, 2017.







Anesthesia Assistants

Dr. James Watson, Program Director

program to increase the number of Anesthesia Assistants, and increase the number of areas Enrolment has begun for next year's class. the department can integrate care.

Anesthesia Assistants have been integrated for anesthesia assistant teaching. This year we into work routines and clinical care with the have introduced a new curriculum with the cooperation of the entire department. This has allowed us to reliably provide service for some Fanshawe College has been at the forefront of the key wait time initiatives such as cataract of this evolution. The Fanshawe teaching surgery. In the cataract suite, we use a model of care where one consultant supervises two accreditation program this year. Anesthesia Assistants.

patients after major regional blockade or provide special assistance in the operating room for more complex cases. Care of are developing new models of care in areas patients outside the OR such as pediatric where previously the Department has not had imaging and procedures, neuroradiology or the human resources to provide coverage. electrophysiology labs, have all benefited from This includes endoscopy and obstetrics having consistent and reliable assistance in with expanded invasive radiology. We have these challenging environments. In September 2008, Fanshawe College in London initiated a with the MOHLTC to further develop and define training program for Anesthesia Assistants. The eighth class began in September and was fully Review of the application of the ACT model subscribed. The Department of Anesthesia and has demonstrated a cost effective, safe and Perioperative Medicine has been involved in the design of this program and has provided a to receive funding from the Ministry of Health significant amount of classroom and operating roominstruction. During the Basic Program, run We will continue to explore ways to improve from September to December, most teaching patient safety, efficiency, and improve working is provided by Fanshawe College instructors conditions for anesthesiologists.

The Department of Anesthesia and affiliated with the Respiratory Therapy Perioperative Care continues to build on the Department. For the Advanced Program or success of the Anesthesia Care Team. We second semester which runs from January have continued with the development of this to April most of the lectures and workshops program. The two major teaching hospitals are physician directed. Many of the senior in London, London Health Sciences Centre anesthesia residents and fellows participate and St. Joseph's Health Care London, and the in teaching these courses and workshops Department of Anesthesia and Perioperative along with consultant staff. Residents and the Medicine have invested more resources into this participating faculty members have found this to be a rewarding training experience.

> Nationally there is new competency framework goal of improving this teaching framework. program will be reviewed under a new national

The role of Anesthesia Assistants is generally Other AA's assist in the block room or monitor becoming widespread in Ontario and Canada and has been recently adopted by the Canadian Anesthesiologists' Society. Currently, we participated in provincial teams in association the roles within the Anesthesia Care Team. accepted model of care. We have continued that continues to support the ACT program.

CSRU and Critical Care

Dr. Jeff Granton. Medical Director

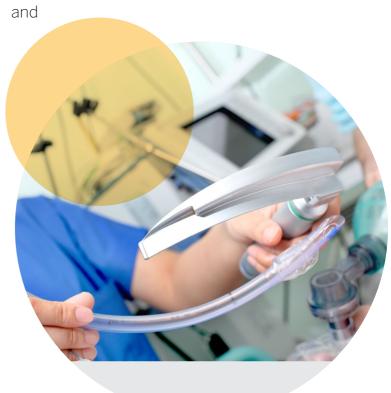
The Cardiac Surgery Recovery Unit (CSRU) is a 14 bed critical care unit that specializes in the care of the post-operative cardiac surgery patient. The CSRU is one of three teaching Critical Care Western.

Each year we care for over 1400 patients that undergo Cardiac Surgery including: on and off pump coronary bypass, valve replacements, heart transplantation, minimally invasive and robotic cardiac surgery, complex aortic reconstruction, 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.

One and two year fellowship opportunities are available within the unit.

Resident trainees from anesthesia, cardiac surgery, cardiology, and critical care rotate through the unit along with cardiac anesthesia fellows. The CSRU has an Advanced Practice intensive care units under the leadership of the 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.



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Neuroanesthesia

Dr. Rudy Noppens, Program Director

Neuroanesthesia provided care to a total of 1059 patients in Neurosurgery and 213 patients in Interventional Neuroradiology at University Hospital in 2017.

The vast majority of neurosurgical patients received care by a subspecialty trained member of the dedicated Neuroanesthesia team.

This past year, the Neuroanesthesia team consisted of eight faculty members: Drs. Miguel Arango, Jason Chui, Rosemary Craen, Daniel Cuillerier, Mauricio Giraldo, Ian Herrick, Rudy Noppens and Tim Turkstra. Dr. Rudy Noppens is new newest member of the group, as he was recently recruited from Germany to join as Director of Neuroanesthesia. Dr. Christine Dy-Valdez from the Philippines and Dr. Aldo Espinosa Tadea from Mexico joined the team for a one-year fellowship training in Neuroanesthesia. Additionally, a total of eight residents completed their rotation in the subspecialty of Neuroanesthesia at University Hospital.

Administrative support was provided in 2017 by Jayme Robbins and Sherry Gorog.

In order to master future challenges in the rapidly changing field of anesthesia, specific members of the neuro-team took the lead for neuro-monitoring, research, education, quality improvement, and fellowship program.

EDUCATION FOR STAFF, FELLOWS AND RESIDENTS

Weekly "neurorounds" were organized by Dr. Giraldo. Educational events progressed positively, with active participation from all faculty members, residents in neuroanesthesia rotation at UH, fellows, and some guests from other areas such as neurosurgery and neuroradiology.

During the last year, most major topics from the field of neuroanesthesia were covered, with journal clubs focusing on the most recently published scientific articles. This year, an attempt will be made to adapt the academic plan to the requirements of the SNACC and to increase participation from other specialties involved in different areas of neurosciences. Most of the teaching activities are made available online for residents, fellows, and staff.

RESEARCH

Dr. Jason Chui started monthly research meetings in order to bundle research efforts and to individually support specific activities. Current research activities are in the field of acute subarachnoid hemorrhage, stroke, airway management, neuromonitoring, and basic science projects with a focus on an Alzheimer's animal model.

QUALITY IMPROVEMENT

Neuroanesthesia actively participates in the interventional acute stroke treatment. An interdisciplinary approach was created in order to improve an effective and timely treatment. A quality improvement program has been initiated with the goal to constantly improve patient care in this field.



The Neuroanesthesia team attending the Annual Meeting for the Society for Neuroscience in Anesthesiology and Critical Care (SNACC) in Boston, MA. From L to R: Dr. Jason Chui, Rudy Noppens, Tim Turkstra, Rosemary Craen, Daniel Cuillerier, Ian Herrick, and clinical fellow, Angela Builes.

NEUROMONITORING

The department of anesthesia offers intraoperative neuromonitoring services in the operating room and radiology suite. A Cascade Elite INOM device is available and is operated and maintained by neuroanesthesiologists Drs. Chui and Giraldo.

Since October 2016, a total of 42 patients at high risk for neuronal injury were monitored using SEP, EMG and EEG during procedures.

FELLOWSHIP PROGRAM

Fellows in neuroanesthesia are exposed to a wide variety of neurosurgical procedures, including stereotactic surgery, endoscopic neurosurgery, craniotomies for tumors and hemifascial spasm, carotid endarterectomy,

and spinal instrumentation. Fellows also have the opportunity to learn how to use Transcranial Doppler, Cerebral Oximetry, Evoked Potential and EEG monitoring during surgery. Neuroanesthesia fellows usually work together with an experienced neuroanesthesiologist on these cases. The 1:1 ratio allows a great learning experience. Fellows have the opportunity to participate in research projects and are expected to actively participate in neuro rounds and research meetings.

Schulich School of Medicine & Dentistry



Dr. Indu Singh, Program Director

The Obstetric (OB) Anesthesia Program is Members continued to be active on OB-Pavilion (B Tower), at Victoria Hospital, London and quality improvement in the Obstetrical Care Unit (OBCU).

CLINICAL CARE

There were approximately 6000 deliveries in the past year, making this OBCU one of the busiest in Ontario.

The OB Anesthesia group provided regular Preadmission Clinics on Wednesdays where anesthesia care plans were made in advance for patients considered to be at increased risk. A 24h epidural service continued to be provided by the group and the epidural labour analgesia rate last year was almost 85% with high patient satisfaction rates. The cesarean delivery rate was 22% and more than 90% were completed with neuraxial anesthesia.

Pain rounds were done daily by the OB Anesthesia group for post-cesarean patients and demonstrated reassuring pain scores, low rate of bothersome side effects, and low complication rates.

located in the Grace Donnelly Women's Health related committees. Dr. Sandra Katsiris is the Anesthesia representative on the Maternal Health Sciences Centre. Members of the OB and Perinatal Death Review Committee for the Anesthesia Subspecialty group actively provide Chief Coroner of Ontario. Dr. Kristine Marmai excellence in clinical care, education, research, represents Anesthesia on the OB Neonatal Ouality Review Committee and the OBCU OR Committee. Dr. Michelle Gros is on the Perinatal Collaborative Council and Dr. Ian McConachie is on the Skin-to-skin after Cesarean Committee.

EDUCATION

Resident Education

Residents continued to do two 1 month rotations as per the Royal College requirements. During the rotations, they provided anesthesia for labour pain relief, instrumental vaginal deliveries, cesarean deliveries, and participated in the OB Anesthesia Preadmission Clinic and Pain Rounds for post-cesarean patients. These rotations are coordinated by Dr. Pravin Batohi.

Competency Based Medical Education was successfully introduced this past year. Entrustable professional activities (EPAs) for OB anesthesia were created by Dr. Arif Al-Areibi. A formal introduction to epidural labor analgesia including practice on a dummy torso

for the new residents was supervised by Drs. obstetrical nurses, and respiratory therapists Al-Areibi and Kristine Marmai.

were provided to residents by all consultant members of the subspecialty group on Monday mornings. These rounds are coordinated by Dr. in emergent situations. Kamal Kumar.

Wednesday afternoon resident academic past year by Drs. Pod Armstrong, Batohi, Gros, Kumar, Marmai, McConachie, Sai, and Singh.

the Resident Exam Preparation Course-Making OB residents about OB anesthesia and Dr. Anesthesia.

The OB Anesthesia Case of the Week PBLD was started last year by Drs. Kumar, Marmai, the past year. and Singh.

Journal club was carried out regularly and coordinated by Drs. Ian McConachie and Sai. These have been accredited for CME points.

Obstetrical Anesthesia Interdisciplinary Simulation Sessions were coordinated by Dr. Andreas Antoniou. These sessions were held at CSTAR as well as the new Simulation Centre in the B Tower at Victoria Hospital. Anesthesia residents, obstetrics and gynecology residents,

participate together in scenarios to explore issues such as leadership, communication, Regular formal OB Anesthesia teaching rounds team dynamics, task delegation and situational awareness. These crisis resource management (CRM) skills contribute to effective teamwork

Fellow Education

lectures for OB anesthesia were given this Both Drs. Aya Elsaharty and Yamini Subramani continued their fellowships for a second year. They provided regular clinical care in the OBCU, as well as in the Obstetric Anesthesia Dr. Marmai lectured about OB Anesthesia at Preadmission Clinic and in the wards on Pain rounds of post-cesarean patients. Both fellows a Mark. Dr. Shalini Dhir gave a lecture to the were active and successful in research and presented their work at the annual SOAP and Gros lectured the medical students about OB CAS meetings. Yamini presented her systematic review at the Richard Knill competition at the CAS meeting. Aya had 2 publications and her work was featured in Anesthesiology News in

> The goals and objectives for the fellowship were revised as per the latest CanMEDS by Dr. Indu Singh. The fellowship program has been supervised by Drs. Ian McConachie and Indu Singh.

INVITED LECTURES

Dr. Singh gave an Update on the Management of Peripartum Hemorrhage at the Can-Am Anesthesia meeting in Niagara Falls. Both Drs. Dhir and Sebbag gave invited lectures at

6000 deliveries in the past year, making this OBCU one of the busiest in Ontario.

rate was 22% and more than 90% were anesthesia.

Turkstra T, Marmai K, Armstrong KP, Kumar K, Singh SI. Preprocedural ultrasound assessment does not improve trainee performance of spinal anesthesia for obstetrical patients: a randomized controlled trial. J Clin Anesth. 2017 Feb; 37: 21-24.

For more publications from the Obstetric Anesthesia team, see p.71



(Obstetric Anesthesia, continued)

the Ontario Anesthesiologists Meeting (OAM) in Toronto. Dr. Shalini Dhir presented Labor analgesia for the patient with chronic pain and Dr. Ilana Sebbag discussed Anesthesia for patients with a poorly functioning epidural. Dr. McConachie gave 3 lectures at the Association of Obstetric Anesthesiologists Conference in India- Parturients in labour should be strictly fasted (pro/condebate), The anesthesiologists' role in the critically ill parturient, and labour analgesia. He also gave Obstetric Grand Rounds the SOAP meeting. here in London- What's new in Obstetric Anesthesia/Analgesia?

RESEARCH

Multiple REB approved projects looking at pain relief after cesarean, dosing for spinal anesthesia, and handovers were actively recruited in the past year. Dr. Ilana Sebbag acts as the research coordinator for the group.

Fellows, Drs. Aya Elsaharty and Yamini Subramani presented abstracts, "Creation of a checklist to assist in anesthesia handover in the OB PACU", and "Prevention and Treatment of Pruritus in Women Undergoing Cesarean Delivery with Intrathecal Morphine: A Systematic Review and Meta-analysis" respectively at the CAS and SOAP meetings.

Ava's study was featured in Anesthesiology News and Yamini presented her study at the Richard Knill Competition (CAS).

Dr. Yamini Subramani presented another abstract Prevention of shivering: A systematic review at the ASA meeting.

Dr. Fatemah Qasem presented a QI study, "Improving patients' experiences with spinal anesthesia for elective cesarean delivery" at

OUALITY IMPROVEMENT

Two initiatives in the past year included:

- 1. Improving patients' experiences with spinal anesthesia for elective cesarean delivery by Drs. Elsaharty, Khemani, Qasem, Sebbag, and Singh. This was presented by Aya as an abstract at the CAS meeting and by Fatemah at the SOAP meeting.
- 2. Creation of a checklist to assist in anesthesia handover in the OB PACU by Drs. Elsaharty, McConachie, Sai, and Singh. This was presented as an abstract by Aya at the CAS and SOAP meetings.



Pain Management

Dr. Geoff Bellingham, Program Director

In 2017, there were 7265 physician-related visits to the SJHC Pain Management Program which included new consults, follow-up visits, and procedures. In addition, there were 2923 visits to pain clinic psychologists for individual treatment sessions or group cognitivebehavioural therapy.

Program received \$1.3 Million in enhanced operating funds from the Ministry of Health to the program in order to better serve our and Long-Term Care. This was a provincewide initiative for increasing support for Allied in the achievement of our long-standing goal Health services.

This funding has provided the pain clinic and a social worker in 2017. Our pharmacist has provided excellent support in helping to for specialized pharmacy consultations in addition to being available for immediate support by staff when required. Our social worker has also started to provide enhanced services to our patients such as spearheading UNDERGRADUATE family support groups.

Our physical and occupational therapy staff have also expanded. In 2017, there were 300 individual physiotherapy clinic visits and 650 occupational therapy visits (including group visits). We have also expanded our nursing staff by creating a full-time nursing position in addition to more part time nursing availability.

Finally, we have increased the fluoroscopy suite time with the additional funding. In 2017, we started providing patients with fluoroscopic guided interventions 4.5 days a week.

Overall, the increased staffing has supported

In June of 2016, the SJHC Pain Management a continued growth in the number of new patients our clinic has been able to accept community. Additionally, this has also resulted of reducing the median wait times for a new patient consultation to 150 days.

with the ability to hire a full-time pharmacist Finally, Dr. Manikandan Rajarathinam has joined the pain clinic staff and the Department of Anesthesia and Perioperative Medicine in manage complex polypharmacy issues. Since 2017. Dr. Rajarathinam has been assessing and coming onboard, she has seen 235 patients managing patients with chronic non-cancer pain in his clinic in addition to performing fluoroscopy-based spine interventions.

EDUCATION

The fourth-year medical school elective for pain management was provided again in 2017 by a multidisciplinary team. This year, presentations on Pain and Addiction were mandatory for the entire fourth year class. Feedback from the students was favorable. with a majority of the class agreeing that the lecture series was a valuable learning experience. Ten seminars of ninety minutes each were offered including topics such as analgesic pharmacology, managing pain in the emergency room and ICU, non-pharmacologic approaches for pain control, cannabinoids for pain management, and managing pain in the elderly.

second-year medical students by the pain clinic at the 2017 Canadian Anesthesiologists' Society staff during the musculoskeletal block. Two lectures were provided including injections for low back pain and peripheral musculoskeletal targets for pain management.

POSTGRADUATE

To learn more about the Pain Medicine Residency Program, See p. 47

CONTINUING MEDICAL EDUCATION

Monthly Interdisciplinary Pain Rounds were organized again in 2017 by the Earl Russell Chair, Dr. Dwight Moulin. Email notification is circulated to all Department members and also posted on www.westernpain.ca

Further information is available on the

RESEARCH

Research by the pain clinic faculty has been robust and varied over the past year. Projects have included examining the structural and functional brain changes in complex regional pain syndrome, impacts of written discharge instructions for outpatient post-operative opioid use, and a systematic review and metaanalysis of randomized controlled trials for gabapentinoids for chronic low back pain.

Publications have also included the novel use of erector spinae plane blocks for postthoracotomy pain syndrome and chronic shoulder pain.

Pain management was also taught to the Pain clinic faculty have also presented research annual conference. This included a best paper award in chronic pain on "Plasma Level of Ketamine and Norketamine in Low Dose Oral Ketamine in Chronic Pain Patients," as well as a presentation of a retrospective study on postoperative pain management of orthotopic liver transplantation.

> Finally, patient recruitment for a two-year AMOSO funded study entitled "Development of an Innovative Opioid Safety Program in Pain Clinics (Op-Safe): A Multi-Centre Project," was successfully completed at the pain clinic. This project was a multicentre observational trial with partners at Women's College Hospital, Toronto Western Hospital, and Mt. Sinai Hospital in Toronto.

> Trainee grants of up to \$10,000 continue to be available annually from the Earl Russell Chair in Pain Research to provide seed funding for pain research projects initiated by trainees registered at Western University or Lawson Health Research Institute. The competition is adjudicated by the Earl Russell Scientific Advisory Board.

FUTURE PLANS

In the coming year, further plans for expansion of the Allied Health services in the pain clinic will continue. Patients will benefit from increased access to physiotherapy, occupational therapy, and psychology resources.

Interventional procedures under fluoroscopic guidance will also increase to a full five days a week.

Palliative Medicine

Dr. Valerie Schulz. Program Director

Dr. Valerie Schulz is practicing in Palliative Medicine through the Department of Anesthesia & Perioperative Medicine, at London Health Sciences Centre, and as a Professor at Western University. Through the support of this department she has been able to contribute to clinical, educational, research, and academic advances in Palliative Medicine during 2017.

Dr. Schulz participates clinically in LHSC's Critical Care Units, and supports the Renal dialysis unit, the Heart Failure Team and the Pre-Admission Clinic at University Hospital, for patients with palliative needs. The palliative service considers an approach to symptom management and goals of care and treatment options for patients with life threatening and/ or life limiting illnesses.

Locally, Dr. Schulz is taking a leadership role in AMOSO is supporting Drs. Gofton, Sarpal, discussions regarding the assessment of frail and Schulz, on a multi-year education project, patients in the peri-operative period. These titled: Implementation of a Cross-Discipline discussions are advancing with the support Palliative Care Curriculum for Post-Graduate of Peri-operative Care leadership, clinical Medical Residents at Western University, Our expertise drawn from Geriatric Medicine, aim is to integrate discipline specific palliative Surgery, and Anesthesiology, at St. Joseph's approach to care within the core curriculums Health Centre and London Health Sciences Centre Administration. The purpose of the Critical Care, and Anesthesiology. assessing frail patients in the peri-operative period would be to collaboratively explore. In addition to advocating for advances in Schulz is a member of the inaugural Palliative Dentistry, Western University. Medicine Specialty Committee at the Royal College of Physicians and Surgeons of Canada.

Lingard at the Centre for Research and publications from our multi-site, multi-



province Palliative Care project exploration, palliative care on the heart failure care team. and mapping patient and provider experiences and expectations. CIHR and AMOSO AFP Innovation Funding support this project.

of Clinical Neurological Sciences, Pediatrics,

care options across their trajectory of care Palliative Care, Dr. Valerie Schulz is honoured from community, through surgery and to to accept her new role as the Associate Dean the best location after surgery for example for Continuing Professional Development rehabilitation or community. Nationally, Dr. (CPD) at Schulich School of Medicine &

Dr. Valerie Schulz' contributions to Palliative Medicine and CPD Western were made Research collaborations with Dr. Lorelei possible through the support of Western University, Schulich School of Medicine & Innovation (CERI) Western, resulted in Dentistry, and the Department of Anesthesia & Perioperative Medicine.

Pediatric Anesthesia

Dr. Mohamad Ahmad, Program Director

Anesthesia Program at LHSC and Western University. Drs. Morrell, Nair and Connolly left the program. However, we did recruit Dr. Abhijit Biswas and Dr. Ushma Shah, both of whom recently completed pediatric anesthesia subspecialty training at The Hospital for Sick Children in Toronto and are also keenly interested in regional anesthesia and medical education.

Academically, we continue to be very active. We had twelve anesthesia and non-anesthesia residents complete pediatric anesthesia blocks at Victoria Hospital.

2017 was a challenging year for the Pediatric We held four pediatric anesthesia journal clubs in 2017. We also participated in three Pediatric Anesthesia Telerounds with other pediatric anesthesia departments across the country. Program members are also involved in simulation, Royal College exam preparation, resident half-day teaching, and Thursday morning teaching rounds. We also participated for the first time in the Division of Pediatric Surgery Research Day in February.

> Clinically, our pediatric case volumes have remained constant. The most exciting development has been the addition of pediatric dental cases at Western's Dental Surgical Care Unit located in the Dental Sciences Building. Its purpose is to serve pediatric patients in need of general anesthesia for dental procedures but also to train dental students to work on anesthetized patients. Drs. Poolacherla, Simon and I are providing pediatric anesthetic services there. In 2017 we looked after 52 patients.

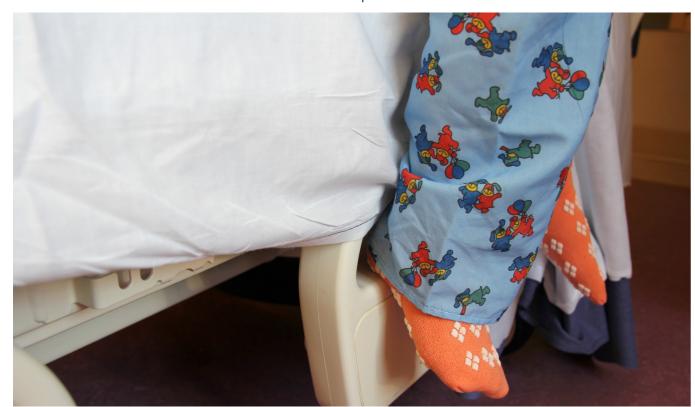
also continue to expand our multidisciplinary teaching in effort to improve quality of care. We held six in-services on pediatric anesthesia and pain management for B6. PACU, and PMDU nurses in 2017.

We also held two first-ever in-services for OR nurses in which we covered the principles of pediatric anesthesia and anesthesia emergencies. These were very well received and we have been invited back for more teaching.

In 2018, our goals are to expand our quality assurance initiatives. Drs. Poolacherla and Shah are leading that effort.

Dr. Sommerfreund has taken over the simulation program and we are hoping to recruit another colleague to join him.

Drs. Biswas and Shah are actively developing pediatric regional anesthesia projects. We have also been invited to teach half-days for the Pediatric residents. This presents an exciting opportunity to further integrate ourselves into the wider world of pediatrics at Western and









Regional and Acute Pain

Dr. Kevin Armstrong, Program Director

Chronic Pain, Acute Pain, and Regional anesthesia across the city. Some programs have been previously noted in the annual reports. Two of these programs have been in place for a few years and are important to the patients we serve. Dr. Collin Clarke continues to provide intrathecal catheter placement and management for palliative pain.

The pediatric chronic pain management program, under the leadership of Dr. Raju Poolacherla, continues to provide a clinic one day per week for children with chronic pain.

The team is comprised of a nurse, a psychologist and pharmacist. The goal of this program is to provide care to a largely under recognized and under treated group of patients in Southwest Ontario.



In 2017 we saw further progression with During 2017 we continued towards coordinated and advanced care for patients with complex pain challenges. Intensive Peri-operative Pain Care (IPPC) for complex patients is expected to launch in 2018. The work of Drs. Kate Ower and Qutaiba Tawfic looks to integrate existing resources which include our nurse practitioners, Charlotte McCallum and Heather Whittle. Dr Manikandan Rajarathinam (one of our newer recruits) is expected to a play significant role in the growth of this program.

> For a number of years residents and fellows have had the opportunity to gain clinical exposure, experience, knowledge and skill in the practice of regional anesthesia at the SJHC and UH sites. For 2017 with the addition of the VH block room, this opportunity was further enhanced with greater exposure to regional anesthesia for foot and ankle surgeries, as well as pediatric regional anesthesia.

> Our support from nursing includes 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. See Intensive Peri-operative Pain Care (IPPC) for complex patients noted above.

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. The formalized regional program at Victoria Hospital moved to 5 day per week program. Much of this work was led by Drs. Gopa Nair and George Nicolaou in collaboration with nursing leadership. Unfortunately, due to personal reasons, Dr. Nair has left the city. His work is now continued by one of our new faculty Dr. Bill Lin.

We welcomed two additional pediatric consultants, who also have experience in regional. They are Drs. Abhijit Biswas and Ushma Shah. We also welcomed Mahesh Nagappa and Herman Sehmbi to the department. Given the patient population (orthopedic trauma, pediatrics, vascular, thoracic) there is an excellent opportunity to add peripheral regional anesthesia to the neuraxial anesthesia already provided at VH.

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 truncal planar blocks.

At UH the general surgery, orthopedic, and plastic surgery populations provide a high volume of clinical work, educational opportunities, and research involving truncal blockade and lower limb regional analgesia. The UH block room continues to evolve. We continue to have challenges with space allocation. Towards the end of 2017, there was a physical change in the block room and preparation process. Patients expected to receive a regional technique are now identified and prepared in the block room. This change contributes to efficiencies in the process by eliminating a step of moving patients

As the clinical work increases, we continue to strive towards academic productivity from our clinical work. This includes both educational activities, and research output. In addition to our established researchers, we have established a research team. The goal of this research team is to provide support and structure for our new faculty to become effective and successful in an academic career. We continue to collaborate with our

surgical colleagues, as well as the Department of Anatomy and Cell Biology.

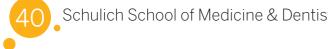
ACUTE PAIN MANAGEMENT

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 our nurse practitioners and on call residents. Going forward we plan to establish and grow an Intensive Peri-operative Pain Care program for the complex patient. Given the population of patients we serve, regional analgesia is an important component of acute pain management for the patient with complex pain.

COMPLEX PAIN MANAGEMENT PROGRAM

There is an ever increasing need for innovative strategies to manage the pain of patients receiving surgery. Some patients have generalized chronic pain, others have preexisting chronic pain at the site of surgery, and others develop chronic post-surgical pain. The extent of these problems is 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. Intensive Peri-operative Pain Care (IPPC) for complex patients is expected to improve the care for all patients but especially those at higher risk for chronic post-surgical pain. This involves pre-operative assessment and management, intraoperative management and techniques, as well as interventions that persist beyond the usual 2-5 days that a patient may be in hospital.

Such changes have the potential to improve patient care, offer learning opportunities for our trainees, and opportunities for research and audit activity. In 2018 we will continue to work towards a manageable solution and integrate the Chronic Pain, Acute Pain, and Regional groups.



Thoracic and Vascular Anesthesia

Dr. George Nicolaou, Program Director and Fellowship Coordinator

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 co-existing diseases including severe cardiorespiratory compromise. These patients have an extensive preoperative evaluation by anesthesia and/or internal medicine. cardiology, and respirology. We have developed a multi-disciplinary perioperative high-risk clinic for optimization and follow up with 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 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 has evolved with the recruitment of a pediatric thoracic surgeon. Pediatric thoracic procedures include investigative, videoassisted 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, highdefinition flat screen monitors for viewing images as well as the patients' vital signs.

It combines the newest computer generated technology and the newest radiologic imaging traditional open surgery and minimally same patient, at the same time, in the same place.

Patient benefits include:

- Shorter procedure times:
- · Less radiation used during imaging;
- · Reduced need for ICU care:
- Shorter hospital stays:
- Faster recovery.

Ruptured abdominal and thoracic aneurysms that have favourable anatomy are repaired by the endovascular route at our institution. The thoraco-abdominal aneurysm program is well developed and these aneurysms are now generally repaired using endovascular TEE available for guidance. branched stents.

The thoraco-abdominal aneurysms that cannot be repaired by using endovascular stents are repaired utilizing partial left heart bypass. In conjunction with cardiac surgery, we are doing elephant trunk-type procedures and aortic arch aneurysm repairs, via the consultants, fellows, and residents. 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 a sterile operating room environment. This in spinal cord blood flow early, allowing for gives the surgeons the ability to perform the early initiation of preventive spinal cord protection treatment strategies. We presented invasive endovascular procedures on the our results on spinal cord protection strategies at the 2012 International Forum of Cardiovascular Anesthesia in China.

TRANSESOPHAGEAL ECHOCARDIOGRAPHY (TEE)

Our Transesophageal Program is well developed with formal teaching and multidisciplinary weekly rounds. We have also acquired a new TEE machine with 3D capabilities. TEE is specifically available for management of thoracic aneurysm stenting and for adjunctive management of the vascular patient with associated cardiac disease. While not every anesthetist involved in vascular anesthesia is experienced in TEE, there is usually one anesthetist experienced in

POINT-OF-CARE ULTRASONOGRAPHY

Recently, we have acquired a new ultrasound machine for point-of-care ultrasonography for use in the perioperative period. We have an established basic and advanced teaching program for point-of-care ultrasonography for

RESEARCH PROJECTS IN PROGRESS

- The Role of Intraoperative Lidocaine Infusion in Preventing Chronic Post Surgical Pain After Video Assisted Thoracoscopic Surgery: Randomized Double- Blinded Controlled Study;
- 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;
- Inhaled milrinone during one lung ventilation in thoracic surgery: a feasibility pilot study.

RESIDENT TRAINING

Our Residency Program includes two fourweek 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, and one day in both vascular and 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 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 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 in both clinical and research settings. It is designed to meet the individual's needs, along with the best exposure to the available clinical caseload.

Transplant Anesthesia

Dr. Achal Dhir, Program Director

ARELLANO, N GONZALES, P JONES, S MORRISON, M ST-AMAND, AND A VANNELLI

to provide excellent clinical care to patients for liver transplantation, liver resections and major Hepato-biliary surgeries. There were two additions - Dr. Phil Jones and Dr. Nelson Gonzales joined the liver group in 2017.

Apart from his clinical experience, Dr. Jones brings research expertise, and this will provide a boost to our research program. Dr. Achal Dhir delivered an invited lecture on After completing his super fellowship, Dr. Gonzales also joined the group. He is pursuing a master's program and we look forward to collaborating with him.

From January to December 2017, our team provided anesthesia for 52 liver transplantations including five critically ill recipients from the ICU.

This also included a combined liver-kidney transplant, 45 livers came from the brain dead donors while 7 were donations after cardiac death. During the same period, our group also provided services for sixty eight major liver resections. The team is also involved with preoperative assessment and optimization of patients before they are listed for liver transplant.

We run a successful fellowship program with two current fellows. Dr. Maria Aspi from the Philippines joined in January 2017 and completed her fellowship in December. Dr. Franklin Dawkins after completing cardiac

TRANSPLANT FACULTY: A DHIR, R fellowship replaced Dr. Sonja Payne in July 2017. Apart from receiving excellent clinical experience, our fellows are also involved with research and academic activities. We also The liver transplantation program continues conduct monthly PBLDs and journal clubs. Liver Transplantation Anesthesia group attends Transplant rounds regularly and participates in 'Liver assessment' and 'M & M' rounds conducted by Transplant surgeons & Hepatology colleagues.

'Fluids in donor hepatectomy', in a symposium conducted by the Institute of Liver and Biliary Sciences on 14 May 2017, ILBS, Delhi, India

Dr. Achal Dhir conducted case base panel discussion on 'New onset cardiac dysfunction - early post-transplant, in a symposium organized by Centre for Liver and Biliary Sciences, Delhi, 16 Sept. 2017

ABSTRACT: Sadkhan H, Tawfic Q, Dhir A, Qumosani K, Morrison S, Kumar K, Armstrong K. Post-operative pain management of orthotopic liver transplantation (OLT): Retrospective study. CAS annual meeting 2017.

ONGOING PROJECTS:

- · Incidence, Risk Factors and Outcomes of Intraoperative Cardiovascular Events **During Liver Transplantation**
- · Pain management after liver transplantation

Schulich School of Medicine & Dentistry

Education Programs

Postgraduate Education

Dr. Anita Cave, Program Director

The success continues for Western's Anesthesia Residency program with another outstanding year. 2017 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.

The challenges of making the transition to competency-based medical education during the past year have only reaffirmed this commitment to excellence and we look forward to further success as we welcome our second cohort of Competency by Design learners.

PROGRAM LEADERSHIP

2017. Dr. November of Arif Al-Areibi stepped down from the position of Director Postgraduate Education Program in our Department. Arif was appointed to this position in

July 2014, and has successfully lead our PGE program forward into the Competency By Design curriculumthatwasimplemented in Anesthesia in July 2017. He and his PGE Committee members are to be commended for their contributions to continually improve our program and ensure the success of our residents each year.

Please join me in expressing our appreciation for his dedication and hard work throughout the past 3 years, during a challenging transition for residency programs in Canada.

With a clear goal of providing the highest We continue our leadership at Western in quality training structure and learning simulation and training in Crisis Resources environment, we continue to design optimal opportunities for our trainees to earn their unparalleled level of excellence and who are place amongst the most qualified clinicians also involved nationally in developing the and educators in the profession. During the Canadian Simulation program. past year our PGME subcommittees worked very closely with the Core Post Graduate Along with the new, state of the art, simulator, Committee to accentuate the importance of learner-centred curriculum and diversity in maintain a meaningful presence in this field. the workplace. These new subcommittees continue to open doors for more creative. Our department offers a wide variety of and thoughtful educational ideas, with more subspecialty training opportunities in leadership roles for our trainees and teachers. anesthesia, with a large case volume which

These subcommittees are:

- Evaluation Subcommittee
- Academic Mentoring Subcommittee
- Academic Half Day Subcommittee
- The Royal College Examination Preparation Subcommittee
- Quality Improvement Subcommittee
- · 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.

As early adopters of the Royal College of Physicians and Surgeons of Canada Competency by Design initiative, our department has welcomed the initiative and hard work of these committees in supporting all faculty, staff and learners to make these improvements.

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.

by highly skilled educators who maintain an

we have the structure that will allow us to

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 master's degrees.

MCMASTER-WESTERN RESEARCH DAY

Congratulations to our residents, Dr. Matthew Chong (1st place) and Dr. Jillian Belrose (2nd place), 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.

[PGE Continued]

CANADIAN ANESTHESIOLOGISTS' SOCIETY ANNUAL MEETING

At this year's Annual Meeting of the Canadian Anesthesiologists' Society (CAS) in Niagara Falls, Ontario, from June 23 - 26, our department was represented by two program residents Dr. T.J. Leeper and Dr. Matt Chong. Both presentations were met with favourable review.

MARC 2017

MARC is an annual conference, sponsored by the Association of Midwest Academic Anesthesia Chairs (AMAAC). This year, Chicago welcomed 600 conference attendees, with representatives and residents from all 33 AMAAC institutions in attendance. Residents from each clinical-academic center participated in numerous research competitions during the conference.

Six of our residents presented six studies at this years' Midwestern Anesthesia Resident's Conference (MARC) and five studies were awarded prizes!

This year's tremendous success was as a result of the amazing effort put forth by our residents, Jill Belrose (PGY1), Sebastian Borowiec (PGY2), Matthew Chong (PGY3), Michael Chow (PGY4), TJ Leeper (PGY4), and Luke Jakobowski (PGY3), as well as the tireless efforts of our faculty advisors, Postgraduate Administration and Resident Research Team.

In addition, special thanks to Drs. Kate Ower and Jon Brookes for their continued support of the residents and for acting as Judges at this year's competition. And many thanks to Dr. Angela BuilesAguilar for providing excellent feedback and support during the presentation practice sessions.

On behalf of the entire department, we are thrilled to be able to congratulate all of this year's winners for putting forth such a wonderful showcase of resident research. We would also like to thank all our faculty advisors and mentors, and Postgraduate Administration and Resident Research team –this success would not have been possible without you!

Thank-you:

Dr. Arif Al-Areibi, Postgraduate Education Director.

RESIDENTS AND RESEARCH PROJECTS

Dr. Jill Belrose (PGY1): REGULATION BY FYN KINASE: A POTENTIAL TARGET IN NEUROPATHIC PAIN (Basic Science study)

Won 1st place presentation in Basic science, and the prestigious FAER (Foundation for Anesthesia Research) research prize for best poster!

Supervisor: Dr. John MacDonald

Dr. Sebastian Borowiec (PGY2): A SYSTEMATIC REVIEW AND META-ANALYSIS OF OSA SCREENING QUESTIONNAIRES IN PREGNANCY

Supervisor: Dr. Mahesh Nagappa

Dr. Matt Chong (PGY3): PERINEURAL VERSUS INTRAVENOUS DEXAMETHASONE AS AN ADJUVANT FOR PERIPHERAL NERVE BLOCKS: A SYSTEMATIC REVIEW AND META-ANALYSIS

1st place presentation in Regional Supervisor: Dr. Indu Singh

Dr. Michael Chow (PGY4): EVALUATION OF VIDEO BASED ASYNCHRONOUS LEARNING TOOL FOR INCOMING ANESTHESIA RESIDENTS: OUTCOMES AND SATISFACTION

Supervisor: Dr. Marcel D'Eon

Dr. Luke Jakobowski (PGY4): THE VALUE OF ROUTINE POST-OPERATIVE CHEST X-RAY AFTER CENTRAL LINE PLACEMENT: A RETROSPECTIVE STUDY

Won 2nd place in Patient safety.

Supervisor: Dr. Jason Chui

Dr. Terrence Leeper - REGIONAL CHANGES IN BLOOD FLOW AND ENDOTHELIAL FUNCTION FOLLOWING BRACHIAL PLEXUS BLOCK.

3rd place presentation in Regional.

Supervisor: Dr. Peter Mack

A SPECIAL THANK YOU TO OUR PROGRAM LEADERS FOR THEIR DEDICATION AND GREAT CONTRIBUTION TO THE SUCCESSFUL YEAR:

- PROGRAM DIRECTOR: Anita Cave (as of Dec 1 2017)
- PROGRAM DIRECTOR: Arif Al-Areibi (Jan to Nov 2017)
- ASSOCIATE PROGRAM DIRECTOR: Andreas Antoniou
- DEPARTMENT CHAIR: Davy Cheng; Ramiro Arellano (as of July 2017)
- EDUCATION COORDINATORS: Linda Szabo and Lori Dengler
- RESEARCH COORDINATOR: Ronit Lavi and Jonathan Brookes
- VH SITE COORDINATOR: Steve Morrison
- UH SITE CO-ORDINATOR: Hilda Alfaro
- SJHC SITE CO-ORDINATOR: Kristine Marmai

- SIMULATION/IT: Richard Cherry
- CHIEF RESIDENT: Lukas Brown
- SENIOR/JUNIOR RESIDENT REPRESENTATIVES: Zach Davidson and James Pius
- FELLOWSHIP COORDINATOR: Miguel Arango
- ACADEMIC MENTORING SUBCOMMITTEE: Jeff Granton
- EVALUATION SUBCOMMITTEE: Ray Zhou
- EXAMINATION PREPARATION SUBCOMMITTEE: Michelle Gros
- RESIDENTS WELLNESS SUBCOMMITTEE: Pravin Batohi
- 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 learners.

2017 Graduates

ISMAIL, Mohamed
JIANG, Jessica Ming
KHALAF, Roy
NGUYEN, Don
QUIGLEY, Nicole
SCHULTZ, William
SMALLWOOD, Jennifer

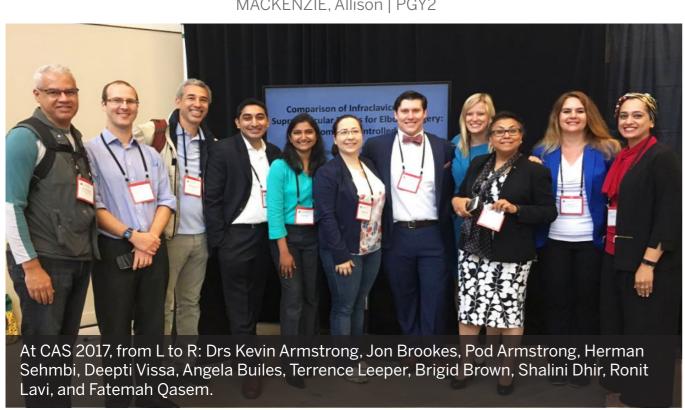
Residents

CURRENT RESIDENTS

ALBOOG, Abdulrahman I

PGY1 BAE, Sandy | PGY1 BAIRAGI, Ranjana | PGY5 BEHBEHANI, Hasan | PGY5 BELROSE, Jillian | PGY2 BOROWIEC, Sebastien |

PGY3 BRADEN, Kevin | PGY1 BROWN, Lukas | PGY4 CHONG, Matt | PGY4 CHOW, Mike I PGY5 DAHROUJ, Dalal | PGY5 DAVIDSON, Zach | PGY4 DESHPANDE, Nachiket | PGY1 FISHER, Kyle | PGY5 FREYTAG, Alex | PGY5 GALLAGHER, Caitlin | PGY5 GERMAN, Mark | PGY3 GILL, Rajwinder | PGY3 HYNES, Zach | PGY3 JAKOBOWSKI, Luke | PGY4 JOSCHKO, Abigayel | PGY2 LAPIERRE, Danielle | PGY5 LARKIN, John Paul | PGY1 LEE, Lina | PGY5 LEEPER, TJ | PGY4 LUI, Jordon | PGY1 MACKENZIE, Allison | PGY2 MELTON, Natalie | PGY5 MERRIFIELD, Kaylyn | PGY3 MOHAJER, Kiarash | PGY4 OEMING, Bethany | PGY4 PARADISO-SHAW, Derek | PGY2 PIRANI, Zameer | PGY4 PIUS, James | PGY2 SEFEIN, Osama | PGY3 SZOKE, Daniel | PGY3 TERLECKI, Magda | PGY5 TRYPHONOPOULOS, Takis I PGY4 WOODS, Megan | PGY1 YASHPAL, Namrta | PGY1



Pain Medicine Residency

Dr. Geoff Bellingham, Program Director

The Pain Medicine residency has continued to provide a successful two-year training program to graduates of a variety of entry disciplines. Dr. Colin Phillips has recently graduated the clinical component of the residency and is currently working in Prince George, B.C. as an anesthetist and a pain medicine specialist. Dr. Doris Leung has continued her training and will be completing her clinical requirements in June of 2018. Both candidates will be eligible to challenge the Royal College Pain Medicine Specialty Examination in the fall of 2018.

Two new residents started the training program in July of 2017. Dr. Scott Cook is a graduate of the University of Ottawa Physiatry residency and Dr. Abdul Alfasi is a graduate of the University of Ottawa Neurosurgery residency.

sessions are held every second Wednesday. The national half- day program linking online with Pain Medicine Residents across the country continues to provide subjects to fulfill the CanMEDs roles such as quality improvement or community practice management.

A national 'ground-school' for the Pain Medicine residents was also held for the first time in July of 2017. This was hosted over a web conferencing platform and provided incoming residents with talks covering various foundational knowledge aspect of pain management. One highlight included a talk provided by Dr. Busse, the lead author of the new National Opioid Use Guidelines.

For the senior Anesthesiology residents, six academic half-days were provided, covering a variety of acute, chronic, and cancer pain topics.



Clinical Case Rounds discussing complex cases are held every three months in the Pain Clinic classroom at St Joseph's Health Care on Wednesday mornings from 0715-0830 For the Pain Medicine residents, teaching hours. These are open to all interested faculty and trainees.

CANADA'S FIRST EVER PAIN MEDICINE RESIDENCY PROGRAM SEES ITS' FIRST **GRADUATES**

January 25, 2017

It is with great pleasure that we are announcing the successful pass of the final RCPSC credentialing exam for Pain Medicine by our two inaugural residents, Dr. Amjad Bader and Dr. Michael Pariser.

Program Director, Dr. Geoff Bellingham, also wrote and passed the exam. It was his first opportunity to write the exam since this Pain Medicine exam was the first ever in Canada.

Undergraduate Education

Dr. Michelle Gros, Program Director

rotation that all third-year medical students complete as part of their surgery block at Western. Six students are on Anesthesia at any one time throughout the city. Typically, two students are assigned to each of the three teaching hospitals in London. We have increased flexibility so that 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-on-one 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 anesthesia student textbook to read during their rotation and a list of learning topics to read about and discuss with their supervising anesthesiologists. 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

Anesthesia is a mandatory two-week core management, and drug administration. They then have the opportunity to run through some case-based scenarios. The students are very enthusiastic about this highly-rated 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 residency 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 2016-2017 academic year, we had 130 clerks, 19 Western elective students, 36 visiting elective students, and 4 non-credit pre-clerkship summer clinical elective students rotate through our program at Western.

Again this year, we had very thought-provoking essays submitted to the CAS medical student essay contest. We are encouraging the medical students to submit essays again next year to this contest.

Another highlight is the annual orientation to airway management lecture and workshop that our department runs for the incoming



year of clerks. This was evaluated very highly and each year it takes a group of dedicated residents to help run this event.

Every student that has rotated through our Department received an exit interview at their respective site. The focus of the interview is to provide an opportunity for the students to share their input on how we can continue to improve rotations for future students.

Some of the outcomes have improved communication at the start of the rotation where we provide a detailed orientation email to the students.

We have also been able to expand accessibility of learning resources. New this year, we are asking the students if they worked with an outstanding teacher that they would like to nominate for the undergraduate teacher of the year award.

Our department continues to have a strong presence in undergraduate teaching at the first and second year level, and we encourage as many faculty members as possible to get involved in this teaching.

AND FINALLY, A VERY SPECIAL THANK YOU

- Pravin Batohi, SJHC Site Coordinator
- Jonathan Brookes, UH Undergraduate Medical Education Site Coordinator
- · Charlotte Sikatori McLain, Undergraduate **Education Coordinator**

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Continuing Professional Development

Dr. Ian Herrick, Program Director

Under the auspices of the Continuing Professional Development Office at the Schulich School of Medicine and Dentistry, the Department of Anesthesia 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.

2017 INVITED SPEAKERS

In 2017, the Department had the pleasure to host several grand round speakers and events that included:

- Dr. Richard Novick, Professor of Cardiac Surgery, University of Calgary – January 18, 2017
- Dr. Chris Watling and Dr. Shannon Venance, Postgraduate Medical Education, Schulich School of Medicine and Dentistry, Western Univeersity - March 22, 2017
- · Dr. Sharon Koivu, Physician Consultant, Palliative Care, London Health Sciences Centre and Associate Professor. Department of Family Medicine, Western University - May 17, 2017
- · Dr. Supriya Singh, Resident, Department of Orthopaedic Surgery, Western University -May 17, 2017
- Dr. Ian Ball, Regional Medical Lead for Organ Donation, Trillium Gift of Life Network -September 20, 2017
- Mr. Robert Sibbald, Clinical and Corporate Ethicist, London Health Sciences Centre -September 20, 2017
- · Dr. Kim Burchiel, Professor, Departments of Neurological Surgery and Anesthesiology and Perioperative Medicine, Oregon Health and Science University - November 14, 15, 2017
- Dr. Jason Brookes, Performance Coach & Consultant, Maven Consulting Group and Lecturer, Department of Emergency Medicine, University of Manitoba -December 13, 2017

OTHER MAJOR ACTIVITIES FOR 2017 · Audit of accredited departmental CPD **INCLUDE:**

- The Department received accreditation from the Royal College of Physicians and Surgeons of Canada for three new CPD activities with the commencement of the Pain Journal Club. Consultant TEE Rounds, and Neuro-Anesthesia Research Rounds.
- WebEx was implemented as a webcasting system to support the city-wide broadcasting of many departmental CPD activities.

- activity.
- The Perioperative Ultrasound Workshop was hosted by the Department in 2017. This two-day accredited workshop explored the utility of point-of-care ultrasound in the perioperative setting.

CITY-WIDE ROUNDS - 2017

Dr. Richard Novick (Cardiac OR: The Call, the Save, and the Threat" January 18. 2017

Dr. Outaiba Tawfic (Anesthesia, Western Effective Postoperative Pain Management" February 15, 2017

Dr. Chris Watling and Dr. Shannon Venance (Postgraduate Medical Education, SSMD) -Training to CBME" March 22 2017

Drs. Deepti Vissa, Catalina CasasLopez, and Ian Herrick 2017

Dr. Sharon Koivu (Palliative Care, Family Medicine, Singh (Orthopedic Surgery, "Perioperative Opiates: Reducing Risk While Maintaining Comfort" May 17, 2017

Subramani, Aya Elsaharty, and Brigid Brown Fellow CAS Presentations" June 14, 2017

Dr. Ian Ball (Trillium Gift of Life Network) and Mr. Robert Sibbald (London Health Sciences Centre) -"MAiD and Organ Donation" September 20, 2017

Dr. Davy Cheng (Anesthesia, - "Vital Directions in the

Dr. Kim Burchiel Anesthesiology, Oregon Lectures - "Trigeminal and Surgical Management" November 14, 2017 and "The Case for Asleep DBS" November 15, 2017

Consulting Group) - "The High Performance Physician Common Stressors December 13, 2017

Western University) -"Perioperative Handover – The Good, the Bad and the Ugly!" December 20, 2017

Fellowship

Dr. Miguel Arango, Program Director

Fellowships in cardiac, neurosurgical, transplantation, regional, obstetrics, acute pain, simulation and vascular & 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, depending on subspecialty and interest in Research.

During the 2017 academic year, the department had 23 clinical fellows, broken down as follows:

CARDIAC: 5 FELLOWSNEURO: 2 FELLOWS

• REGIONAL: 3 FELLOWS

• TRANSPLANT: 2 FELLOW

• OBSTETRIC: 2 FELLOWS

• VASCULAR: 2 FELLOWS

• SIMULATION: 1 FELLOW

• GENERAL: 3 FELLOWS

ACUTE PAIN: 2 FELLOWS

• QUALITY ASSURANCE: 1 FELLOW

2017 FELLOW RESEARCH ACCOMPLISHMENTS/PRESENTATIONS

Simulation Fellow **ANGELA BUILES** presented at the Canadian Anesthesiologists Society's annual meeting this year in Niagara Falls. She also presented at the 45th Annual SNACC Meeting that was held in Boston and at the Canadian Simulation summit in Montreal. Additionally, Dr. Builes was significantly involved in facilitating the Simulation Airway Bootcamp for PGY1 and PGY2.

Several of our fellows, including DRS. MARTA BERRIO, LUZ MARIA LOPERA, AND ISABEL ARIAS, were involved in a new Perioperative Transthoracic (TTE) and Transesophageal (TEE) Echocardiography workshop held in Medellin, Colombia in November 2017. This was the first workshop of its kind for the region and our fellows, along with anesthesia faculty, had great success with this event.

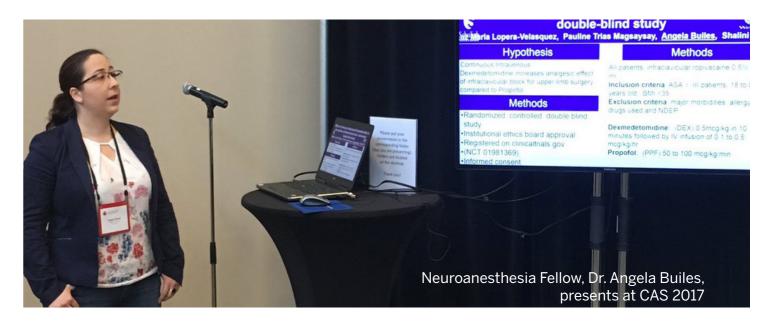
FUJII S, TUGALEVA E, CHU MWA (SURGERY), BAINBRIDGE D. A Curious Case of Blood-Culture-Negative Infective Endocarditis. J Cardiothorac Vasc Anesth. 2018 Feb;32(1):e3-e5.

SEBBAG I, QASEM F, DHIR S. Ultrasound guided quadratus lumborum block for analgesia after cesarean delivery: case series. Rev Bras Anestesiol. 2017 Jul - Aug;67(4):418-421

CHONG MA (PGY4), WANG Y, DHIR S, LIN C. Programmed intermittent peripheral nerve local anesthetic bolus compared with continuous infusions for postoperative

analgesia: A systematic review and metaanalysis. J Clin Anesth. 2017 Aug 19;42:69-76.

LAU JC, MACDOUGALL KW, ARANGO M, PETERS TM, PARRENT AG, KHAN AR. Ultra-high field template-assisted target selection for deep brain stimulation surgery. World Neurosurg. 2017 Jul;103:531-537



FELLOWS

AMIRUDDIN, Nabeel Vascular/Thoracic, India

ARIAS, Isabel Cardiac, Colombia

ASPI, Maria Transplant, Philippines

BANASCH, Matthew Vascular/Thoracic, Canada

BERRIO, Marta Cardiac, Colombia

BROWN, Brigid Regional, Canada

BUILES, Angela Simulation, Colombia

COURNOYER, Catherine Vascular/Thoracic, Canada

DAWKINS, Franklin Cardiac, Costa Rica DY-Valdez, Christine Neuroanesthesia, Philippines

ELDEYASTY, Basem Acute Pain, Egypt

ELSAHARTY, Aya Obstetric, Egypt

ESPINOSA, Aldo Neuroanesthesia, Mexico

FREYTAG, Alexander Regional, Germany

FUJII, Satoru Cardiac, Japan

GONZALEZ, Nelson General, Colombia

KARUPPIAH, Niveditha Regional, India

LIN, Bill Regional, Canada

LOPEZ CASAS, Catalina Quality Assurance, Colombia PAYNE, Sonja Transplant, Canada

QASEM, Fatemah Acute Pain, Kuwait

SADKHAN, Hussien Acute Pain, Iran

SATO, Keita Cardiac, Japan

SEHMBI, Herman General, India

SUBRAMANI, Yamini Obstetric, India

VANDENBRANDE, Jeroen Cardiac, Belgium

VISSA, Deepti Quality Assurance, India

YANG, Churao Regional, Canada

YOUSSEF, Hesham General, Egypt

Anesthesia and Critical Care Teaching Through Simulation (ACCTTS)

Dr. Richard Cherry, Program Director



In 2017 ACCTTS delivered more than 1500 learner hours of high quality, simulation based formative learning and summative assessment for trainees.

The undergraduate anesthesia bootcamp and postgraduate anesthesia resident simulation training sessions continue, as they have for the past decade, to be recognized as tremendous assets to the department. In addition, residents from a wide variety of specialties receive Crisis Resource Management training from ACCTTS faculty during their Critical Care rotation. Senior residents in Critical Care, who have a wealth of clinical experience, are able to consolidate their training in regular simulation sessions. Expert ACCTTS faculty members continue to regularly collaborate with simulation efforts of other departments such as obstetrics, otolaryngology, and surgery.

Our experience and established education approaches using simulation have garnered us recognition as leaders in the field within our academic health center. Increasingly, our faculty members are taking on simulation leadership roles at local, regional, and national levels.

In 2017, Dr. Richard Cherry was named the inaugural Associate Dean, Learning with Technology & Simulation for the Schulich School of Medicine & Dentistry. This position will oversee the development and stewardship of simulation activities for the school and help establish a collaborative and coordinated strategy for simulation with our clinical partners.

OTHER NOTABLE ACHIEVEMENTS FOR ACCTTS DURING 2017 INCLUDE:

- a successful poster presentation by Dr. Angela Builes (Simulation Fellow) at the Royal College Simulation Summit (Montreal)
- workshops at the Schulich Education Conference
- presentation at the Chatham Kent Education Day
- supporting a simulation based learning experience for high school students during Discovery Day



- Schulich Competency-Based Medical Education Innovation Fund grant funding to pursue a unique simulation training opportunity that concurrently delivers learner training and faculty development during the same event.
- Publication: Antoniou A, Marmai K, Qasem F, Cherry R, Jones PM, Singh S. Educating anesthesia residents to obtain and document informed consent for epidural labor analgesia: does simulation play a role? International Journal of Obstetric Anesthesia. 2017 Dec 29.

With greater emphasis on simulation anticipated as CBME residents form a greater component of trainee cohort, ACCTTS is actively planning for faculty expansion and additional resource development in 2018. Other exciting areas of opportunity include the creation of simulation programs for staff continuing professional development.

MEDICI

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Centre for MEDICI (Medical Evidence Decision Integrity Clinical Impact)

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

The Centre for Medical Evidence, Decision Integrity & Clinical Impact (MEDICI) is a World Health Organization (WHO) Collaborating Centre for Global Surgery & Anesthesia in the Department of Anesthesia & Perioperative Medicine, Schulich School of Medicine and Dentistry, Western University. MEDICI was established in 2011/12 with the support of the Schulich School of Medicine and Dentistry, London Health Sciences Centre, St. Joseph's Health Care London, and Lawson Research, and received official WHO Collaborating Centre Status in 2016.

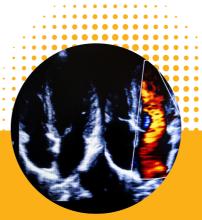
MEDICI HAS THREE KEY MANDATES:

- 1. PRACTICE & POLICY: To provide timely, contextualized evidence synthesis to facilitate evidence-informed decision-making related to drugs, devices, procedures, and programs in the real-world setting, with a special focus on:
 - Hospital-based health technology assessment for decision-making related to drugs, devices, procedures, and health services relevant to acute care.
 - Optimizing decision-making across portfolios of opportunities in healthcare using Know4Go
 - Health services assessment for local, regional, national, and international decision-making, to support capacity-

building and improved outcomes in global surgery, anesthesia, and perioperative care

- 2. EDUCATION: To provide educational and capacity-building opportunities in evidence-informed decision-making, health technology assessment, health economics, health policy, and knowledge translation locally, nationally, and 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









MEDICI encompasses:

HITEC

HiTEC: (High Impact Technology Evaluation Centre): a hospital-focused, evidence-based health technology assessment program which serves to inform 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 decision-makers 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 HIGHLIGHTS

REACH Network

In 2017, Drs. Janet Martin and Davy Cheng of the MEDICI Centre were co-applicants and co-investigators on a successful Canadian Institutes of Health Research (CIHR) Operating Grant: Strategy for Patient-Oriented Research – Guidelines and Systematic Reviews. The project is titled SPOR REACH Network and led by nominated PI Dr. Andrea Tricco (St. Michael's Hospital, Toronto). A total funding amount of \$4,997,000 was received for a period of five years.

The REACH Network aims to improve the health of Canadians through the development of a rapid learning health system, where patients receive the right intervention at the right time.

The Network is made up of patients, healthcare providers, researchers, knowledge users, and policy-makers from all health system levels

MEDICI CORE TEAM

Janet Martin, PharmD, MSc(HTA&M) Director & Associate Professor

Davy Cheng, MD, MSc, FRCPC, FCAHS, CCPE Medical Director & Distinguished University Professor

Jessica Moodie, MLIS Program Coordinator & Information Specialist

Ava John-Baptiste, PhD

Health Economist & Assistant Professor

(Angel) Fang Zhu, MD, PhD Research Methodologist

Amy Newitt, MLIS Grants & Communications Coordinator

Matthew Chong, MD Research Resident across Canada. Through the knowledge, expertise, evidence and skills brought together by its 177 members, the Network will support healthcare decision making and practice by providing both standard and rapid responses to knowledge-user queries posed by patients, policy and decision makers, and other knowledge-users. This approach aims to strengthen the Canadian healthcare system, increase efficiencies, decrease research waste, expand the profile of Canadian research, and support the next generation of researchers and trainees in Canada.

Distinguished Leader Award of Excellence

In May 2017, Dr. Janet Martin was awarded the Schulich Distinguished Leader Award of Excellence – Graduate/Postgraduate Education. This is the highest category award for outstanding achievements in education and leadership locally and internationally.

Vice Dean, Faculty Affairs

In July 2017, Dr. Davy Cheng was appointed Vice Dean, Faculty Affairs, the Schulich School of Medicine and Dentistry, after completing 16 years as Chair/Chief of the Department of Anesthesia & Perioperative Medicine.

Desiree Sutton, BSc, MSc(epi) Research Assistant

Riaz Qureshi, BSc, MSc(epi) Masters Student Thesis Research

ASSOCIATE CLINICIAN-RESEARCHERS

Saverio Stranges MD, PhD, FAHA Professor & Chair, Department of Epidemiology & Biostatistics

Daniel Bainbridge, MD, FRCPC Associate Professor

Miguel Arango, MD Associate Professor

EPICOR

Members: Drs. 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 o 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)

MEDICI Presentations



NORTH AMERICA

CANADIAN ANESTHESIOLOGISTS' SOCIETY (CAS) ANNUAL MEETING; NIAGARA FALLS, CANADA.

Martin J. (2017) Research in Anesthesia – What has it Yielded? Provide the findings of a comprehensive analysis of all anesthesia related research in the past few decades for its validity and clinical reference. Symposium: Return on Investment in Anesthesia Research; Knowledge Translation, Clinical Impact and Engaging the Anesthesia Community.

INTERNATIONAL ANESTHESIA RESEARCH SOCIETY ANNUAL MEETING (IARS); WASHINGTON DC, USA.

Martin J. (2017) Surgical or Anesthesia-Related Death: How Big Is the Risk for Developed and Developing Countries? Panel: Perioperative and Anesthesia-Related Mortality: Global Trends and Innovations. Invited Panel Speaker: Martin J. (2017) Health Economics 101: "Value" Rather Than Price Tags. Invited Review Course Lecture.

Cheng D. (2017) Global Issues and Coordinated Research Agenda for Perioperative and Anesthetic-Related Mortality: All Hands on Deck.

JOINT WEST CHINA HOSPITAL/SISCHUAN UNIVERSITY AND SCHULICH SCHOOL OF MEDICINE & DENTISTRY, WESTERN UNIVERSITY; LONDON, CANADA.

Cheng D. (2017) Overview of Education and Research Opportunities at Schulich School of Medicine & Dentistry, Western University.

TORONTO HEALTH ECONOMICS AND TECHNOLOGY ASSESSMENT (THETA) COLLABORATIVE, UNIVERSITY HEALTH NETWORK; TORONTO, CANADA.

John-Baptiste A. (2017) How can economic evaluation inform cost reduction and disinvestment in the hospital setting? Research Rounds,

39TH ANNUAL MEETING OF THE SOCIETY FOR MEDICAL DECISION MAKING; PITTSBURGH, USA.

Li Z, Habbous S, Thain J, John-Baptiste A. (2017) Costeffectiveness analysis of frailty assessment in older patients undergoing coronary artery bypass grafting (CABG) surgery.

SOCIETY OF CARDIOVASCULAR ANESTHESIOLOGISTS 39TH ANNUAL MEETING; ORLANDO Cheng D. (2017) Long Term Outcome and Cost Implications Global Engagement in Cardiac Surgery. Invited Speaker.

CANADIAN AGENCY FOR DRUGS AND TECHNOLOGIES IN HEALTH SYMPOSIUM; OTTAWA, CANADA.

John-Baptiste A, Qi Y, Jones P, Cheng D, Martin J. (2017) Economic Evaluation of Disinvestment in Hydroxyethyl Starches for Cardiac Surgery.

UNIVERSITY OF TEXAS MD ANDERSON CANCER CENTRE; HOUSTON. TX. USA.

Cheng D. (2017) Health
Technology Assessment and
Knowledge Translation in
Perioperative Care – Evidence
to Guidelines to Practice: the
Road Less Traveled. Visiting
Professorship.

35TH ANNUAL INTERNATIONAL SYMPOSIUM: CLINICAL UPDATE IN ANESTHESIOLOGY, SURGERY AND PERIOPERATIVE MEDICINE; CANCUN, MEXICO. Martin J. (2017) Impact of Ebola on Surgery. Invited Lecture.

SOUTH AMERICA

16TH INTERNATIONAL CONGRESS OF CARDIOTHORACIC AND VASCULAR ANESTHESIA (ICCVA); RIO DE JANEIRO, BRAZIL.

Cheng D. (2017) Cardiothoracic and Vascular Surgery & Anesthesia: Past, Present and Future. Invited Speaker.

WFSA RESEARCH SYMPOSIUM: 34TH CLASA CONGRESS; MONTEVIDEO, URUGUAY.

Cheng D. (2017) Sustainable Development Goals in Universal Health Coverage: Drug, Technology and Technique – Lecture: Knowledge Generation, Access (eHeath and mHealth), and Clinical Practice in LMIC. Invited Speaker,

EUROPE

19TH CONGRESS OF THE POLISH SOCIETY OF ANESTHESIOLOGY AND INTENSIVE THERAPY; BYDGOSZCZ, POLAND.

Cheng D. (2017) Transfusion Thresholds: Do Outcomes Differ for Critical Care versus Surgical Patients? Invited Speaker.

Cheng D. (2017) Blood Management Strategies in Cardiac Surgery – Drugs, Techniques and Procedures. Invited Speaker.

32ND ANNUAL CONGRESS OF THE EUROPEAN ASSOCIATION OF CARDIOTHORACIC ANAESTHESIOLOGY; BERLIN, GERMANY.

Cheng D. (2017) The Times Are Changing: Cardiothoracic Anesthesiology in the Era of Interventional Cardiology. Invited Speaker.

EVIDENCE LIVE; OXFORD, UK.

Martin J. (2017) Troubled Evidence? Tracking excess significance, cherry-picking, and premature closure. Invited Speaker.

HTAI ANNUAL MEETING; ROME, ITALY.

Martin J. (2017) No innovation without Evaluation: The IDEAL approach for surgical innovations. Invited Panel Speaker & Coordinator.

Martin J, Cheng D. (2017) Hospital-Based HTA: Experiences and outcomes from 10 countries across the globe. Invited Panel Speaker & Coordinator.

EUROANAESTHESIA 2017; GENEVA, SWITZERLAND.

Martin J. (2017) Perioperative techniques: how can anesthetic-related mortality in the low-income countries keep pace with the high-income countries? Session: Evidence in clinical decision-making: high to low income countries. Invited Panelist & Speaker.

Martin J. (2017) Evidence in clinical decision-making: high to low income countries. WFSA Symposium



ANNUAL SCIENTIFIC MEETING OF ANAESTHESIOLOGY; HONG KONG.

Cheng D. (2017) Heart Team Approach: How to Make it Work? Invited Speaker.

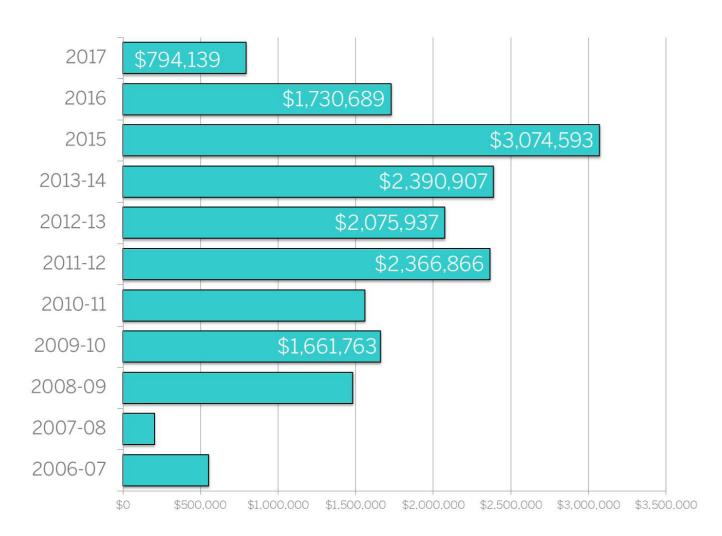
Cheng D. (2017) Tricuspid Valves: What is the Big Deal? Invited Speaker.

Cheng D. (2017) Blood Management Strategies in Cardiac Surgery: Drugs, Techniques and Technologies. Invited Speaker.

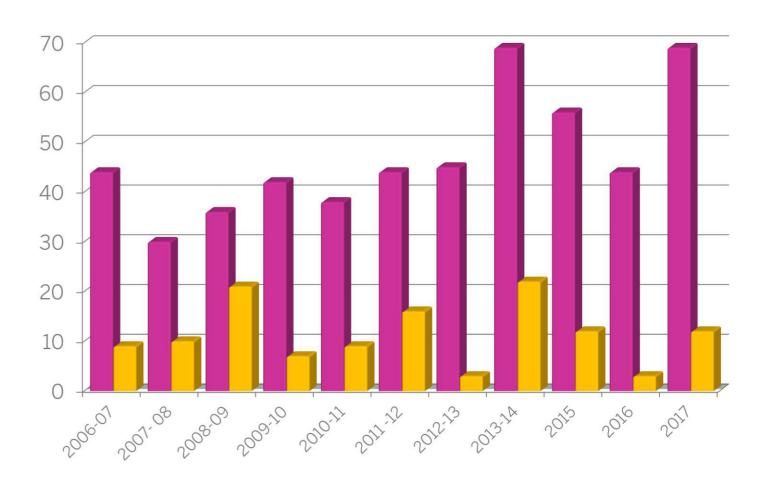
CHINESE SOCIETY OF CARDIOVASCULAR ANESTHESIOLOGY ACADEMIC CONFERENCE; NANJING, CHINA.

Cheng D. (2017) Minimally-Invasive Cardiothoracic Surgery: Are Clinical Outcomes Significantly Better Than Conventional Surgery?

Research







Peer-Reviewed Publications
Journal Articles | Books and Book Chapters

Grants

Peer-Reviewed

ARANGO M, JONES PM.

GASTROKE - The effect of General Anesthesia versus Sedation for patients with acute ischemic stroke undergoing endovascular treatment on three month morbidity and mortality: a feasibility study 2017-2019: \$3650 of \$7,300 [Year 1 of 2]

ABOU-SETTA A, ARMSON H, ASTON M, BARNABEE C, MARTIN J, CHENG D, ET AL. SPOR REACH Network. Canadian Institutes of Health Research (CIHR). 2017-2023: \$4,997,000 total

BUILES A, ARANGO M, GONZALEZ N, ARIAS I, GIRALDO M. Ultrasound evaluation of airway changes after prone position surgeries. Anesthesia IRF. 2015-2017: \$2790 of \$5,580 [Year 2 of 2]

CHENG D, JOHN-BAPTISTE A, KIAII B, THAIN J, MARTIN J, SCHULZ V, ARELLANO R, BAINBRIDGE D, JONES P. Measuring Frailty and Quality of Life for Patients with Aortic Stenosis who Undergo

Implantation or Surgical Aortic Valve Replacement. AMOSO Innovation Fund. 2016-2018: \$75,000 of \$150,000 [Year 2 of 2]

Trans Catheter Aortic Valve

CHENG D, MARTIN J.

Development of WFSA Global Anesthesia Clinical Research Toolkits. 2017: \$10,000

CHENG D, RAHMAN A. Pilot Randomized Control Trial of Nutritional Care Pathway in at Risk Cardio-Vascular Surgery Patients. AMOSO Innovations Fund. 2015-2017: \$85.791 of \$171.58

2015-2017: \$85,791 of \$171,583 [Year 2 of 2]

CHERRY R, BUILES A, HAJI F, NOPPENS R, BOULTON M, ARANGO M. Neurosurgicalteam, Simulation Based Training (NEUROSIM) Competencybased Medical Education. CBME Implementation Award, SSMD. 2017: \$3,500

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

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.
CIHR.
2015-2017: \$106,483 of
\$212,966 [Year 2 of 2]

of preoperative beta blocker withdrawal on postoperative 30-day morbidity and mortality. Anesthesia IRF. 2015-2017: \$5,000 of \$10,000 [Year 2 of 2]

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.

GANAPATHY S, VISSA D. A novel single injection phrenic nerve sparing ultrasound guided subscapularis plane block compared to interscalene block for arthroscopic shoulder surgery – A prospective, randomization non-inferiority study. Anesthesia IRF. 2016-2018: \$4710 of \$9420 [Year 2 of 2].

JONES PM. The effectiveness of Oscillating Positive Expiratory Pressure (OPEP) therapy in high risk patients following coronary artery bypass grafting surgery: A Randomized Clinical Trial. 2015-2017: \$62,500 of \$125,000 [Year 2 of 2]

JONES PM, MACDONALD B. SodiUm SeleniTe Adminstration IN Cardiac Surgery (SUSTAIN CSX-trial). A multicenter, randomized controlled trial of high dose sodium-selenite administration in high risk cardiac surgical patients. surgical patients 2017: \$50.000 KHEMANI E, MCCONACHIE I, QASEM F, GRAY D, LESLIE K. Evaluation of ERAS: Has it Made a Difference? A continuous, multidisciplinary initiative to improving the quality of ERAS as Victoria Hospital. Anesthesia IRF.

2015-2017: \$1208 of \$2415 [Year 2 of 2]

LAVI R, CHUI J, BAINBRIDGE D, ARELLANO R,

NAUDIE D. Raising the Bar in South Western Ontario: Current Perioperative Ultrasound Use and Future Plans. AMOSO Innovation Fund. 2016-2018: \$42,735 of \$85,470 [Year 2 of 2]

LINGARD L, WATLING C, CHAHINE C, **CHERRY R.** Advancing Assessment Science Through Competency-Based Medical Education. Dean's Research Initiative Grant. 2016-2018: \$50,000 of \$100,000 [Year 2 of 2]

NOPPENS R, BELROSE J, PRADO M, PRADO V. The effect of volatile anesthetics on Alzheimer's Disease in an animal model. IRF grant. 2017-2019: \$4935 of \$9,870 [Year 1 of 2] PALANIYAPPAN L, **POOLACHERLA R.** Neuroinflammation in brain in Schizophrenia patients. SRE-Lawson Research. 2016-2017: \$50,000

RAILTON C, CHONG M, KIM R. Rocuronium pharmacogenetics. Anesthesia IRF. 2016-2018: \$4465 of \$8930 [Year 2 of 2]

SUKHERA J, **POOLACHERLA R.** Comfort & Coping strategies in children. Children's Health Foundation.
2017-2018: \$63,000 of \$126,000 [Year 1 of 2]

TANEJA R. Advance Care Planning at LHSC. LHSC Funding. 2016-2018: 13,250 of \$25,600 [Year 2 of 2]

TANEJA R, JONES

P. Advance care planning at LHSC. AMOSO Innovation Fund. 2016-2018: \$75,000 of \$150,000 [Year 2 of 2]

TANEJA R, HYNES Z, CRISTANCHO S. Heuristics and biases in cardiac anesthesia anticoagulation management. Anesthesia IRF. 2016-2018: \$2654 of \$5990 [Year 2 of 2]. TAWFIC Q, PIRANI Z, KUMAR K, NICOLAOU G, AMIRUDDIN N. The role of intraoperative lidocaine infusion in preventing chronic post-surgical pain after VATS. Randomized doubleblinded controlled study. Anesthesia IRF. 2016-2018: \$2995 of \$5990 [Year 2 of 2].

TURKSTRA T. Comparison of simultaneous endotracheal tube insertion with GlideScope use: a pilot study. Anesthesia IRF. 2015-2017: \$1855 of \$3710 [Year 2 of 2]

YOU JJ, **TANEJA R.** Improving Advance Care Planning for Frail Elderly Canadians. Canadian Frailty Network. 2016-2018: \$49,998 of \$99,997 [Year 2 of 2].

ZHOU R, FUJII S, VISSA
D, GANAPATHY S,
BAINBRIDGE D, JONES P,
CHU M, QUANTZ M, GUO
R, MCKENZIE N, MYERS
M, KIAII B, NAGPAL D,
GOLDBACK M. Analgesic
effects of transversus
thoracic plan (TTP) block in
cardiac surgery – feasibility
study. IRF grant.
2017-2019: \$7,620 [Year 1 of
2]

Publications

Peer-Reviewed Journal Articles

AL-AMODI HA. TWEEDIE EJ. IGLESIAS I, CHU MWA. Black Aortic valve: A surprise finding of what clinical relevance? The Canadian Journal of Cardiology 2017 Jun; 33(6):831.e7-831.e8.

AMERI G. BAXTER JSH. **BAINBRIDGE D. PETERS** TM, CHEN ECS. Mixed reality ultrasound guidance system: a case study in system development and a cautionary tale. International journal of computer assisted radiology and surgery. Int J Comput Assist Radiol Surg. 2018 Apr;13(4):495-505.

BERRIO VALENCIA MI. IGLESIAS I. Rupture of aneurysm of sinus of Vasalva. Spanish Journal of Anesthesiology and Resuscitation. 2017 Oct; 64(8):485.

CHONG MA. BERBENETZ NM. LIN C. SINGH S.

Perineural Versus Intravenous Dexamethasone as an Adjuvant for Peripheral Nerve Blocks: A Systematic Review and Meta-Analysis. Reg Anesth Pain Med. 2017 May/Jun;42(3):319-326.

CHONG MA, WANG Y, DHIR S, LIN C. Programmed intermittent peripheral nerve local anesthetic bolus compared with continuous infusions for postoperative analgesia: a systematic review and meta-analysis. J of Clin Anes. 2017 Nov; 42:69-76.

CHUI J. ALAMRI R. PARRENT A. **CRAEN RA.** The effects of intraoperative sedation on surgical outcomes of deep brain stimulation surgery. The Canadian Journal of Neurological Sciences. 2017 Dec; 14:1-8. Epub ahead of print.

CHUI J. MURKIN JM. TURKSTRA T, A novel automated somatosensory evoked potential (SSEP) monitoring device for detection of intraoperative peripheral nerve injury in cardiac surgery: a clinical feasibility study. Journal of Cardiothoracic and Vascular Anesthesia. 2017 Aug: 31(4):1174-1182.

EL-BOGHDADLY K, BRULL R, SEHMBI H, ABDALLAH FW. Perineural dexmedetomidine is more effective than clonidine when added to local anesthetic for supraclavicular brachial plexus block: a systematic review and meta-analysis. Anesthesia and Analgesia. 2017 Jun; 124(6):2008-2020.

ELSAHARTY A, MCCONACHIE

I. Skin to skin: a modern approach to caesarean delivery. Journal of Obstetric Anaesthesia and Critical Care. 2017 Jun; 7(1):13-19.

FORERO M. **RAJARATHINAM** M, ADHIKARY S, CHIN KJ. Continuous erector spinae plane block for rescue analgesia in thoracotomy after epidural failure: a case report. 2017 May; 8(10):254-256.

FORERO M, RAJARATHINAM M. ADHIKARY S. CHIN KJ. Erector spinae plane (ESP) block in the management of post thoracotomy pain syndrome: a case series. Scandinavian Journal of Pain. 2017 October: 17:325-329.

FUJII S. JONES PM. A technique for optimizing ultrasonography-guided radial arterial catheter insertion. Canadian Journal of Anaesthesia. 2017 June: 64(6):683-684.

FUJII S, TUGALEVA E, CHU MWA, **BAINBRIDGE D**. A curious case of blood-culturenegative infective endocarditis. Journal of Cardiothoracic and Vascular Anesthesia. J Cardiothorac Vasc Anesth. 2018 Feb:32(1):e3-e5

GIAMBRUNO V, HAFIZ A, FOX SA, IGLESIAS I, JONES PM, HARLE CC, BAINBRIDGE D, ET AL. Is the future of coronary arterial revascularization a hybrid approach?: The Canadian experience across three centers. Innovations (Philadelphia, PA). 2017 March-Apr; 12(2):82-86.

GOFTON TE, CHUM M, SCHULZ V, ET AL. Challenges facing palliative neurology practice: A qualitative analysis. Journal of Neurological Sciences. 2017 Dec. Pii. S0022-510X(17)34491-X. Epub ahead of print.

GOTTSCHALK BH. FUJII S. JONES PM, CHU MWA. Atypical M, LAVI R, CIBELLI M, ET AL. chest pain and blood blister: more than meets the eye. The Canadian Journal of Cardiology. 2017 Sept; 33(9):1206.e7-1206. e8.

GUPTA K, PRASAD A, NAGAPPA LALLOO C, SHAH U, BIRNIE M, WONG J, ABRAHAMYAN L. ET AL. Risk factors for opioidinduced respiratory depression and failure to rescue: a review. Curr Opin Anaesthesiol. 2018 Feb;31(1):110-119.

JONES PM, BRYSON GL, BACKMAN SB, MEHTA S, **GROCOTT HP. Statistical** reporting and table construction guidelines for publication in the Canadian Journal of Anesthesia. Can J Anaesth. 2018 Feb;65(2):152-

JONES PM, CHOW JTY, ARANGO MF, FRIDFINNSON JA. GAI N. LAM K. TURKSTRA TP. Comparison of Registered and reported outcomes in randomized clinical trials published in anesthesiology journals. Anesthesia and Analgesia. 2017 Oct; 125(4):1292-1300.

KRIEGE M, ALFLEN C, EISEL J. PIEPHO T. NOPPENS RR. Evaluation of the optimal cuff volume and cuff pressure of the revised laryngeal tube "LTS-D" in surgical patients. BMC Anesthesiology. 2017 Feb; 17(1):19.

KWOK CS. BAGUR R. RASHID Aortic stenosis and non-cardiac surgery: a systemic review and meta-analysis. International Journal of Cardiology. 2017 Aug; 240:145-153.

KA, DAVIES-CHALMERS C, RIVERA J, ET AL Commercially available smartphone apps to support postoperative pain selfmanagement: scoping review. JMIR mHealth and uHealth. 2017 Oct; 5(10): e162.

LAM T, **NAGAPPA M**, WONG J. SINGH M. WONG D. CHUNG F. Continuous Pulse Oximetry and Capnography monitoring for postoperative respiratory depression and adverse events: A systematic review and meta-analysis. Anesthesia and Analgesia. 2017 Dec; 125(6):2019-2029.

LAU JC. MACDOUGALL KW. **ARANGO MF**, PETERS TM, PARRENT AG, Khan AR. Ultrahigh field template-assisted target selection for deep brain stimulation surgery. World Neurosurgery. 2017 Jul; 103:531-537.

LAVI S, ABU-ROMEH N, WALL S, ALEMAYEHU M. LAVI R. Longterm outcome following remote ischemic postconditioning during percutaneous coronary interventions- the RIP-PCI trial long-term follow-up. Clinical Cardiology. 2017 May; 40(5):268-274.

LAVI S, ALEMAYEHU M, PUKA K. WALL S. LAVI R. Association between administration of Ticagrelor and Microvascular

Endothelial Function, JAMA Cardiology. 2017 Sept: 2(9):1042-1044.

MCCREERY G. JONES PM. KIDANE B, DEMELO V, MELE T, ERASE C. DIFFICILE TRIALS GROUP. Polyethylene glycol intestinal lavage in addition to usual antibiotic treatment for severe Clostridium difficile colitis: a randomized controlled pilot study. BMJ Open. 2017 Jul; 7(7):e016803.

NAGAPPA M, PATRA J, WONG J. SUBRAMANI Y. SING M. HO G,ET AL. Association of STOP-Bang Ouestionnaire as a screening tool for sleep apnea and postoperative complications: a systemic review and Bayesian metaanalysis of prospective and retrospective cohort studies. Anesthesia and Analgesia. 2017 Oct; 125(4):1301-1308.

NAGAPPA M. WONG J. SINGH M, WONG DT, CHUNG F. An update on the various practical applications of the STOP-Bang questionnaire in anesthesia, surgery, and perioperative medicine. Curr Opin Anaesthesiol. 2017 Feb;30(1):118-125.

NAIMAN MI. GRAY M. HAYMORE J. **HEGAZY AF.** MARKOTA A, BADJATIA N, KULSTAD EB. Esophageal heat transfer for patient temperature control and targeted temperature management. 2017 November; (129). doi: 10.3791/56579.

NEUMAN MD. GASKINS LJ, ZIOLEK T, CLARKE CF. REGAIN INVESTIGATORS. Time to institutional review board approval with local versus central review in a multicenter pragmatic trial. Clin Trials. 2018 Feb;15(1):107-111.

PIRLICH N. LOHSE JA. **NOPPENS RR.** Topical airway anesthesia for awakeendoscopic intubation using the spray-as-you-go technique with high oxygen flow. Journal of visualized experiments. 2J Vis Exp. 2017 Jan 13;(119).

RICE DB. MEHTA S. SERRATO J. POPE JE, HARTH M, SEQUEIRA K, MORLEY-FORSTER P, ET AL. Stress in patients diagnosed with rheumatoid arthritis compared to chronic pain. Rehabil Psychol. 2017 Nov;62(4):571-579.

SCHULZ VM. CROMBEEN AM. MARSHALL D. SHADD J. LADONNA KA. LINGARD L. Beyond simple planning: existential dimensions of conversations with patients at risk of dying from heart failure. Journal of Pain and Symptom Management. 2017 November: 54(5): 637-644.

SEHMBI H. BRULL R. SHAH U. EL-BOGHDADLY K. NGUYEN D, ET AL. Evidence basis for regional anesthesia in ambulatory arthroscopic knee surgery and anterior cruciate ligament reconstruction: Part II: adductor canal nerve block—A systematic review. Anesth Analg. 2017 Oct 19.

SEHMBI H, D'SOUZA R, BHATIA SH, SHARMA M, PANDEY SK, A. Low back pain in pregnancy: investigtions, management, and role of neuraxial analgesia and anaesthesia: A systematic review. Gynecologic Obstetric Investigation. 2017 May; 82(5): 417-436.

SEWELL D. GELB AW. MENG L, CHUI J, FLEXMAN AM. Anesthesiologists' perception of perioperative stroke risk during non-neurologic and non-cardiac surgery. Can J Anaesth. 2018 Feb;65(2):225-226.

SEYMOUR N. JANSEN S. FENG L, AYRES S, AUSTIN Z. SEABROOK JA. JONES PM. Impact of emotional intelligence coaching on job satisfaction of pharmacists during organizational changes. Journal of Hospital Administration. 2017 June; 6(4): 39-45.

SHANTHANNA H. GILRON I. **RAJARATHINAM M,** ALAMRI R, KAMATH S, THABANE L, DEVEREAUX PJ. BHANDARI M. Benefits and safety of gabapentinoids in chronic low back pain: a systematic review and meta-analysis of randomized controlled trials. PLoS Medicine. 2017 August: 14(8): e1002369.

SHESHADRI V. TIWARI AK, NAGAPPA M. VENKATRAGHAVAN L. Accuracy in blood pressure monitoring: the effect of noninvasive blood pressure cuff inflation on intra-arterial blood pressure values. Anesth Essays Res. 2017 Jan-Mar;11(1):169-173

STAUDT MD. PASTERNAK **ARANGO MF, ET AL. Multilevel,** ultra-large-volume epidural blood patch for the treatment of neurocognitive decline associated with spontaneous intracranial hypotension: case report. J Neurosurg. 2017 Oct 6:1-6.

SUBRAMANI Y, NAGAPPA M, WONG J, PATRA J, CHUNG F. Death or near-death in patients with obstructive sleep apnea: a compendium of case reports of critical complications. British Journal of Anaesthesia. 2017 November; 119(5):885-899.

SUBRAMANI Y. WONG J. NAGAPPA M, CHUNG F. The benefits of perioperative screening for sleep apnea in surgical patients. Sleep Medicine Clinics. 2017 March; 12(1): 123-135.

TAWFIC O. KUMAR K. PIRANI Z, ARMSTRONG K. Prevention of chronic post-surgical pain: the importance of early identification of risk factors. Journal of Anesthesia, 2017 June: 31(3): 424-431.

WU K. RAJASINGHAM SJ. BRUNI I, FUNG K, ROTH K. Post-Thyroidectomy Hematoma: A Simulated Emergency. Simulation in Healthcare. 2017 November.



Obstetric Anesthesia

ANTONIOU A. MARMAI K. **QASEM F, CHERRY R, JONES** P, SINGH SI. Educating anesthesia residents to obtain and document informed consent for epidural labor analgesia: Does simulation play a role? Int J Obstet Anaesth 2017 Dec.

MCCONACHIE I. ELSAHARTY

A. Anesthesia considerations for skin to skin care after cesarean delivery. J Obstet Anaesth Crit Care 2017: 7:13-9.

NI L. MCCONACHIE I. **ELSAHARTY A.** Cesarean Birth-What's in a name? Int J Obstet Anaesth 2017 Sept;

VEDAGIRI SAI R, SINGH SI, QASEM F, NGUYEN D, DHIR S, MARMAI K, ADAM R. JONES P. Onset of labour epidural analgesia with lowdose bupivacaine and different

doses of fentanyl: a randomized controlled trial. Anaesthesia. 2017 Nov;72(11):1371-1378.

TURKSTRA T, MARMAI K, ARMSTRONG KP. KUMAR K, SINGH SI. Preprocedural ultrasound assessment does not. improve trainee performance of spinal anesthesia for obstetrical patients: a randomized controlled trial. J Clin Anesth. 2017 Feb: 37: 21-24.

MEDICI

NAGAPPA M, HO G, PATRA J, WONG J, SINGH M, KAW R. CHENG D. CHUNG F. Postoperative Outcomes in Obstructive Sleep Apnea Patients Undergoing Cardiac Surgery: A Systematic Review and Meta-analysis of Comparative Studies. Anesth Analg, 2017 Dec 1; 125 (6): 2030-2037.

SUTTON D. OURESHIR. MARTIN J. Evidence Reversal - When New Evidence Contradicts Current Claims: A Systematic Overview Review. J Clin Epidemiol. 2017 Oct 15 [Epub] 2018 Feb;94:76-84.



MARTIN J, CHENG D,

STRANGES S. Population health intervention research: myths and misconceptions. Int J Public Health. Send to Int J Public Health. 2017 Nov:62(8):845-847.

HABBOUS S. PRZECH S. ACEDILLO R, MARTIN J, GARG A. SARMA S. Sevelamer for the management of hyperphosphatemia of chronic renal disease: A costeffectiveness analysis. Value Health 2017 October 17.

HABBOUS S, ACEDILLO R, PRZECH, SARMA S, GARG A, MARTIN J. The efficacy and safety of sevelamer and lanthanum versus calcium-containing and ironbased binders in treating hyperphosphatemia in patients with chronic kidney disease: a systematic review and meta-analysis. Nephrol Dial Transplant. 2017 Sep;32(1):111-

AKHTAR OA, MARTIN J, ZARIC G. SI FF. HUTNIK C. HODGE W. A Comparison of Clinical Trial and Model-Based Cost Estimates In Glaucoma -The Case of Repeat Laser Trabeculoplasty In Ontario. J Hosp Adm. 2017 Jun;6(3):46-57. PMID: N/A

LEE M, **ZHU F, MOODIE J**, ZHANG Z, **CHENG D, MARTIN J.** Remifentanil as an alternative to epidural analgesia for vaginal delivery: A meta-analysis of randomized trials. J Clin Anesth.

HEGAZY AF, LAPIERRE DM, BUTLER R, MARTIN

2017 Jun:39:57-63.

J, ALTHENAYAN E. The esophageal cooling device: A new temperature control tool in the intensivist's arsenal. Heart Lung. 2017 Apr 11. pii: S0147-9563(17)30102-4.

MARTIN J, CHENG D, AND THE CHOOSING WISELY CANADA CRITICAL CARE CAMPAIGN TASK FORCE. CRITICAL CARE: FIVE THINGS CLINICIANS AND PATIENTS SHOULD QUESTION. (PRACTICE GUIDELINES) 2017 March 22. Available from http://choosingwiselycanada.org/recommendations/critical-care/

BAINBRIDGE D, CHENG D.

Current Evidence on Fast Track Cardiac Recovery Management. EHJ Fast Track Journal Supplement 2017 Jan 16 (19) A3-A7.

Books & Book Chapters

BAINBRIDGE D, CHENG

D. Fast-track postoperative cardiac recovery and outcomes (chapter 27). In: Kaplan JA, ed. Essentials of Cardiac Anesthesia. Philadelphia, PA: Elsevier, 2017: 1313.

JOHN-BAPTISTE, A & MCKINLEY G. [EDS] Western Public Health Casebook 2017.

London, ON: Public Health Casebook Publishing. | ISBN 978-0-7714-3141-8

- MALEK N, HARRISON SJ, JOHN-BAPTISTE A. (2017). Camp fYrefly.
- WOOD E, MILBURN J, JOHN-BAPTISTE A. (2017). United Hearts: Fostering Interdisciplinary Collaboration for the Detection of Critical Heart Defects in Newborns.

PUENTES W. VEGAS A.

Ultrasound Imaging: acquisition and optimization [chapter 1]. In: Denault A, Vegas A, Lamarche Y, Tardif J, Couture P, editors. Basic Transesophageal and Critical Care Ultrasound. USA: CRC Press, Taylor & Francis Group Ltd; 2018.

 Simple congenital heart disease in adults [chapter 11]. PUENTES W, VEGAS A.

SAMPIETRO-COLOM L, MARTIN J (EDS.) Hospital-Based Health Technology Assessment The Next Frontier for Health Technology Assessment. 2016. Adis

- Hospital-Based HTA and Know4Go at MEDICI in London, Ontario, Canada [Chapter 12]. MARTIN J, LAL A, MOODIE J, FANG Z, CHENG D.
- Hospital-Based HTA in China [Chapter 24] WANG L, FANG Z.
- Clinician Perspectives on Hospital-Based HTA [Chapter 31]. CHENG D, MARTIN J.
- Hospital-Based HTA in 31 Organizations Worldwide: What Are the Lessons

Learned? [Chapter 32]. CICCHETTI A, MARCHETTI M, MARTIN J, SAMPIETRO-COLOM L.

VERGEL DE DIOS J, BAINBRIDGE D. Systematizing safety in the low-resource operating theater. Current Anesthesiology Reports. 2017 March; 7(1): 37-41.

Editorials & Commentary

DHIR S, SONDEKOPPAM RV.
Reply to Dr Price. (Comment on: Optimizing the combined

on: Optimizing the combined cuprascapular and anxillary nerve (SAXX) block.) Regional Anesthesia and Pain Medicine. 2017 January-February; 42(1): 123.

clarke cfm. Neuraxial drug delivery for the management of cancer pain: cost, updates, and society guidelines. Current Opinion in Anesthesiology. 2017 October; 30(5): 593-597.

GINTY O, MOORE J, PETERS T, **BAINBRIDGE D.** Modeling patient-specific deformable mitral valves. Journal of Cardiothoracic and Vascular Anesthesia. 2017 September. Pii. S1053-0770(17)30738-3.

JONES PM, BAINBRIDGE D, CHU MW, LAVI R. In reply: Isoflurane use is not associated with prolonged intensive care unit stay following routine cardiac surgery when compared to sevoflurane. Canadian Journal of Anesthesia. 2017 January; 64(1): 102-103. JONES PM, BRYSON GL. Open season: positive changes for increased transparency in biomedical literature. Canadian Journal of Anesthesia. 2017 November. Epub ahead of print.

JONES PM, BRYSON GL, BACKMAN SB, MEHTA S, GROCOTT HP. Statistical reporting and table construction guidelines for publication in the Canadian Journal of Anesthesia. Canadian Journal of Anesthesia. 2017 December. Epub ahead of print.

LAVI S, LAVI R. Ischemic postconditioning during primary percutaneous coronary interventions-not ready for prime time. Journal of Thoracic Disease. 2017 September; 9(9): 2752-2755.

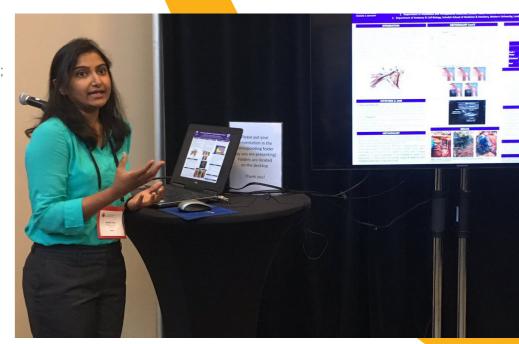
NAGAPPA M, WONG J, SINGH M, WONG DT, CHUNG F. An update on the various practical applications of the STOP-Bang questionnaire in anesthesia, surgery, and perioperative medicine. Current Opinion in Anesthesiology. 2017 February; 30(1): 118-125.

SONDEKOPPAM RV, DHIR S. Reply to Marty et al. Regional Anesthesia and Pain Medicine. 2017 March-April; 42(2): 274-275.



Dr. Ray Zhou (centre) wins Best Paper Award at the Canadian Anesthesiologists' Society (CAS) Annual Meeting, June 2017. The paper was based on research regarding heparin resistance and of Heparin-Induced Thrombocytopenia (HIT); it has since been published in the Journal of Cardiothoracic and Vascular Anesthesia (Jan 2018).

Photo courtesy of Dr. Chris Harle (@tifferharle)



Dr. Deepti Vissa (QI Fellow), presents her research on single injection shoulder block at the CAS Annual Meeting, June 2017.

Photo Courtesfy of Dr. Fatemah Qasem (@fatemah gasem)

