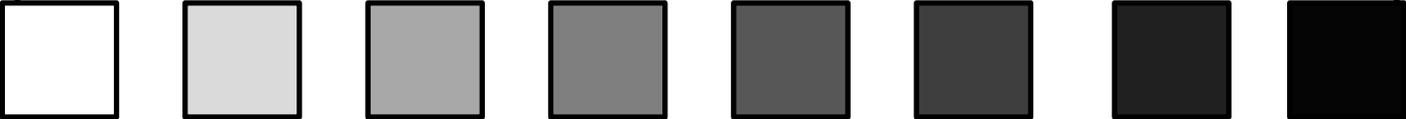


Anesthesia

ANNUAL REPORT

2015



Submitted by,

Dr. G. Dobson
Zone Clinical Department Head
Department of Anesthesia
Alberta Health Services



Anesthesia

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Executive Report



If a single word can describe the Department of Anesthesia in 2015, it would be change.

I thank Dr. Armstrong for his nine years of leadership and for leaving our department in a strong position to face the challenges that will present in the near future. He has since made the transition to his new role as CMO of STARS and I wish him continued success. My thanks go also to Dr. Pearce for acting as Interim Head of our department for fourteen months. After ten months on the job, I appreciate better the hard work and commitment that was required of him. Ms. Austad, Director of Anesthesia Services, has recently pursued a new career outside of AHS. Over the nine years of her tenure, she created a lean and efficient operations team that will remain her legacy. Ms. Austad will be missed and I wish her all the best.

The operational chart that follows reflects our reality up until a month ago. With the changes to our departmental administration there are new people assuming new roles as we align with the more common Calgary Zone organizational structure. Ms. Makin has assumed the role of the Operational Dyad for Anesthesia and Mr. Jenkins has become the Manager, Department of Anesthesia. They both bring considerable experience to our department and I look forward to working with them. Please join me in welcoming Ms. Makin and Mr. Jenkins to our department.

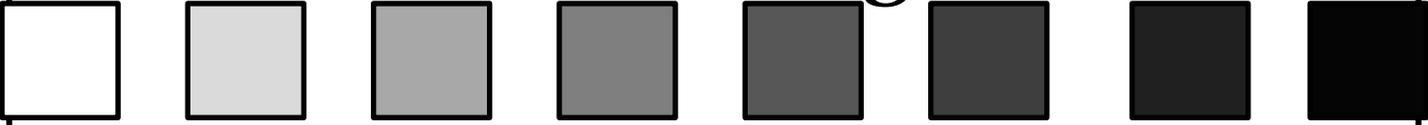
On the horizon is the concept of the Anesthesia Care Team (ACT), an approach to the provision of care that has been in use in the United Kingdom and elsewhere for many years. Both ACUDA and COACT of the Canadian Anesthetists' Society (CAS) have been involved in the development of a Canadian model and in July the CAS published Appendix 5 to the Guidelines to the Practice of Anesthesia, outlining the Society's position on Anesthesia Assistants. A subcommittee of ZAEC will be reviewing this document and making recommendations that represent the best interest of our department and the population we serve.

The expansion of the Academic Alternate Relationship Plan within Alberta is part of an ongoing discussion within the AHS and the Medical Faculties. While the details regarding their governance and implementation are works in progress, there may be an opportunity for members of our department with a strong academic (education, research, administration) interest to enrol, allowing for protected non-clinical time in the context of a formal academic appointment.

In the pages that follow it is clear that much of the teaching, research and administrative work within the department is performed by member volunteers without whom our mission would falter. Similarly, without the hard work on the operational side the efficient provision of clinical services would be at risk. I thank everyone for their contributions and hope they see change as I do, presenting new opportunities.



Departmental Structure and Organization



The Department of Anesthesia has five sections; approximately 184 physicians, and 9 city wide locums; 11 administrative support staff, nearly 100 Anesthesia Respiratory Therapists, 6 site-specific Anesthesia Respiratory Therapist site leads, and Service Workers. In addition, 14 RNs work in the Acute Pain Service and Peri-Operative Blood Conservation Program. The total annual operating budget is approximately \$16 million.

Department medical staff are faculty members of the University of Calgary Cumming School of Medicine. Academic appointments include five geographic full time and ten major clinical positions, including Post Graduate Medical Education, Family Practice Anesthesia and Undergraduate Medical Education program directors. Staff anesthesiologists work a range from .4 to 1.0 clinical FTE, with many working in a variety of part-time or job sharing arrangements.

Anesthetic services are also provided at several AHS contracted non-hospital surgical facilities for ophthalmology, podiatry, oral maxillofacial surgery and pediatric dental surgery. Anesthesia service continues to be provided in Yellowknife, NWT by some members of our department as well as throughout Alberta as needed. Annually anesthesia provides manpower, preceptorship, and organizational support to the Banff Family Practice Anesthesia conference.

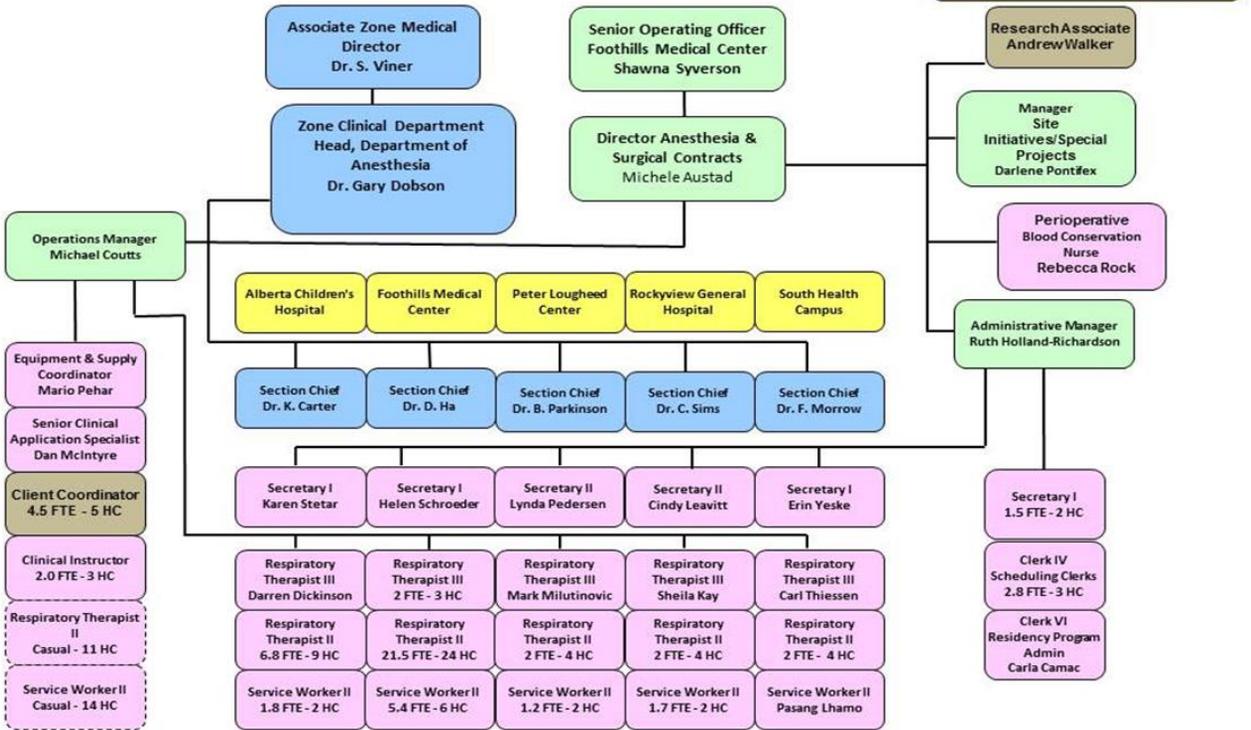
Subspecialty clinical services and programs are provided for Pediatric Anesthesia, Cardiac Anesthesia, Obstetrical Anesthesia, Acute Pain, Chronic Pain, Cancer Pain, Neuroanesthesia, Regional Anesthesia, Thoracic Anesthesia, Vascular Anesthesia, Preadmission Clinics, Trauma Anesthesia, Palliative Care and the Perioperative Blood Conservation Program.

In 2014-2015, the Department provided anesthetic care for over 80,000 in-patient and outpatient surgical procedures, and more than 10,000 deliveries, and treated many patients through the Acute and Chronic Pain Services.

Zone Organization Chart



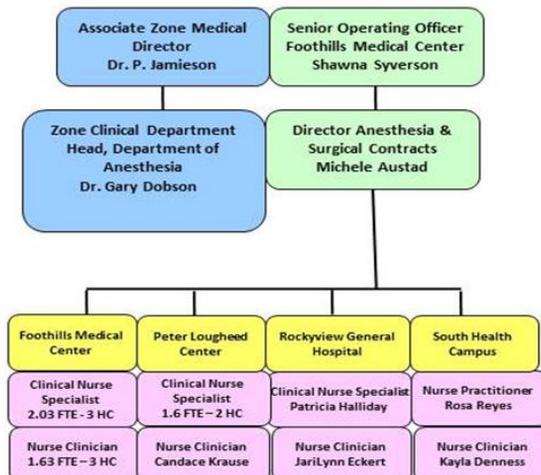
Current



1



Current



5

Zone Anesthesia Executive Committee

ZCDH & Academic Head, U of C
Deputy ZCDH
FMC Section Chief
FMC Deputy Section Chief
PLC Section Chief
PLC Deputy Section Chief
RGH Section Chief
RGH Deputy Section Chief
ACH Section Chief
ACH Deputy Section Chief
SHC Section Chief & Deputy Department Head
SHC Deputy Section Chief
Director, Residency Training Program
Associate Director, Residency Training Program
Clinical Safety Lead
Acute Pain Service Medical Director
Director, Anesthesia
Alberta Medical Association Representative
ZCDH and Head, Department of Surgery
Deputy Zone Medical Director

Dr. G. Dobson
Dr. G. Eschun
Dr. D. Ha
Dr. C. Seal
Dr. B. Parkinson
Dr. N. Maher
Dr. C. Sims
Dr. R. Schultz
Dr. K. Carter
Dr. M. Letal
Dr. F. Morrow
Dr. L. Olivieri
Dr. R. Eng
Dr. D. Archer
Dr. D. Liepert
Dr. J. Hamming
Ms. M. Austad
Dr. M. Cassidy
Dr. J. Kortbeek
Dr. S. Viner

Anesthesia Residency Training Committee

Program Director
Associate Program Director
ZCDH
FMC Site Coordinator
FMC Member at Large
PLC Site Coordinator
PLC Members at Large
ACH Site Coordinator
ACH Member at Large
RGH Site Coordinator
RGH Member at Large
SHC Site Coordinator
SHC Member at Large
Education Coordinator – PGY 2-4
Education Coordinator – PGY 1
Scholarly Project Coordinators
Simulation Coordinator
Quality & Safety Coordinators
Chief Residents
Senior Resident Representatives
Junior Resident Representative
Canadian Anesthesiologists Program Director
Family Practice Anesthesia Director
Anesthesia Clerkship Program Director

Dr. R. Eng
Dr. D. Archer
Dr. G. Dobson
Dr. J. Caveno
Dr. D. Teoh
Dr. G. Bishop
Dr. C. Pearce
Dr. A. Ewen
Dr. D. McAllister
Dr. P. Samuels
Dr. K. Torsher
Dr. A. Chu
Dr. N. Brown
Dr. J. Haber
Dr. K. Santosham
Drs. L. Chow & A. Spencer
Dr. M. Hayter
Drs. J. Davies & D. Finegan
Drs. E. Bruce & L. Hung
Dr. Z. Sunderani
Dr. N. Lange
Dr. L. Kosakoski
Dr. D. Wood
Dr. M. Chong

Anesthesia Academic Council

<p>Zone Clinical Department Head (Chair) ARPD, FMC Zone Director ACH and GFT Representative Residency Training Program Director, RGH ACH Representative Resident Representative RGH and CI/SIM Representative FMC Representative PLC Representative SHC Representative Senior Research Associate ACUDA Representative</p>	<p>Dr. G. Dobson Dr. D. Archer Ms. M. Austad Dr. R. Cox Dr. R. Eng Dr. D. Lardner Dr. J. Moser Dr. M. Hayter Dr. K. Duttchen Dr. C. Pearce Dr. L. Baghirzada A. Walker Dr. R. Chun</p>
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U of C Faculty

DR. G. DOBSON	ZONE CLINICAL DEPARTMENT HEAD, DEPARTMENT OF ANESTHESIA	ASSOCIATE PROFESSOR	GFT
DR. R. COX	PEDIATRIC ANESTHESIA AND PEDIATRIC ICU	PROFESSOR	GFT
DR. J. DAVIES	ANESTHESIA AND SYSTEM SAFETY	PROFESSOR	GFT
DR. D. ARCHER	NEURO-ANESTHESIA	PROFESSOR	GFT
DR. JN. ARMSTRONG	ANESTHESIA, STARS	ASSOCIATE PROFESSOR	GFT
DR. R. ENG	RESIDENCY PROGRAM DIRECTOR	CLINICAL ASSISTANT PROFESSOR	MPT
DR. J. HAMMING	MEDICAL DIRECTOR, ACUTE PAIN SERVICE	CLINICAL ASSISTANT PROFESSOR	MPT
DR. M. CHONG	CLERKSHIP DIRECTOR	CLINICAL ASSISTANT PROFESSOR	MPT
DR. C. MACADAMS	MEDICAL LEADER PERI-OPERATIVE BLOOD CONSERVATION PROGRAM	CLINICAL ASSOCIATE PROFESSOR	MPT
DR. D. WOOD	GPA RESIDENCY PROGRAM DIRECTOR	CLINICAL ASSISTANT PROFESSOR	MPT
DR. D. SEAL	DIRECTOR, CARDIAC ANESTHESIA	CLINICAL ASSISTANT PROFESSOR	MPT
DR. M. KOSTASH	ANESTHESIA CLINICAL EDUCATOR	CLINICAL ASSOCIATE PROFESSOR	MPT
DR. D. LARDNER	CLINICAL PEDIATRIC ANESTHESIA RESEARCHER	CLINICAL ASSISTANT PROFESSOR	MPT
DR. M. SHAH	PAIN MEDICINE RESIDENCY PROGRAM DIRECTOR	CLINICAL ASSISTANT PROFESSOR	MPT
DR N. DONNELLY- WARNER	CLERKSHIP EVALUATION COORDINATOR	CLINICAL ASSISTANT PROFESSOR	
DR. M. HAYTER	SIMULATION MEDICAL EDUCATION COORDINATOR	CLINICAL ASSISTANT PROFESSOR	MPT



Section Chief **Dr. D. Ha**

Section Function

The Foothills Medical Centre Section of Anesthesia provides quaternary anesthesia care encompassing trauma, critical care, surgery, cardiac surgery, obstetrics, interventional radiology and both acute and chronic pain for Southern Alberta and adjacent geographical areas. At present there are 53 anesthesiologists in the Section. Subspecialty interests in all aspects of adult anesthesia practice are fully represented within the Section.

Anesthesia Services

The Foothills Medical Centre performed over 19,344 surgeries for the 2014-2015 year and 5,904 total births, of which 1,715 were via C-section. Foothills Medical Centre Section of Anesthesia provides services in operating theatres on the third floor of the McCaig building, and on the first and seventh floor in the FMC main building. In addition, there are separate cardiac operating theatres, a MRI neurosurgical operating theatre, obstetrical operating theatres and a radiation oncology theatre. There are three post anesthetic recovery areas and two satellite recovery rooms for obstetrics and radiation oncology postoperative patients, respectively.

This year Foothills Medical Centre Section of Anesthesia dealt with the challenges of increasing clinical demands for the Acute Pain Service. To relieve this workload, a trial of a new clinical anesthesia assignment was conducted. Information from this trial allowed us to allocate anesthesia resources to better adjust to the changing needs of the patients at Foothills Medical Centre.

Foothills Medical Centre anesthesia section members advocated for improved operating room utilization and cost efficiency. As such, Foothills Medical Centre has seen a modest increase in operating room utilization. While we are mindful of the concerns of 100% operating room utilization, we are encouraged with the upward trend.

This year, we were fortunate to have a second hybrid O.R. added. Whilst the first hybrid O.R. is an essential resource for trauma patients, the second hybrid O.R. has been instrumental in treating patients with cardiac disease. After successful development, building and simulation of operating scenarios, the hybrid O.R. now regularly allows patients to undergo TEVAR, TAVI, complex lead extractions and complex electrophysiological device insertion procedures.

cont'd ... Section Chief - Dr. D Ha

Accomplishments and Highlights

The Foothills Medical Centre Section of Anesthesia remains very successful at attracting highly desirable candidates both from within the University of Calgary Residency Program and nationally. It is expected that there will be no difficulty in hiring exceptional anesthesiologists to address workload growth at the Foothills Medical Centre site.

This year we were successful at attracting two anesthesiologists. Dr. Andrea Todd is an anesthesiologist from Saskatoon, SK. Dr. Todd is a very familiar face at FMC as she worked as a locum whilst her husband undertook his Interventional Pulmonary Medicine fellowship. Dr. Donal Finegan also came on board, after successful completion of his anesthesia residency at the University of Calgary. We are very fortunate to have both Andrea and Donal at FMC.

Looking Forward

The Foothills Medical Centre Section of Anesthesia continues to find ways to improve our delivery of anesthetic services. Future endeavors include assessing anesthesia services for trauma services, emergency surgeries, and emergent/urgent airway consultations.

We are always looking at ways to assess human resource needs. Moving forward, we hope to develop methods of recruitment and retention of anesthesiologists.

Prominent clinical and administrative roles for the Section are:

Dr. Chris Prusinkiewicz – Director, Cardiac Anesthesia (took over from Dr. D. Seal)

Dr. Richard Falkenstein – Clinical Lead, Neuroanesthesia

Dr. Jeremy Hamming - Clinical Lead Acute Pain Service and Medical Director,
Acute Pain Services, Calgary Zone

Dr. Jennifer Froelich - Clinical Lead, Trauma Anesthesia

Dr. Lorraine Chow - Clinical Lead, Thoracic Anesthesia

Dr. Rob Thompson - Director, Obstetrical Anesthesia (took over from Dr. L. Chow)

Dr. Jordan Caveno - Site Coordinator, Residency Training Program

Dr. Desiree Teoh - Site Coordinator, Clerkship Program

Dr. Melinda Davis – Director, Pre Admission Clinic

Dr. Lorraine Chow – Medical Lead, Perioperative Blood Conservation, Calgary Zone

Dr. Michael Chong - University of Calgary Anesthesia Clerkship Director



Section Chief **Dr. B. Parkinson**

The Peter Lougheed Hospital Section of Anesthesia consisting of 34 members has met the demands of anesthetic care for a total of 13, 829 elective and emergent surgeries in the 2014-2015 fiscal year; as well as, pain management for some of the 5,650 newborn deliveries and anesthetic care for 1,669 caesarean sections. We are pleased to announce the recent hiring of Dr. Shannon Rabuka who joined the Peter Lougheed Centre Section of Anesthesia this summer. Dr. Rabuka started her career in Nova Scotia, moving to Edmonton for the next 12 years, where she left her mark as a well respected colleague and excellent clinician. Her experience includes teaching anesthesia in Kenya and her interest in the education of anesthesia residents is a welcome addition to our team.

Collaborative Roles and Research Activities

A new collaborative role of simulation site lead has been formed to liaise with the Calgary zone simulation lead regarding education and organization of simulation activities for the section. Dr. Dean Jordan has taken on this role.

Our Interim Acute Pain Service Medical Director, Dr. Sandy Shysh, has served as part of a very busy service with numerous activities being undertaken. His activities include designing the new role of Nurse Practitioner on APS at PLC, promoting charting improvements by staff using Sunrise Clinical Manager APS structured notes, developing new charting stickers to minimize time spent on double-charting, reviewed policies and protocols for arthroplasty pain management and continuous peripheral nerve block catheters as well as coordinating optimal patient care with the ERAS program. Dr Shysh has assisted in updating the "Going Home After a Nerve Block" document for postoperative patients and in collaborating with other departments including ICU patients with epidurals critical event care communication management, Vascular Amputation Management Pathways Teaching and Ketamine infusion literature review and support for the newly adopted protocol.

A longstanding PLC member, Dr. JN Armstrong, serves as President of the Alberta Medical Association and Canadian Anesthesia Society Section of Anesthesia. Dr. Dan Wood is the Vice President. In addition, Dr. Armstrong is the Chief Medical Officer (CMO) and Executive Vice President of STARS - the Shock Trauma Air Rescue Society - where he is responsible for all medical activities, including clinical, educational, and research, for the Helicopter Medevac Program across the three prairie provinces.

cont'd ... **Section Chief Dr. B. Parkinson**

He has also assisted Dr. Mike Murphy from Edmonton and others in renewing the provincial gathering of anesthesiologists with the Alberta Anesthesiology Summit. The Summit is a combined AMA section of Anesthesiology meeting and CME presentations.

Dr. Michael Cassidy is Past President of the AMA and CAS Sections of Anesthesia and maintains an active role in anesthesiologists' political and educational matters as the Alberta Divisional Representative on the Canadian Anesthesia Society (CAS) Board of Directors.

Dr. Steven Wheeler, Quality Assurance site lead, is in the process of developing a site specific Quality Assurance committee policy and procedure in conjunction with the guidelines and plans of the newly formed AHS Calgary Zone Department of Anesthesia Quality Assurance committee.

Dr. Neal Maher is the educational lead for the FATE (Focused Assessed Transthoracic Echocardiography) and FAST (Focus Assessed Sonography for Trauma) protocol, with a second session as course director and instructor for the FATE and FAST certification course this October. He was also the creator of a Handover of Care document designed for anaesthesiologists handing over patient care to the on-call anaesthesiologist.

Research projects include: A QI retrospective review of care by Dr. Shysh and the PLC APS nursing team evaluating the use of intrathecal morphine versus local infiltration analgesia as two methods for the management of acute postoperative pain for knee and hip arthroplasty patients. Dr. Maher is part of a vascular research project, currently in recruiting phase, evaluating Endovascular and Percutaneous Endovascular Aneurysm Repair (EVAR and PEVAR) Pathway.

Construction Plans and Looking Forward

Our longstanding obstetrical anesthesia site lead, Dr. Curt Pitter, has represented anesthesia in discussions with the Obstetric and Gynecologic Department leaders and is actively involved in planning for the upcoming Women's Health construction project. The anticipated start date is early 2016, at which time the Labor and Delivery operating rooms will be closed and temporarily moved to the main operating room theatres on the second floor while NICU and peripartum care will be on the fifth floor. Patient safety of both mother and baby will be of the utmost concern as we meet this challenge of distance between operating rooms and the obstetrical patients by arranging special elevator transport and staff training. The long-awaited opening of the state-of-the-art hybrid vascular operating rooms is coming close to fruition, with the first patient planned to arrive on November 30, 2015. Our biggest challenge is navigating the use of the new and distant operating area using the current operating room manpower numbers of nursing, physician and support staff. We welcome the Peter Loughheed Volunteer Resources donation of \$40,000 for a new monitor for the hybrid rooms. To complete the hybrid OR expansion we are awaiting funding for one monitor and two anesthetic machines.

The section is planning a retreat for the Spring of 2016 and will be addressing recruitment, manpower planning and finalizing search and selection committee procedures.



Section Chief

Dr. K. Carter

The 2014-15 academic year in the Section of Anesthesia, at Alberta Children's Hospital has been challenging and exciting. As a Section, our priorities are excellence of clinical care and our relationships with each other and the wider hospital community. Our education, research and patient safety initiatives are highlights of the year. We are working to improve health care in many health care delivery domains. I would like to thank my colleagues for their support and assistance during the six months I served as interim Section Chief and during my tedious orthopedic injuries. 2015-16 will be busy with three members of our Section presenting at the ASA 2015, Dr. Robin Cox and team organizing CPAS 2016 and the exciting research opportunities opening up with the appointment of Dr. Melanie Noel to the Vi Riddell Pain Program.

We provided anesthesia services for 10,721 elective cases in the 2014-15 fiscal year and 2213 emergency cases in the 2014-15 academic year – approximately 13,000 cases within the ACH operating rooms per year. The service provided by the section now includes:

- seven daily operating room lists,
- three Non-Hospital Surgical Facility dental lists per week
- a comprehensive ARP funded Acute Pain Service at all times,
- a two day a week physician led Complex Pain Service supported by five day a week nursing support, and
- a Pre-operative Assessment clinic one day per week.

There remain some procedures that, due to medical equipment or patient factors, need to be supported at FMC and RGH and we have occasional and more than occasional work at these sites depending on the week. A recent review regarding offsite post anesthesia care has led to the introduction of a PACU nurse or nursing team to offsite procedure personnel. Members of our team also work with the Pediatric Palliative Care team and Transport team.

We currently have a task force anesthesiologist (TFA) on call each day. Our call day begins with a briefing between anesthesiologist, the Task Force Nurse, and Task Force Surgeon at 07:15 with each team outlining known concerns. This triad supports operational decisions in the OR. We have three anesthesiologists on call per night in the format of 1st, 2nd and Pain call. Day-to-day variability in the number of anesthesiologists on vacation contributes to challenges in matching the number of anesthesiologists available to the daily workload.

cont'd ... Section Chief Dr. K. Carter

There are a total of 20 anesthesiologists on permanent staff at ACH. Dr Jamin Mulvey joined the team January 2014 upon finishing his pediatric anesthesia fellowship; Dr Nina Hardcastle started August 2014 after completing a pediatric anesthesia fellowship in Seattle; and, Dr Jon McMann joined us in January 2015 after completing his fellowship at ACH and BC Children's Hospital and working as a locum. Our current Fellow, Dr Michelle Theam joined us in January 2015 and has an interest in Quality Assurance activities.

During this year, safety concerns arose regarding procedures being facilitated through the induction room at ACH. Initially a moratorium was placed on procedures occurring except those required by our Pain ARP, this was expanded in January to pilot inpatient procedures with protocols around booking and nursing/PACU support. Results of this pilot will be released soon, however the program's popularity is expanding.

An Out of OR Procedures ARP has been pursued over the last number of years. Its primary aim is to improve patient access to a highly trained practitioner for sedation and pain management, for patient safety, and consistent with the ACH procedural and anaesthesia care guidelines. Sedation practices for pediatric patients for painful and non-painful procedures are a very topical issue and we are reviewing the hospital policies for this, as are many other children's hospitals in Canada.

The section continues to fund its own research programs via personal donations from anesthesiologists. In the past year we have supported projects looking at codes in recovery and the database recording of events, and another looking at gastric volume assessment via ultrasound. In March 2015 we were presented the results of a Physician Learning Program project (PLP) that we all participated in, "Does anesthetic technique influence patient outcomes following pediatric tonsillectomy" This was a project created by collaboration between members of our Section and the PLP. This was an eye opening reflection on our group and personal practice with challenging results including 33% of patients post tonsillectomy have average pain scores >5/10 in the first 24 hours and that the incidence of post-operative vomiting in the first 24 hours was 24% despite multimodal anti-emetics.

We did not have our annual retreat in April due to organisational challenges; this will be occurring in November with the theme being third world medicine.

Early in 2015 we were asked to make a statement for the physicians/surgeons and families with regard to the risks/benefits of single anesthesia exposure vs combining procedures especially when they are in two locations. This was informed by research into neurotoxicity for the developing brain and risks of prolonged vs multiple exposure to anesthesia and the risks of transport. Neurotoxicity of anesthesia agents in the developing brain is very topical. Translation of bench research to inform clinical decisions and dilemmas is part of everyday discussion between our team, other ACH surgeons and pediatricians and families.

The health and work life balance of our team remains a priority. Many members have interesting and exciting off site activities including welcoming new family members (Elisabeth Dobereiner, Jamin Mulvey and Leah Foster), third world medical excursions and exotic vacations. Our schedulers and the entire team

cont'd ... Section Chief Dr. K. Carter

are to be congratulated for the hard work, balancing and flexibility that goes into accommodating all these activities into a busy work year.

Section Chief: Dr. Jeremy Luntley July to December 2014

Interim Section Chief: Dr. Kerry Carter January to July 2015

Section Chief: Dr. Kerry Carter August 1, 2015

Deputy Section Chief/Treasurer: Dr. Michael Letal

Acute Pain/Regional Lead: Dr. Adam Spencer

Chronic Pain Medical Lead: Dr. Nivez Rasic

POAC Lead: Dr. Peter Farran

Education Coordinator/RTC Member: Dr. Alastair Ewen

RTC Member-at-Large: Dr. Debbie McAllister

Schedulers: Dr. Nivez Rasic (2014-15) Dr. Nina Hardcastle (2015-16)

Simulation Lead / Fellowship Director: Dr. Mark Gale

Quality/Safety Liaison: Dr. Jamin Mulvey (lead): Dr. Mike Letal, Dr. Alastair, Dr. Robin Cox, Dr. Adam Spencer (committee members)

Trauma Committee/Trauma Safety Committee: Dr. Brian Kuwahara / Nancy Ghazar

Manpower Committee Members: Dr. Kerry Carter (Chair), Dr. Nivez Rasic, Dr. Robin Cox, Dr. David Lardner

PACU Liaison: Dr. David Lardner

DI Liaison: Dr. David Luntley

PICU Liaison: Dr. Robin Cox

NICU Liaison: Dr. Nancy Ghazar

Research committee: Dr. Robin Cox, Michael Letal, and David Lardner

Core Program / Fellow-Resident Rounds Co-ordinator / Fellowship Director: Dr. Mark Gale

Section Rounds Co-ordinator: Dr. Robin Cox / Dr. Elisabeth Dobereiner

Retreat Co-ordinator: Dr. Alastair Ewen

Equipment: Dr. Robin Cox

Transport Liaison: Dr. Mark Gale and Dr. Adam Spencer

Complex Pain Service Report: Dr Nivez Rasic

Within the section of pediatric anesthesia, there is strong commitment to integrating the science and practice of pediatric pain and making Alberta an international leader in pediatric pain research and management. We have made great strides toward that goal. At the Alberta Children's Hospital, we have recently implemented the Vi Riddell Pediatric Pain Program. Clinically, we have substantially increased capacity in our multidisciplinary pediatric complex pain clinic to better serve our catchment area (serving three provinces) and have launched the first state-of-the-art intensive pain rehabilitation program for children in Canada. Our clinic has also moved into a new, expanded physical space at the Alberta Children's Hospital.

In addition, we have launched an innovative research program to include integrated multi-wave outcome assessment throughout the pediatric clinical pain programs as well as novel clinical and lab-based investigations from a diverse range of disciplines/perspectives. The Alberta Children's Hospital Research

cont'd ... Section Chief Dr. K. Carter

Institute (ACHRI) believes that a multidisciplinary team of clinicians, child psychologists and basic scientists – collaborating within an interdisciplinary environment – is essential to reducing the pain burden on our children and their families.

We presented Pediatric Chronic Pain at the Calgary Pain Symposium series and five posters in Seattle at the ISPP.

APS Update: Dr. Adam Spencer

Christine O'Leary, Nurse Practitioner on the Acute Pain Service team for many years, has taken on a new role within Alberta Children's Hospital. We would like to thank Christine for her contributions to our service and wish her good luck in her future endeavours. Leah Foster, Nurse Practitioner has taken on this new role but is currently on maternity leave (congratulations!). Rachel Slomp, nurse practitioner has taken on Leah's role for the next year and has led a number of new and exciting pain and education initiatives.

Elastomeric Pumps: We are undergoing a trial looking at the use of non-electronic elastomeric pumps to deliver continuous peripheral nerve block infusions. To date, we have enrolled 14 patients and their families in our trial and have achieved great success with very good post-operative experience in terms of pain control and patient satisfaction. We are aiming to review our overall experience once 25 patients are enrolled in the trial.

CADD Pumps with PCEA: We are excited about the upcoming roll out of our new CADD Solis pain pumps. ACH will be initiating the use of the PCEA for our postoperative patients. We have been busy creating orders sets and policies surrounding this change in practice as well as educating the staff on the benefits and uses.

A hospital wide Pain Committee under the umbrella of the Quality Committee has been established. Terms of reference are being created and stakeholders invited. This came out of a patient survey indicating pain management was less than satisfactory. Dr Carter is the co-chair of this committee.

Pain Resource Nurses

We are developing a Pain Resource Nursing Team. This will involve recruiting staff from all units to participate in a 2 day workshop on pain assessment and management to create "Pain" champions. "Pain" Champions will be responsible for developing a project for the year to help promote pain assessment and education around pain management for their colleagues and patients.

Simulation report: Dr. Mark Gale

Simulation is an exciting and growing part of the Section of Anesthesia. Simulation played a big role in the twelve core teaching sessions this year starting in November and running until January (each Thursday afternoon). There were also monthly operating room in situ simulation sessions with Anesthesia, Nursing, Respiratory Therapists and Surgeons, and quarterly combined service simulation sessions in the operating room (Critical Care, Perfusion Medicine, Surgery, Cardiology etc). Anesthesia plays a major role in the PACU bi-weekly simulations. We lead a POCM Course: "Peri-operative Crisis Management". This is a full-day multidisciplinary simulation course including RNs (OR and PACU), Staff Anesthesiologists, Staff Surgeons and RTs. The day is spent simulating peri-operative crises to enhance performance. Most

cont'd ... Section Chief Dr. K. Carter

scenarios are loosely based on real-life events which have occurred at ACH in the last year. This course runs 3 times per year. It is similar to MEPA but now with a focus on Maintenance of Competence for Staff physicians and RNs and RTs. I facilitate the course, with my collaborator Corey Dowler. It is currently free for any ACH surgeon, anesthesiologist, OR RN/RT or PACU RN. A wait list currently exists due to demand.

QA/QI Activity : Dr Jamin Mulvey

It has been a busy year, reinventing QA here at ACH. It began with meetings with Sharon Spicer, Physician Lead for Safety and Chair of the Alberta Children's Hospital Quality Assurance Committee regarding initiation and issues with QA meetings. We also met with PICU and General Surgery to discuss the format and lessons learnt regarding QA meetings.

Over the year we have:

- Reviewed and discussion of implications of Section 9, Alberta Health Act
- As a Section reviewed and gained acceptance of QA project.
- Establishment of "ground rules" and confidentiality.
- First meeting April, with initial quarter meetings, increased to monthly from September

We have also started a data collection on OR/PACU codes, implementation of Resident Training in ACH Anesthesia Machines as formal orientation when start rotation and implemented an Ultrasound Checklist: + Regional Dosing Guidelines (with Adam Spencer and Nina Hardcastle). We have also implemented a formal critical incident debrief for ACH staff involved in these incidents within the OR.

QI activity has included a project led by Dr Michael Letal titled Reduction in Code Blue Activations in the Recovery Room at Alberta Children's Hospital - A Quality Improvement Project. This has led to a reduction in code blue events in our PACU. This was presented at the inaugural ACH Quality Forum.

David Lardner (MPT position) Anesthesia Academic Activities – 2014-15

The Pediatric Airway Course (TPAC): This is an exciting and we feel an important initiative. Following initial work done By Dr Mark Gale (ACH-Anesthesia) and Dr Eli Gilad (PICU-ACH) in setting up a program to teach airway management to pediatric residents and the transport Team at ACH the concept was expanded to develop TPAC. In doing so additional members (Dr David Lardner) were recruited from anesthesia and collaboration expanded to include Pediatric Emergency Medicine and the Pediatric Hospitalists. The course involving multiple multidisciplinary instructors with a high instructor to participant ratio was developed using an emphasis on simulation and a hands on approach to emphasise the importance of oxygenation in pediatric airway management. A needs assessment was completed and a pilot ½ day program for rural ERs occurred at the Banff Emergency Conference in Jan 2015. A full day TPAC course was delivered at PEACH in Mar 2015. Ongoing Plans for TPAC are to provide 2 full day courses for all 60 physicians working at ACH ER. The first 30 will participate on Oct 16 and again in early 2016 for the remainder. Again, we will provide the course at PEACH in May 2016.

Administrative liaison with Kidsim is ongoing and applications to RCPSC and CCFP have been made for TPAC for CME accreditation. Additionally, a resident from Anesthesia (Dr Scott Else) and Pediatric Emergency Medicine have been integrally involved in developing and delivering the course.

Thus far Drs Gale, Lardner, Mulvey and Else from the Department of anesthesia have been instructors for the course.



Section Chief **Dr. C. Sims**

The Rockyview General Hospital Section of Anesthesia is comprised of 36 practicing anesthesiologists. Of these, 23 work full time and 13 work various FTEs from 0.2 to 0.8. In addition to providing anesthetic coverage at the Rockyview General Hospital, the section provides two or three anesthesiologists per day to serve six non-hospital surgical facilities in Calgary. In addition, coverage is provided at two privately-funded facilities.

Early in 2015 the section reviewed the principles which guide the scheduling of anesthesia work in detail by means of an online survey and section meetings. Some changes were made, with the goal of simplifying the scheduling process and clarifying the rules which govern anesthesiologists' work assignments, given the varying degrees of publicly-funded service-commitment of different members.

The Rockyview General Hospital section provides anesthetic services to 14 operating room lists per day, as well as the labour and delivery ward where one anaesthesiologist covers both the epidural analgesia service and surgical obstetrical cases. One anesthetist covers the pre-assessment clinic as well as the acute pain service, Monday to Friday. In terms of after-hours coverage, two anesthetists cover the operating room each night and on weekends. On most days this is reduced to one operating room after 11:30 PM during the week, and after 5:30 PM on weekends. Twenty-four hour anesthetic coverage is provided for our busy obstetrical unit. Over the twelve-month period ending Aug 31 2015, 4,783 deliveries were performed at Rockyview General Hospital, 1,496 of which were done by cesarean section .

All Rockyview General Hospital Section of Anesthesia members have University of Calgary appointments, and all function as clinical and/or academic teachers to residents, medical students, and other non-physician learners.

One of the ongoing challenges facing this section has been managing the intermittent service requirements for pediatric ophthalmology, and to a lesser extent urology, at the Rockyview. Some pediatric cases are done at Rockyview General Hospital because of the need for specialized equipment currently only available onsite at RGH. For a number of years pediatric patients, under the age of 15 years have been managed by a team from the Alberta Children's Hospital who are scheduled onsite at

cont'd ... Section Chief Dr. C. Sims

Rockyview General Hospital. This team consists of a pediatric anaesthesiologist, nurses and anesthesia technicians. The Rockyview Anesthesia Section recently came to an agreement with nursing staff that we would manage younger scheduled patients without the Alberta Children's Hospital team, down to the age of 10 rather than the previous minimum age of 15 years. This is provided they are ASA one or two, without manifestations of multi-system syndromes. It is hoped this will provide some relief to those who deal with the logistics of scheduling the Alberta Children's Hospital team at Rockyview General Hospital. The longer term goal of the section and the Section of Ophthalmology is to equip the Alberta Children's Hospital operating rooms appropriately so that these cases can be undertaken there.

The Rockyview Section of Anesthesia has not hired any new members over the last year. One of our senior section members, Dr. Gordon Hopper, has reduced his workload to several days per month, as a preferred locum.

Several Rockyview anesthesiologists travelled to developing countries to provide care.

These trips included:

- Dr. Miriam Berchuk – Broken Earth – Haiti, November 2014
- Dr. Reuben Eng – Education Medical Aid Society, China, May 2015
- Dr. Stephen Phillips – Broken Earth – Haiti, November 2014
- Dr. Lin Tsai - Dental team, Cambodia, January 2015
 - Eye team, Bolivia, Feb 2015
 - Mercy Ship International, Madagascar, Sept 2015
- Dr. Karrie Yont - Health for Humanity, Guatemala, November 2014

Looking forward:

We will have the opportunity to consider adding to our department over the next year. Should this occur, thankfully there are talented candidates to consider.

Here in Calgary the residency program is evolving, and simulation is taking on a greater role in the training of residents and maintenance of competence of staff. I expect the Rockyview to have a prominent role in this progress.



Section Chief

Dr. F. Morrow

Introduction

2014-15 was the second fully operational year for surgical services at South Health Campus, including our third birthday in February 2015. The year saw the site expand surgical services and the South Health Campus Section of Anesthesia mature as a fully operational arm of the AHS Calgary Zone Department of Anesthesia. South Health Campus is developing its role as a leader in regional anesthesia, obstetrics, simulation and quality assurance. General Surgery have extended their presence at South Health to include an expanded bariatric and upper GI service, and the Sections of General Surgery, Plastic Surgery, Orthopedics and ENT also continue to recruit. We continue to work alongside a strong orthopedic section, and have innovated to optimize peri-operative patient care and pain management.

Site Leadership

Many thanks to our outgoing section chief Dr. Keith Drader, who has moved to Edmonton to practice at the Royal Alex. He gave an enormous amount of time and energy to establish an Section of Anesthesia at South Health Campus and to ensure we were grounded in principles of patient-centered care, innovation and quality assurance. We are especially indebted to him for his work to make simulation an essential part of how we train and teach at our site, and we wish him best of luck in Edmonton.

South Health Campus Section of Anesthesia Leadership

Section Chief: Dr. Farrah Morrow

Deputy Section Chief/PAC Liaison: Dr. Lori Olivieri

Obstetrics Lead: Dr. Fayaz Bharwani

Acute Pain/Regional Lead: Dr. Ryan Endersby

Chronic Pain Liaison: Dr. Jarad Stephan

PACU & Day Surgery Liaison: Dr. Tony Trinh

Residency Training Committee Site Coordinator: Dr. Jennifer Demarty 2014, Dr Alan Chu 2015

Residency Training Committee Regional Anesthesia Coordinator: Dr. Mark Kostash, Dr. Nathan Brown

Physician Scheduler: Dr. Mark Cheesman

Quality/Safety Liaison: Dr Leyla Baghirzada & Dr Dean Swedlo

Treasurer/Secretary/Academic and CME Rounds Coordinator: Dr. Esther Ho

SMART Committee: Dr. Nathan Brown, Dr Esther Ho, Dr Melissa Jack, Dr Fayaz Bharwani

Manpower Committee Members: Dr. Fayaz Bhawani (Chair), Dr. Dean Swedlo, Dr Jarad Stephan, Dr. Lou Fraser, Dr. Jennifer Demarty, Dr. Lori Olivieri

South Health Campus Quality Council: Dr Leyla Baghirzada

South Health Campus Medical Staff President : Dr Lou Fraser

cont'd .. Section Chief **Dr. F. Morrow**

Manpower

We welcomed two new section members in late 2014 to complete our FTE of 17.6 members. In late August 2015, our department suffered the loss of Dr. David Ablett, a veteran anesthesiologist and respected member of the Calgary medical community. Dr. Ablett began practice in Alberta in 1976 in Lethbridge, and he joined the Calgary department in 1986. His Calgary career spanned 30 years and multiple hospital sites; he was truly a remarkable physician who innovated for patients. Dr. Ablett was instrumental in developing regional anesthesia in Calgary and establishing effective protocols to improve peri-operative care of arthroplasty patients. We will remember his kind manner, his willingness to think outside the box for patients, and his eagerness to teach. We are working to develop a lecture or annual award in his honor - he was an outstanding physician who will be missed.

Surgical Services

There are eight elective operating rooms daily at South Health Campus. Anesthesia provides two on-call anesthesiologists daily for both operating room and obstetrical care. We also provide staff for a non-hospital surgical facility room four days a week. In addition, Dr. Nathan Brown has been active in piloting a program to place peripheral nerve blocks for patients booked for minor surgery procedures, expanding the scope of what they are able to do in Minor Surgery. We also provide anesthetic services for the Outpatient Gynecology Clinic, Diagnostic Imaging (imaging and kyphoplasty), and Endoscopy. The section staffs an on-site Pre-Operative Assessment Clinic that continues to face increasing demands for patient assessment as our surgical programs develop in complexity and volume.

Family Maternity Place (FMP)

South Health Campus continues to see approximately 250 deliveries a month, with an epidural rate of approximately 75%. Construction of an additional operating room was completed this year to provide a second back-up obstetrical operating room, and is fully functional. The opening was preceded by team training and simulations to acclimatize staff to the new space.

Quality Assurance & Program Development:

Annual retreat May 2015 - development of CBE modules for regional anesthesia residency training, teaching modules for core clerkship rotation - Morrow F, Olivieri L, Ho E
Development of official hiring process (protocols for search and select, multidisciplinary committee, interview process) - Bharwani F, Morrow F
OSA screening revisions and PACU order sets finalized - implementation ongoing (Olivieri L)
Physician Learning Project - 1) Drugs given intra-operatively in outpatient general surgery and 2) Tranexamic acid & dexamethasone use in the OR and impact of post-operative anti-emetics and transfusions - Olivieri L
Acute Pain Pathway for Total Arthroplasty (development and implementation) - Baghirzadeh L, Endersby R
Minor Surgery Peripheral Nerve Block Program (development and implementation) - Brown N
VPP October 2015 (Visiting Professor Dr Jose Carvalho) - Baghirzadeh L
ERAS NPO guidelines (implementation and PACU adaptation) - Ablett D, Olivieri L

cont'd .. Section Chief **Dr. F. Morrow**

Postgraduate Education:

We would like to acknowledge the contribution made to the Calgary Zone Regional Anesthesia teaching program by Dr. Mark Kostash. Dr. Kostash joined the Anesthesia Residency Training Committee in 1998, taking over from Dr. Diane Wassill as Curriculum Coordinator (running the Academic Half Day/Core Program from 1998 to 2005). Dr. Kostash began the regional anesthesia program as a resident elective; it was made a required part of the residency rotation in July 1995. This past year, Dr. Kostash has handed this role over to Dr. Nathan Brown. We are very grateful for the vast amount of time and expertise Dr. Kostash has dedicated to this role.

Advanced Degrees, Fellowships, Preceptorships and Certificate Courses

Dr. A. Chu – MMedEd candidate at the University of Dundee, Scotland, ongoing

Dr. A. Chu - Global Health Bootcamp, University of California at San Francisco

Dr. E. Ho, Dr. F. Morrow and Dr. L. Olivieri – Royal College SET Course (simulation instruction)

Dr. F. Morrow – Physician Management Institute – Disruptive Behavior, Self-Awareness)

Dr. L. Olivieri – Physician Management Institute – Crucial Conversations

ANESTHESIA ASSISTANTS



**Michael
Coutts,
RRT**

There are nearly 100 Anesthesia Assistants (Respiratory Therapist IIs) and 6 Anesthesia Respiratory Therapist site leads. There are 15 Anesthesia Aides and relief staff distributed among the five sites. Many Anesthesia Respiratory Therapists and Anesthesia Aides work at more than one site. Anesthesia Respiratory Therapists continue to provide high level service delivery to all areas that require an Anesthesiologist. This service delivery involves clinical and technical support of anesthesia equipment. Respiratory Therapists are located at the five acute care centers within the Calgary Zone and provide consulting support for the rural sites (Canmore, High River, Banff).

Many experienced staff have been returning this year from leave of absences which has thereby displaced other temporary staff back to casual status. The extra casual staff provides the zone department with lots of relief when there are time off requests and potential increases in activity.

An advanced practice pilot project is ongoing at South Health Campus that enables the Anesthesia respiratory therapist to provide room relief for the Anesthesiologists. This advanced competency learning has a didactic, clinical and simulation component.

Continuing education and policy/procedure development and updating continues. Continuing competency audits for advanced skill sets occur annually.

Within Anesthesia, several staff provide zone wide support to clinical applications including Anesthesia Electronic Record (AER) and anesthesia scheduling software and other clinical applications. There are two senior analysts, three clinical educators and one Zone equipment and Supply Coordinator.

ACUTE PAIN SERVICE

**Dr. J.
Hamming**

Another academic year has come and gone, and with it the Acute Pain Service continues to expand, providing more comprehensive and progressive analgesic care.

Acute/Anesthesia Pain Service

The Acute Pain Service (and Anesthesia Pain Service at FMC) provides consultant post-operative analgesic care in the five AHS Calgary Zone acute care sites across Calgary. The service continues to expand, and we welcome new staff at these sites.

The APS service is a medical consultant lead service that provides analgesic care in peri-operative patients. Additionally, APS provides a consultation service for patients with severe, acute pain that may benefit from certain interventional regional procedures, such as thoracic epidurals in patients with traumatic rib fracture. Select patients with acute on chronic pain that may benefit from specific analgesic modalities and procedures also form a part of the consultation services. One of these modalities is the use of low-dose ketamine infusions, which was piloted at Foothills Medical Center three years ago, and is now available at all acute care sites across the city.

The Acute Pain Service teaches ward nurses, medical students, and anesthesia residents. The Anesthesia Residency Training committee amended the second year curriculum was from a one hour lecture on pain to five hours total. Two hours of this lecture time is devoted to Acute Pain physiology, pathophysiology, diagnosis and treatment. Senior anesthesia residents complete a one month acute pain rotation as a part of their training. Junior residents complete an acute pain service rotation in addition to covering first line acute pain service night calls at Foothills Medical Centre.

Ward nurse education consists of weekly education session, learning modules, and ward in servicing all acute care sites in Calgary, as well as CORE lectures for clinical clerks on an Anesthesia rotation.

The pinnacle of the year is the Pain Awareness Day, a special grassroots education day designed for general nursing staff across multiple disciplines. The 4th Annual Pain Awareness day takes place in November 2015, and includes international speakers and a substantial waiting list. The success of this yearly event is due to the hard work and vision of the AHS Calgary Zone acute pain service nurses.

The Acute Pain Service continues to expand across the AHS Calgary Zone acute care sites. Low-dose intravenous lidocaine infusions as a therapeutic option for select patient groups is being rolled out this fall. This protocol will be trialed first at the Foothills Medical Clinic and should be available across the other acute care sites in the new year, based upon interest and demand. Formalized Acute Pain Service research projects are underway, particularly at South Health Campus.

CARDIAC ANESTHESIA

**Dr. C.
Prusinkiewicz**

All Cardiac Anesthesiologists have University of Calgary primary appointments in the Department of Anesthesiology (Foothills Medical Centre Section) with joint appointments in the Department of Cardiac Sciences. All Cardiac Anesthesiologists are members of the Libin Institute. Dr. Doug Seal was the director of the CV Anesthesiology group and is a member of the Department of Cardiac Sciences Clinical Services Council.

There are nine Cardiac Anesthesiologists. All cardiac anesthesiologists have additional training in echocardiography and have successfully completed the National Board of Echocardiography Perioperative Examination. All members have received certification in Perioperative TEE as level II echocardiographers from the Alberta College of Physicians and Surgeons of Alberta. In July 2015, Dr Seal completed the second of two 5 year terms as the Director of the Cardiac Group. Dr. Chris Prusinkiewicz has graciously accepted the role as the new director.

Clinical Practice

The CV Anesthesia group continues to have a dynamic clinical practice covering a progressively more complex variety of cases on an ever more elderly population of patients. This includes anesthetic coverage for: open heart surgery, off-pump coronary artery bypass grafting, deep hypothermic circulatory arrest for aortic reconstruction surgery, mechanical assist device support (Impella, Heartmate II, Levitronix CentriMag and HeartWare LVADs, as well as, ECMO), TEVAR (Total EndoVascular Aortic Repair) procedures, TAVI (Transcatheter Aortic Valve Instrumentation) procedures, MIVS (Minimally Invasive Valve Surgery), Complex / Laser Lead Extractions, as well as various CV labs procedures (percutaneous ASD, VSD closures, CRT and valvuloplasties) and Electrophysiology (EP) cases.

After extensive planning and funding, the Cardiac Hybrid Operating room opened in October 2014. Several simulation sessions were conducted prior to commencing clinical practice. The room is now utilized for TAVI, TEVAR, complex lead extraction and CRT cases. This room has been a very welcome addition to the Cardiac Surgical program.

There is continued growth in the Minimally Invasive Valve Surgery (MIVS) and Aortic programs. The MIVS cases are done by Drs Maitland and Kent. Calgary was the first centre in western Canada to have a Cardiac Surgery MIVS program. Dr. Scott McClure was recently hired as a second aortic surgeon.

CV Anesthesia continues to provide dedicated coverage for an ever increasing number of complex lead extractions. These cases are covered by a multidisciplinary team consisting of CV Anesthesia, EP Cardiology, CV Surgery, perfusion, CV OR nursing, EP nursing, an Anesthesia technologist and a DI technologist.

cont'd ... **CARDIAC ANESTHESIA**

Anesthesiology Workload

After an increase of an extra 162 cases per year in 2014, there are now 3 CV ORs Monday to Thursday and 2 CV ORs on Fridays. TAVI cases were moved to Thursday and lead extractions were moved to Wednesdays and Fridays. The workload is spread out between two CV ORs on the 9th floor of FMC, one CV OR on the 7th floor of FMC and the new CV Hybrid OR (OR 3-5) in the McCaig building. CV Anesthesia covers the Preadmission Clinic on Tuesdays.

Education / CV Anesthesia Fellowship

The Anesthesia residents rotate through the CV OR in their PYG4 year for two blocks. Dr Mark Schnidel is currently completing his CV Anesthesia Fellowship. We also have residents and fellows from Critical Care Medicine and Cardiology. The TEE Simulator by HEARTWORKS™ is located at the PLC and is being used to teach the Anesthesia residents basic TEE prior to their CV Anesthesia and Vascular Anesthesia rotations.

Research

Dr. T. Tang generously created the Foothills Medical Centre Staff Anesthesia Research Fund. This was established through the University of Calgary. It was developed to promote research in the areas of Cardiac Anesthesia, Patient Outcomes and Quality Improvement. Dr. Seal is the project holder for the fund. Dr. Alex Gregory was the first recipient of fund in 2015 for a project on the use of Speckle tracking imaging for assessment of aortic stiffness.

Transfusion Requirements in Cardiac Surgery (TRICS III): A Randomized Controlled Trial: Site Investigators: Dr. Charlie MacAdams, Co-Investigator: Dr Douglas Seal, Dr Alex Gregory: This is a multicenter trial investigating transfusion strategies in CV Surgery.

Registry for Off-Label Use of Recombinant Factor VIII - Chart review: Principle Investigator: Dr C MacAdams, Co-Investigator: Dr D Seal; Research Nurse: K Maier

TACS Study – Transfusion Algorithm in Cardiac Surgery Study: A prospective trial using a transfusion algorithm in conjunction with viscoelastic testing for perioperative bleeding. Principle Investigator: Dr C MacAdams, Co-Investigators: Dr D Seal; Dr Alex Gregory: Research Nurse: K Maier

SIMULATION

**Dr. M.
Hayter**

The Alberta Health Services Calgary Zone Department of Anesthesia have now established a formal Simulation Committee, chaired by Dr. Megan Hayter, who has also taken over the role of Anesthesia Simulation Coordinator. All existing department programs have been maintained and improved in most respects, with the notable addition of an upcoming simulation pilot course for anesthesia staff physicians.

Crisis Resource Management:

Adult CRM courses continue to be held in various hospitals. The Rockyview General Hospital introduced interdisciplinary in-situ simulations co-led by Dr. Megan Hayter and Linda Rae. We have run this on a monthly basis with the inclusion of anesthesia, RNs and RTs. The South Health Campus continues to run their CRM sessions involving members of the OR team under the direction of Dr. L. Oliveiri.

Alberta Children's Hospital Section of Anesthesia continues to offer the MEPA course (Management of Emergencies in Pediatric Anesthesia), the first round of a multi-center study having been completed. An Adult CRM course was introduced for our residents led by Dr. Hayter. This involves four residents from PGY 1-4 attending the simulation lab at the Rockyview General Hospital one half day a month. So far these sessions have been a great success.

Alberta Children's Hospital and KidSim (Drs. Mark Gale and Michael Letal)

Simulation played a big role in the twelve core teaching sessions this year starting in November and running until January. There are also monthly operating room in situ simulation sessions with Anesthesia, Nursing, Respiratory Therapists and surgeons, and quarterly combined service simulation sessions in the operating room (Critical Care, Perfusion Medicine, Surgery, Cardiology etc). Anesthesia plays a major role in their PACU bi-weekly simulations.



Core Program Integration (Dr. Haber and simulation committee)

Several simulation sessions have been added to each core block. These are led by Dr. J. Haber with the input of several members of the simulation committee. Feedback has been positive and the plan is to expand simulation activities into other core areas as other coordinators become familiar with simulation as a teaching modality.

CanNASC Simulation Milestones

In 2014, our PGY 5 residents completed their CanNASC simulation milestone. These milestones are a National undertaking. The PGY5 will run thru their scenario again in November 2015.

Quality Assurance

Dr. D. Liepert

It continues to be my profound pleasure and honor to represent AHS Calgary Zone Department of Anesthesia's aspirations in the development of a culture of safety and ongoing improvement at all our clinical facilities in Calgary, in conjunction with both the University of Calgary and Alberta Health Services. 2014-2015 has been a developmental year, with a great deal of progress to report on all fronts!

Rather than comprising the bulk of our work, the timely review of reportable incidents (73 in 2014-15) has become an important part of a much larger process, in which our City-wide Department of Anesthesia is having a steadily expanding influence. The timely and appropriate feedback we provide continues to help optimize care in our non-hospital surgical facilities (both public and private), with the systems that my predecessor, Dr. F. Mensink put in place continuing to function in a truly effective and exemplary fashion. Thanks Fred!

In addition to that, our Department's participation in the Alberta-wide roll-out of the prospective Quality Improvement tools associated with the National Surgical Quality Improvement Program, in conjunction with the American Academy of Surgeons, has gone exceptionally well. The Calgary site for that roll-out is Rockyview General Hospital and it is the recognized provincial leader. We have received our first set of processed, risk-adjusted and bench-marked data, and are already beginning to plan best-practice based and outcome-informed Quality Improvement initiatives built upon the insights that high quality data brings.

Finally, I am very pleased to announce that our City-wide Department of Anesthesia has also taken a leadership role in working with the Alberta Health Services Quality Assurance system, in order to ensure organized, comprehensive and systems-based improvements in clinical care in response to both prospective and clinically responsive improvement initiatives. Our Department has been given the autonomy to function as an independent specialty in this process (through the provision of an anesthesia sub-committee to review events on a site-specific level) with the capacity for expediting city-wide initiatives where appropriate. This also promotes our own Department's already existing capacity for site-specific Quality Assurance and Quality Improvement initiatives.

It is truly an exciting time to participate in all of these initiatives, and I look forward to another year of progress to report next fall. We intend to increase our Department's roles and responsibilities in all these areas of both Quality Improvement and Quality Assurance together, for the sake of all of the individuals entrusted to our care, the Health system we work within, the students we train and the honor and respect of our Specialty of Anesthesia. Thank-you once again for all of your support, and the opportunity to serve you all in such a meaningful fashion, and for this opportunity to make such a positive difference for the people of Alberta!

PERIOPERATIVE BLOOD CONSERVATION

**Dr. C.
MacAdams**

Autologous Blood Program

This program was discontinued in 2014 and we have since had no requests for autologous collections in exceptional circumstances such as very rare blood types. Should such situations arise, the PBCP and CBS will collaborate to provide autologous collections. Transfusion rates continue to fall or remain steady in all disciplines which used the PAD program.

Report on Transfusion at Elective Surgery – Statit piMD Database

In collaboration with the Data Integration Management and Reporting Portfolio and the Transfusion Safety Office, the PBCP continues to provide reports on transfusion practice in Calgary Zone AHS. The reports cover the largest surgical users of allogeneic blood: arthroplasty, spinal, cardiac, vascular, hysterectomy, prostatectomy, breast flap reconstruction, maxillofacial. These reports have been provided to the surgeons in these specialties in an effort to influence their practices. This data continues to be available on the AHS Calgary website with an appropriate log in.

As of 2014 we were providing individual reports to surgeons performing arthroplasty, hysterectomy and breast flap. These have been well received by surgical chiefs and section members. We have solicited permission from the cardiac, vascular and spine surgeons to commence individual reporting to them for 2014-15. Arthroplasty transfusion rates continue to fall since introduction of tranexamic acid. Pediatric spine transfusion rates are falling. There may be a bit of signal for reduction in coronary bypass surgery.

Rebecca Rock, Perioperative Blood Conservation nurse presented an abstract on the arthroplasty data to the Society for Advances in Blood Management Meeting in Houston in September 2014 and received an award for best abstract at the meeting.

Preoperative Anemia Management Referrals

Over the past year we have had a further important increase in referrals to the PBCP for intervention with oral and intravenous iron and erythropoietin. In particular the cardiac surgery referral volume is up and we have had numerous successes particularly with intravenous iron. The arthroplasty preoperative anemia management algorithm has been embraced reasonably at the intake clinics, with the exception of the South Health Campus which we are actively pursuing. We realize that we have to improve our preoperative anemia identification and treatment in vascular surgery which is a high priority for the program in 2015.

cont'd .. PERIOPERATIVE BLOOD CONSERVATION

OrthoPAT Orthopedic Cell Saver Program

Dr. Carol Hutchison continues to use the OrthoPAT system and Becky Rock continues to provide clinical support for it. The clinical team manages well with little backup required.

Zone Transfusion Committee

Dr. Andrew Daly has very ably succeeded me as chair of the Calgary Zone Transfusion Committee. The Transfusion Guidelines approved by the ZMAC in May 2014 have been posted to the Calgary Laboratory Services website.

Hematology Fellows & Anesthesia Residents Teaching Sessions

Approximately 2-3 times per year I provide two hour seminars for these residents and fellows during their rotations in Transfusion Medicine. These include provision of reference material and teaching sessions on massive transfusion and blood conservation.

Massive Transfusion Protocol

Based on utilization data and clinical trial results, the MTP is regularly updated through collaboration among the Trauma Committee, the Calgary Zone Transfusion Committee and the PBCP. This has been a positive collaboration which is serving the trauma population well.

Partnership for Research and Innovation in the Health System (PRIHS) Grant Application: Innovation Collaborative for Blood Transfusion Reporting and Practice Interventions: Impact on Transfusion Rates and Surgical Outcomes

This grant application for \$750,000 over three years to study transfusion in 12 arthroplasty, 2 cardiac and 2 vascular centres across Alberta was a finalist in the competition. I had the great honor of presenting our proposal to an academically powerful committee chaired by a Canadian icon in transfusion clinical trials and quality improvement, Dr. Andreas Laupacis. We lost. There is enthusiasm from epidemiologists and clinicians involved in the project to reapply.

Transfusion requirements in cardiac surgery III trial (TRICS III)

Despite starting five months late, Karen Maier has now recruited 118 patients to the TRICS III trial, the second highest total among 51 hospitals in 18 countries. We now hope to recruit a total of 250 patients over the next 1.5 years to this CIHR sponsored trial which is aiming for 3400 patients. This trial randomizes patients undergoing high risk cardiac surgery to a hemoglobin transfusion threshold of 75 g/L in the conservative group, versus 95 g/L (OR, ICU, step down unit) or 85 g/L (ward) in the liberal group. We will be funded locally for \$175,000 to recruit 250 patients.

Blood conservation in cardiac surgery using a novel transfusion algorithm based on point-of-care testing: A stepped-wedge cluster randomized controlled trial (TACS)

This trial was initiated at the Toronto General Hospital (TGH) branch of the University Health Network by Dr. Keyvan Karkouti and funded by CIHR. We randomized 700 patients to this trial from October 2014 to May 2015 in a step-wedge cluster protocol.

cont'd .. PERIOPERATIVE BLOOD CONSERVATION

Control patients had usual care. Intervention patients underwent ROTEM (rotational thromboelastometry) and Platelet Works (platelet function analysis) point of care (POC) testing during the rewarming phase of cardiopulmonary bypass. After achievement of 34 surgical hemostasis and protamine administration, sponges were weighed. When bleeding was excessive, clotting products were administered according to POC results. Data analysis is ongoing. Based on results, application will be made through the Health Technology Assessment and Innovation program and Cardiac Sciences capital equipment to obtain a ROTEM for the cardiac OR. The Anesthesia Department is also applying for funding for ROTEM equipment for non-cardiac OR's.

Coagulation testing in pregnancy using ROTEM

Dr. Lorraine Chow has obtained funding and equipment to pursue ROTEM analysis of coagulation in the later stages of pregnancy. Preliminary work has been completed using thromboelastography equipment owned by Calgary Laboratory Services. ROTEM is a more user friendly technology. Several anesthesia residents are involved.

PBCP Medical Leader Term

The failure of the PRIHS Grant application encouraged me to submit my resignation as Medical Leader of the PBCP effective 30 June 2015. A selection committee struck by Dr. Dobson included anesthesiologists from three hospital sites; Michele Austad Director of Anesthesia, Dr. Taher Rad Director of Transfusion Medicine; Rebecca Rock and me. The committee was very pleased to select Dr. Lorraine Chow to be the new PBCP Medical Leader.

As noted before, little could be achieved in the cardiac surgery transfusion research field or in the PBCP without the very longstanding dedication and great efforts of Karen Maier and Rebecca Rock. Charlene Cutt very ably performed the equipment management and data extraction for the TACS Trial. Data handling has always benefited from the work of university students recruited by Karen Maier. I appreciate the work done by each of these ladies over many years. It is always a pleasure to work with them.

ANESTHESIA HUMAN FACTORS

**Dr. J.
Davies**

Over the past year, Department of Anesthesia members, including both Anesthesiologists and Anesthesia Respiratory Therapists, have continued their Human Factors (HF) activities.

In late 2014, Department members became aware of a new Canadian Standards Association (CSA) standard, Z314.8-14, "Decontamination of reusable medical devices". While the standard encompassed a number of devices, Department members focussed on the cleaning and storage of flexible bronchoscopes, which anesthesiologists use to secure the airways of their patients with compromised airway anatomy and function. These patients occasionally present for elective procedures but more often present as an airway-associated emergency, when time is of the essence. After reviewing this standard, Department members became concerned about the content of the standard with respect to the lack of evidence with respect to flexible bronchoscopes on which this standard appeared to be based. The content was such that a strong argument could be made for resultant HF usability problems with respect to the availability and assembly of bronchoscopes used to help secure a patient's airway in an emergency. Since then, AHS has supported our decision not to follow that CSA standard.

In late 2014 – early 2015, a member of the Department of Anesthesia was involved in a HF evaluation of the donning and offing of Personal Protective Equipment designated to be used in AHS when dealing with patients presumed to have Ebola disease. This evaluation was commissioned by AHS Infection Prevention and Control (IPC) and was based on several *in vivo* simulations carried out in the four major Calgary hospitals. While there are traditional IPC evaluative methods, this research employed HF methods to focus on interactions between system and human characteristics. As a result of the evaluation, a total of 77 recommendations were made in the report. (For further details, please see Hallihan GM, Baers JH, Wiley K, Davies JM, Kaufman J, Conly J, Caird JK. Human Factors Evaluation of Simulated Ebola Virus Disease Patient Scenarios: System Factors Associated with Donning and Doffing During Triage, Treatment and Transport. W21C, O'Brien Institute for Public Health, Cumming School of Medicine, University of Calgary, for *Infection Prevention and Control, Alberta Health Services*, 2015. A copy of this report is available from Infection Prevention and Control, Alberta Health Services.) All of the recommendations were accepted by AHS and several of these have already been implemented.

Starting in 2008, the Department of Anesthesia standardized its anesthetic drug drawer contents and layout, based on a Human Factors evaluation. (For further details, please see Shultz J, Davies JM, Caird J, Chisholm S, Ruggles K, Puls R. Standardizing anesthesia medication drawers using human factors and quality assurance methods. *Canadian Journal of Anesthesia* 2010; 57: 490-9.) Following along from this initiative, the Department of Anesthesia is now

...ANESTHESIA HUMAN FACTORS

instituting another standardization project – that of a single platform for physiologic monitoring. This project will help maintain and improve the safety of anesthetic care through this standardization, which incorporates certain HF heuristics such as improved consistency and standards, increased recognition of visibility system status, and greater flexibility and efficiency of use. These concepts are very important from a safety point of view because of the Department of Anesthesia's Zone-wide staffing models for staff anesthesiologists, resident anesthesiologists and Anesthesia Respiratory Therapists. This staffing model, which also provides flexibility in the face of specific site shortages, means that any individual anesthetic care-provider could work at any of the four adult acute care sites. While it is possible to use any monitoring system, case study lessons and best practices from aviation have taught us that reversion to old actions and behaviours related to interacting with specific equipment can occur at times of high workload.

ANESTHESIA RESIDENCY PROGRAM

**Dr. R.
Eng**

2015 Annual Report for the Residency Training Program
(Royal College of Physicians of Canada)

The past year has been a time of significant transition and transformation for the residency program.

Graduating Residents

The residency program congratulates the following anesthesiologists for earning their fellowship from the Royal College of Physicians and Surgeons of Canada and the pursuit of their fellowship studies:

- Dr. Heather Hurdle** – Perioperative Hemodynamics and Echocardiography (University of Ottawa)
- Dr. Wing Lam** – Masters in Public Health (Concentration: Quantitative Methods, Harvard University)
- Dr. Meggie Livingstone** – Pediatric Anesthesia (Seattle Children’s Hospital, University of Washington)
- Dr. Duncan McLuckie** – Pediatric Anesthesia and Simulation (Children’s Hospital of Eastern Ontario, University of Ottawa)
- Dr. Mancho Ng** – Pediatric Anesthesia (Boston Children’s Hospital, Harvard University)
- Dr. Kevin Yee** – Cardiac Anesthesia (Toronto General Hospital, University of Toronto)

Accreditation

The residency program successfully received accreditation from the Royal College this past year, in accordance with the usual six-year accreditation cycle. Many thanks to the RTC members and Rotation Coordinators who spent countless hours contributing to this important endeavour. The next internal review will take place in three years.

Future Directions

The next several years will require significant changes to the residency program with the implementation of Competency By Design (CBD); in fact, there will be a period of four years in which we will be simultaneously running two programs: CBD and the current format of the residency program. Over the next year, the RTC, Rotation Coordinators, and Competency Committee will be working towards the implementation of these new changes. The task ahead is enormous, and it will be vital to have as much support as possible from all faculty members.

... **ANESTHESIA RESIDENCY PROGRAM**

Residency Training Committee (RTC)

The Residency Training Committee consists of the following members:

Program Director (Chair) – Dr. Reuben Eng

Associate Program Director – Dr. David Archer

Alberta Children’s Hospital (ACH) Site Coordinator – Dr. Alastair Ewen

ACH Member-at-large – Dr. Debbie McAllister

Foothills Medical Centre (FMC) Site Coordinator – Dr. Jordan Caveno

FMC Member-at-large – Dr. Desiree Teoh

Peter Lougheed Centre (PLC) Site Coordinator – Dr. Graeme Bishop

PLC Member-at-large – Dr. Craig Pearce

Rockyview General Hospital (RGH) Site Coordinator – Dr. Peter Samuels

RGH Member-at-large – Dr. Kevin Torsher

South Health Campus (SHC) Site Coordinator – Dr. Alan Chu

SHC Member-at-large – Dr. Nathan Brown

Education Co-Coordinators – Drs. Julia Haber (PGY 2-4 Core Program) and Kristi Santosham (PGY-1 Core Program)

Scholarly Project Co-Coordinators – Drs. Lorraine Chow and Adam Spencer

Simulation Coordinator – Dr. Megan Hayter

Quality & Safety Co-Coordinators – Drs. Jan Davies and Donal Finegan

Chief Residents – Drs. Erin Bruce and Linda Hung

Senior Resident Representative – Dr. Zahid Sunderani

Junior Resident Representative – Dr. Nicola Lange

Canadian Anesthesiologists’ Society (CAS) Resident Representative – Dr. Laura Kosakoski

Family Practice Anesthesia Program Director – Dr. Dan Wood

Clerkship Director – Dr. Michael Chong

The Residency Training Committee functions and exists as a result of the volunteer efforts of the aforementioned individuals, and they are each greatly appreciated.

The RTC is grateful to Dr. Udell Larsen for his years of service as Program Director; he transitioned out of the position on April 1, 2015. At that time, Dr. Reuben Eng was appointed to the role of Program Director, and Dr. David Archer to the role of Associate Program Director.

The RTC is also thankful for the services of Drs. Kevin Gregg and Christopher Noss, who completed their terms as Chief Residents on May 1, 2015.

Finally, the RTC would like to recognize the following individuals who resigned from the RTC this past year: Drs. Tadd Cherry (PLC Site Coordinator), Rosaleen Chun (Scholarly Activity Co-Coordinator), Ruth Connors (ACH Site Coordinator), Jennifer Demarty (SHC Site Coordinator), Kaylene Duttchen (Scholarly Activity Co-Coordinator), Kim Illing (FMC Site Coordinator), Mark Kostash (SHC Member-at-large), Marelise Kruger (PLC Member-at-large), and Stephen Phillips (RGH Site Coordinator).

... ANESTHESIA RESIDENCY PROGRAM

Rotation Coordinators

The following faculty members serve as Rotation Coordinators for the residency training program:

Acute Pain Service: Dr. Jeremy Hamming

Airway Anesthesia: Dr. Saul Pytka

Cardiac Anesthesia: Dr. Chris Prusinkiewicz

Chronic Pain: Dr. Kelly Shinkaruk

Neuroanesthesia: Dr. Richard Falkenstein

Obstetrical Anesthesia: Drs. Rob Thompson (FMC), Curt Pitter (PLC), and Udell Larsen (RGH)

Regional Anesthesia: Drs. Arash Fard (PLC) and Nathan Brown (SHC)

Thoracic Anesthesia: Dr. Lorraine Chow

Vascular Anesthesia: Dr. Theresa Yang

The residency program would like to recognize the following rotation coordinators who transitioned out of their roles during this past year: Drs. Mike Beriault (Thoracic Anesthesia), Lorraine Chow (Obstetrical Anesthesia at FMC), Mark Kostash (Regional Anesthesia at SHC), and Neal Maher (Vascular Anesthesia).

Recognition of Excellence

The following residents received awards for excellence this past year:

Dr. Erin Bruce (Adult Anesthesia at FMC, Regional Anesthesia at PLC, Regional Anesthesia at SHC)

Dr. Paul Dawson (Obstetric Anesthesia at RGH, Standardized Exam Performance)

Dr. Scott Else (Adult Anesthesia at RGH, Pediatric Anesthesia)

Dr. Allison Finningley (Obstetric Anesthesia at PLC)

Dr. Kevin Gregg (Pediatric Anesthesia)

Dr. Linda Hung (Adult Anesthesia at FMC, Pediatric Anesthesia, Standardized Exam Performance)

Dr. Meredith Hutton (Adult Anesthesia at PLC, Airway Anesthesia)

Dr. Laura Kosakoski (Adult Anesthesia at RGH, Obstetric Anesthesia at RGH)

Dr. Danae Krahn (Standardized Exam Performance)

Dr. Lindsay MacKenzie (Obstetric Anesthesia at PLC)

Dr. Lindsay McMillan (Pediatric Anesthesia)

Dr. Afra Moazeni (Regional Anesthesia at PLC)

Dr. David Nguyen (Standardized Exam Performance)

Dr. Christopher Noss (Airway Anesthesia, Obstetric Anesthesia at FMC, Standardized Exam Performance)

Dr. Kyle Rogan (Airway Anesthesia, Regional Anesthesia at SHC, Standardized Exam Performance)

Dr. Zahid Sunderani (Adult Anesthesia at FMC)

The RTC recognizes the hard work of all residents, and it will continue seek ways to develop and recognize excellence amongst the residents.

... **ANESTHESIA RESIDENCY PROGRAM**

The following faculty members received outstanding teaching awards, as selected by the residents:

ACH – Dr. Michael Letal

FMC – Dr. Kim Illing

PLC – Dr. Graeme Bishop

RGH – Dr. Megan Hayter

SHC – Dr. Nathan Brown

Leo Strunin Award – Dr. Mike Beriault

The following faculty members were recognized for their excellent teaching, as noted on resident evaluations of clinical teachers:

ACH: M. Gale, N. Hardcastle, M. Letal, J. McMann, J. Mulvey, N. Rasic

FMC: K. Anderson, M. Chong, L. Chow, M. Davis, D. Finegan, A. Gregory, J. Haber, K. Illing, B. Ligier, C. MacAdams, R. McTaggart Cowan, D. Seal, K. Shinkaruk, H. Smith, S. Stacey, R. Thompson, R. Wahba, B. Wang, J. Wilson

PLC: G. Bishop, J. Downie, A. Fard, D. Jordan, B. Parkinson, C. Pitter, K. Santosham, D. Wood

RGH: T. Chan, W. Hall, U. Larsen, J. Partridge, S. Pytka, Y. Rubin, K. Simon

SHC: L. Baghirzada, A. Chu, M. Jack, M. Kostash, F. Morrow, T. Trinh

Recognition of Faculty Volunteers

Without faculty members volunteering their time, efforts, and other resources, the residency program would not be able to function.

The following faculty members were Unit Managers for the Core Program:

Crisis Resource Management: Dr. Dean Jordan;

Cardiac Anesthesia: Dr. Chris Prusinkiewicz

Obstetric Anesthesia: Dr. Lorraine Chow

Medicine: Drs. Julia Haber and Kelly Shinkaruk

Equipment: Dr. Nathan Brown

PGY-1 Core Program: Drs. David Archer and Chris Prusinkiewicz

The following faculty members taught individual core program sessions:

Crisis Resource Management: J. Balaton, L. Chow, J. Froelich, M. Jack, D. Jordan, K. Santosham, T. Yang

Cardiac Anesthesia: C. Bands, R. Chun, R. Eng, A. Gregory, D. Ha, J. Haber, R. Kowalewski, C. MacAdams, C. Prusinkiewicz, D. Seal

Obstetric Anesthesia: L. Chow, R. Eng, D. Finegan, J. Haber, E. Ho, C. Pitter, K. Shinkaruk, D. Teoh, R. Thompson

Medicine: G. Bishop, A. Chu, M. Davis, R. Eng, J. Haber, N. Hardcastle, M. Hayter, M. Kruger, C. MacAdams, P. Samuels, K. Santosham, M. Shing, K. Shinkaruk, S. Stacey, D. Teoh

Equipment: N. Brown, D. Finegan, J. Haber, D. Jordan, D. Kent

PGY-1 Core Program: K. Anderson, C. Bands, M. Beriault, G. Bishop, M. Chong, L. Chow, K. Duttchen, D.

Fermor, M. Gale, A. Gregory, N. Hardcastle, M. Hayter, K. Illing, K. Shinkaruk, D. Teoh, J. Waechter, J. Wilson

... **ANESTHESIA RESIDENCY PROGRAM**

The following faculty members taught at the Tuesday or Thursday morning rounds at their respective sites:
FMC: J. Balaton, M. Chong, D. Guglielmin, J. Haber, M. Hiew, K. Illing, L. Illing, B. Ligier, K. Shinkaruk, S. Stacey, D. Teoh

PLC: G. Bishop, A. Fard, M. Hokanson, D. Jordan, C. Pearce, C. Pitter, K. Santosham

RGH: N. Donnelly-Warner, J. Partridge

Drs. Marius Saayman and Udell Larsen conducted the Annual Practice Oral Exam with the residents.

Drs. Megan Hayter, Julia Haber, and Niamh Donnelly-Warner ran and debriefed simulation sessions for the residents (outside of Core Program).

The following faculty members opened up their homes and hosted dinner and Journal Club: Drs. Nathan Brown, Lorraine Chow, David Kent, Mark Kostash, Craig Pearce, Udell Larsen.

Education

FAMILY PRACTICE

**Dr. D.
Wood**

The Family Practice Anesthesia (FPA) residency program serves rural communities with its core goal to train family physicians to provide competent anesthesia care in remote and underserved rural locations. The FPA program benefits from its co-ordination and affiliation with the excellent Royal College training program and the residents are generally integrated with the specialty anesthesia residents for clinical and much didactic training.

Targeted training is also arranged to allow FPA residents to focus on expected practice profile upon completion of training. The training is a one year program with rotations in anesthesia covering general adult, pediatric and obstetric training, with a month spent in Yellowknife doing anesthesia with both local FPA practitioners and Royal College certified specialists. The FPA program is accredited by the College of Family Physicians of Canada via the Department of Family Medicine, and is represented on the Department of Family Medicine's Enhanced Skills Program committee.

Manpower, recruitment and staffing

Current residents are Drs. Jyoti Seshia and Adrienne Dufour. Dr Seshia has been practicing rurally and Dr Dufour comes to us directly from her Family Medicine residency. Almost all of our graduates have practiced in rural Western Canada after graduation.

Section/Program educational and academic activities

Staff anesthesiologists in Calgary contribute greatly to the success of the FP-Anesthesia program. Resident teaching rounds and grand rounds are hospital site co-ordinated as is daily education in the Operating Room. FPA residents also participate in academic half day as well as various departmental educational opportunities, with events from both the Departments of Anesthesia and Family Medicine. FPA residents also have protected time for the Rural Anesthesia conference in Banff each year which is heavily supported with teaching by Department of Anesthesia staff.

Section/Program accomplishments and highlights

This year the FPA Program underwent its second successful external accreditation by the College of Family Physicians of Canada. The FPA Program has successfully trained residents for a number of years and has been formally accredited since 2009 by the College of Family Physicians (CFPC), in association with the Department of Family Medicine.

The FPA program benefits from strong faculty support and has been fortunate to recruit high quality resident trainees. The success of the FPA program is thanks to the efforts of so many staff in our department. At a time when multiple other Canadian university departments have been unable to maintain accreditation for their FPA training programs, we should be very proud of the contributions we make to rural health care in Alberta and beyond.

ANESTHESIA CLERKSHIP PROGRAM

**Dr. M.
Chong**

Hello everyone and thank you again for your involvement in the **University of Calgary Anesthesia Clerkship program!** This program continues to be a favourite with the University of Calgary students as we consistently get strong feedback from the students regarding our clinical teaching and the organization of the rotation.

The program has had some exciting developments over the past year. In particular, we have added the South Health Campus to our available sites to send students. They have been an excellent addition to our program and I wanted to send a special thanks to all of the people involved who have made this addition to our program possible. I would like to welcome Dr. Jennifer Demarty to the clerkship committee as our site lead for the South Health Campus.

I would like to thank you all of the members of the Clerkship committee for their hard work and commitment to ensuring that the program runs smoothly at each site.

Dr. Niamh Donnelly-Warner - Anesthesia Evaluations Coordinator and site lead at the Rockyview General Hospital.

Dr. Desiree Teoh - Site lead at the Foothills Hospital

Dr. Sabrina Sandhu - Site lead at the Peter Lougheed Hospital

Dr. Jennifer Demarty - Site lead at the South Health Campus.

Lynda Pedersen - Anesthesia Clerkship Secretary (and the engine of the whole clerkship program)

The clerkship program consists of a two week rotation. The students first day of the rotation consists of an orientation followed by didactic and hands on workshop teaching. The remaining nine days are spent in the OR, pre-operative clinic and with the Chronic Pain service. I would like to express a special thanks to the anesthesia residents and the nurses of the foothills acute pain service who are integral in the teaching of the students during their first day of their rotation.

The four adult sites in the region do the majority of teaching and mentorship during the clerkship rotation. Each site has between one to five students for each two week block. The Alberta Children's hospital also assists with the program by accommodating elective students throughout the year. During the year we have 160 students go through the mandatory clerkship program. In addition, the program accommodates Med 440, Med 402, shadowing and elective students. The combination of the mandatory clerkship plus the addition electives, pre-clerkship programs and shadowing amounts to over 270 medical students that come through all the OR's in the region per year.

... ANESTHESIA CLERKSHIP PROGRAM

Our program consistently receives highly positive feedback from the students for our strong clinical teaching and organization. I would like to recognize some of the staff from each site who were voted by our students as the outstanding clerkship educators for the class of 2014.

- Rockyview General Hospital - Dr. Saul Pytka
- Peter Lougheed Hospital - Dr. Raymond Kozody
- Foothills Medical Centre - Dr. Geoffrey Hawboldt
- Resident educator - Dr. ManCho Ng

I want to personally thank each member of the medical staff and administration team involved in the University of Calgary Anesthesia Clerkship program. You all make this program a success with the University of Calgary students. This program is one of many positive experiences our students have to Anesthesia in Calgary and is integral in us growing our specialty and attracting great applicants to our residency program.

CONTINUING MEDICAL EDUCATION

**Dr. R.
Cox**

2014 – 2015 saw the continuation of significant departmental activity in the area of Continuing Medical Education and Professional Development (CME/PD). All five clinical sites continue to conduct anesthesia rounds at a Section 1 level of MOC, on a weekly basis throughout the academic year. A proportion of these rounds are for journal article review and case discussions. Rounds are given by staff anesthesiologists, fellows, or residents under supervision. On occasion, joint rounds are held with other clinical departments and programs, e.g. surgery, critical care, trauma. Other teaching rounds, for example at the Alberta Children’s Hospital, are aimed more towards residents and fellows; these may have staff anesthesiologists attending or presenting, so provide CME as a non-accredited Section 1 or a Section 2 MOC event if a Personal Learning Project ensues.

At the departmental level, there have traditionally been two main citywide CME/PD programs, the Visiting Professor Program (VPP) and Journal Club (JC). A planning committee has determined the content of these events with input from all sites. The Visiting Professor Program (VPP) was active under the leadership of Dr. Keith Anderson, but has just gone on hold due to lack of funding and withdrawal of the industry support that made this program possible. City-wide Anesthesiology Journal Club (JC), chaired by Dr. N. Brown, is conducted several times per academic year. Each journal club session takes the form of critical review of two to three key journal articles, now being held in one of the staff anesthesiologists’ homes.

Other CME/PD initiatives have included regular participation in the Rural Anesthesia for GP-Anesthetists Course in Banff, occasional refresher updates for rural physicians, and participation in Canada-wide pediatric anesthesia rounds. Several faculty members and residents presented at the Annual Meeting of the Canadian Anesthesiologists’ Society Meeting in Ottawa, ON, in June 2015.

Other specific CME activities have been initiated. Dr. Megan Hayter and colleagues at the Rockyview site created a small scale simulation workshop entitled “Review of Critical Events in Anesthesia – a simulation based workshop”. Dr. Neil Maher at the PLC site is conducting a course on Basic FATE (Focus Assessed Transthoracic Echocardiography) and Basic Lung/FAST (Focused Assessment with Sonography for Trauma).

At an administrative level, each site continues to have an identified leader for CME/PD. These are Drs. E. Dobreiner and R. Cox (ACH), Dr. S. Jacyna (RGH), Dr. M. Hokanson (PLC), Dr. K. Duttchen (FMC), and Dr. E. Ho (SHC). Dr. R. Cox is the Departmental representative on the Faculty of Medicine’s CME and PD Committee, and he also sits nationally as Chair of the Continuing Education and Professional Development (CEPD) Committee of the Association of Canadian University Departments of Anesthesia (ACUDA), and as Chair of the Professional Development Committee of the Royal College of Physicians and Surgeons of Canada, as well as being a council member of the Royal College. There is no specific city-wide Anesthesia CME/PD Committee, as the Zone Anesthesia Executive Committee, the Academic Council of the Department, and the VPP/JC planning group fully serve this function.

.... **CONTINUING MEDICAL EDUCATION**

The Department of Anesthesia continues to develop its simulation program at more than one site, and this is hoped to grow into a key learning tool. As well, the Section of Pediatric Anesthesia and the South Campus group are involved with patient outcome studies, with support from the Physician Learning Program, which should allow our learning needs to be tailored more directly to these patient outcomes, and has led to several abstracts being presented at national meetings.



MEDICAL STAFF ASSOCIATION

Medical Staff Associations in Alberta – Dr. S. Patterson

This is a short description of my role and the value of being involved in Medical Staff Associations. I have tried to describe my role with its successes and challenges and have ended my description with a brief view of the situation facing us moving forward. The most valuable resource CAMSS has is engaged physicians, and I would encourage all medical staff to consider how we can be engaged moving forward. If we all do a little, no one has to do it all.

I have spent the last two years as president of the Calgary and Area Medical Staff Society (CAMSS). CAMSS is funded by dues paid when a physician checks the “medical staff association” component on the AMA annual renewal form. CAMSS receive a lump sum from the AMA based on the number of physicians represented in the zone (in Calgary around 3,000 physicians). Alberta Health Services (AHS) provides some administrative support.

The role of the Medical Staff Associations (MSAs) is enshrined in the Medical Staff Bylaws for the province, but remains a work in progress. The five Medical Staff Associations represent all physicians in the province on various committees. As the CAMSS President, I represented Calgary physicians on AHS committees at the local level; committees such as the Zone Medical Administrative Committee and the Zone Application Review Committee (privileges for access to AHS facilities), and at the provincial level on the Provincial Executive Committee (PPEC), which advises the Chief Medical Officer. Our local responsibilities to AHS also include selecting members to serve on Search and Selection Committees for department heads and hospital lead physicians.

CAMSS also works closely with the Alberta Medical Association. We nominate physicians for the AMA’s Representative Forum and serve on other AMA committees. We have a responsibility to host Zone Advisory Forums to explore local issues and advise the AMA as required.

And finally, CAMSS’s holds local meetings and supports the hospital and community based physicians in Calgary. We are responsible for the publication of Vital Signs, which is your medical staff magazine.

The collaborative/committee-based system makes it difficult to measure the impact of any one person or group on the health-care system as a whole, but CAMSS was involved in many and diverse issues during my two years as president. Some of these included medical manpower planning (or lack thereof), chart completion, lab data distribution, and the benchmarking study now underway.

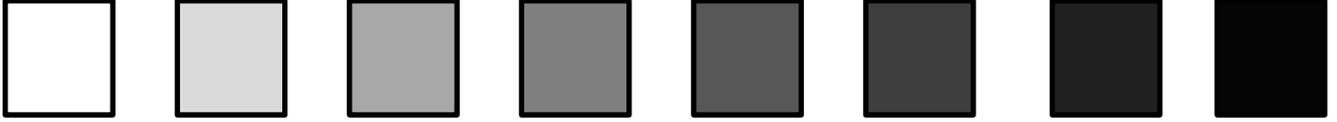
This benchmarking study examines the cost of a day in hospital, comparing nursing hours, support services, and physician costs across the country. The results will have a major impact on how we practice, as higher-cost hospital units will have their budgets adjusted downward. Hospitals in Alberta have much higher costs in terms of nursing hours per patient than those in other provinces. Our operating rooms and recovery rooms in particular are far more costly to run, and are being subjected to increased scrutiny. Our behaviour as individuals is representative of our profession as a whole, and we must constantly seek to improve our practice.



.....MEDICAL STAFF ASSOCIATION

The biggest revelation to me during my term is that AHS is not a monolith. There are many hard working, motivated physicians and administrators that choose to work from within the system to improve health care for Albertans. Physicians and AHS should be allies, not adversaries, in an effort to provide effective, efficient care. Unfortunately, the number of committees and stakeholders involved and the lack of individual accountability for decisions made does make it frustratingly slow to work with AHS. The very long timelines and seemingly endless meetings make it difficult for a fee-based physician to stay involved long enough to see results. It is ironic that the very process of seeking input from all sources, including physicians, is also the process that slows the decision-making down and discourages those interested in providing input. Despite this, we need to take the time and make the effort to remain involved in the process from the early stages of planning right through to the final result. Physicians, as individuals and as a group, should support the doctors who do volunteer for these committees, and should seek out further opportunities to become involved. We should not be surprised if our role is diminished and we become more marginalized if we let others do the planning for us. Remember – if we all do a little, no-one has to do it all.

APPENDICES



- DEPARTMENT MEMBERSHIP
- ADMINISTRATIVE COMMITTEES
- RESEARCH PUBLICATIONS

Section Membership

FMC
Foothills Medical Centre

Anderson, Keith
Archer, David
Arraf, John
Balaton, John
Beriault, Michael
Caveno, Jordan
Cheung, Kenneth
Chong, Michael
Chow, Lorraine
Chun, Rosaleen
Davis, Melinda
Diserens, Monique
Duttchen, Kaylene
Eschun, Gerald
Falkenstein, Richard
Fermor, David
Finegan, Donal
Fox, Joel
Froelich, Jennifer
Gregory Alex

Guglielmin, Darryl
Ha, Duc
Haber, Julia
Hamming, Jeremy
Hawboldt, Geoffrey S.
Hiew, Moo-Khon
Illing, Kim
Illing, Leigh H.G.
Jordan, Dean
Jungen, David
Korzeniewski, Piotr A.
(Peter)
Kowalewski, RJ (Richard)
Lee, Alan
Ligier, Bruno
MacAdams, Charles L
McTaggart-Cowan, Robert
Norrie, Bill
Organowski, Slawomir
Pash, Michael

Prusinkiewicz, Chris
Seal, Douglas D.
Shing, Molly
Shinkaruk, Kelly
Smith, M Heather
Stacey, Shean
Teoh, Desiree
Thompson, Robert
Todd, Andrea
Waechter, Jason
Wahba, Raouf S
Wang, Bing
Watson, Neil C
Wilson, Joshua

Section Membership

ACH
Alberta Children's Hospital

Carter, Kerryn
Connors, M. Ruth
Cox, Robin
Dobereiner, Elisabeth
Ewen, Alastair
Farran, R. Peter
Gale, Mark
Ghazar, Nancy

Hardcastle, Nina
Kuwahara, Brian
Lardner, David
Letal, Mike
Luntley, Jeremy
McAllister, Debbie L
McIntyre, Brian
McMann, Jon

Mulvey, Jamin
Rasic, Nivez
Spencer, Adam
Stewart, Terry

Section Membership

SHC
South Health Campus

Baghirzada, L
Bharwani, F
Brown, N
Cheesman, M
Chu, A
Demarty, J
Endersby, R

Fraser, L
Ho, E
Jack, M
Kostash, M
Morrow, F
Olivieri, L
Stephan, J

Swedlo, D
Trinh, T
Wollach, B

Section Membership

PLC
Peter Loughheed Centre

Armstrong, JN
Azmaysh-Fard,
Arash
Bands, Colin
Bishop, Graeme
Cassidy, Michael
Cherry, Tadd
Cuk, Aleksander
Darcus, Karl

Dobson, Gary
Donais, Philip
Downie, Joseph
Halpenny, David
Hokanson, Michelle
Jordan, Dean
Kozody, Raymond
Kruger, Marelise
Lim, Beatriz

Maher, Neal
Mensink, Fred
Parkinson, Bronwyn
Patterson, Steven
Pearce, Craig
Pitter, Curt A
Priddy, Richard
Sandhu, Manjot
Sandhu, Sabrina

Santosham, Kristi
Shysh, Alesander
Stilling, Lee
Tiessen, Alan
Wassill, Diane
Wheeler, Steven
Wong, Vanessa
Wood, Daniel
Yang, Theresa

Section Membership

RGH
Rockyview General Hospital

Bart, Bevan
Berchuk, Miriam
Chan, Tommy
Dobberthein, Marion
Dodd, Colin
Donnelly-Warner, N
Dusevic, Myrna
Eng, Reuben
Hall, Wendy
Hardy, C. David
Hayter, Megan

Hopper, Gordon
Jacyna, Stephen
Janzen, James
Kent, David
Larsen, Udell
Lee, Brenda
Liepert, David
Olson, Brian
Partridge, Jill
Patel, Kiran
Phillips, Steven

Pytko, Saul
Rubin, Yair
Saayman, Marius
Samuels, Peter
Scanlon, M
Schultz, Rod
Shah, Misbah
Simon, Karl
Sims, Christopher
Soska, Mark
Sweet, Blythe

Thomas, Sean
Torsher, Kevin
Tsai, Lin
Verma, Manhar
Wasserman, Paula
Willsie, Robert
Yemen, D. Jill
Yont, Karrie



Additional Members

Community

Eagle, Chris
Jivraj, Kabir
Nanji, G. Mohammed
Reddy, Neville
Young, Dale – Canadian
Blood Services

City wide LOCUMS

Braithwaite, Philip
French, Susan
Jadavji, Nadeem
Joo, Jennifer
Merah, Ann
Montgomery, Shaylyn
Nemish, Ulyana
Sully-Letal, Jillian

Calgary Chronic Pain Centre

Montgomery, Lori
Spanswick, Chris
Shah, Misbah

ADMINISTRATIVE COMMITTEES



- Bharwani, F.** Clinical Lead Obstetrical Anesthesia, South Health Campus Section of Anesthesia
Member, South Health Campus Women's Health Site Leadership Committee
Member, South Health Campus MoreOB Core Team
Chair, South Health Campus Section of Anesthesia Manpower Committee
SMART Committee
- Chu, A.** Anesthesia Lead, Bethune Round Table Steering Committee
- Chow, L.** CAS Obstetric section member-at-large
CAS Obstetric anesthesia guidelines committee
CAS Standards Committee
Clinical Lead – Obstetric Anesthesia
Women's Site-based Leadership Committee
Maternal Cardiac Diseases group
Clinical Lead – Thoracic Anesthesia
Perioperative Blood Conservation – Medical Lead
Calgary Zone Transfusion Committee
Making a Mark – co-chair
CAS Obstetric section member-at-large
Associate Investigator Member, Alberta Children's Hospital Research Institute (ACHRI)
- Cox, R.** Chair, Investigation Committees, College of Physicians and Surgeons of Alberta
Chair, Complaint Appeals Committee, College of Physicians and Surgeons of Alberta
Chair, Medical Student Appeal Committee, Cumming School of Medicine, University of Calgary
Chair, Scientific Affairs Committee, Canadian Anesthesiologists' Society
Chair, Patient Safety Committee, Health Quality Council of Alberta
Chair, Professional Development Committee, Royal College of Physicians and Surgeons of Canada
Chair, Continuing Medical Education Committee, ACUDA

ADMINISTRATIVE COMMITTEES



- Cox, R.**
- Member, Alberta Medical Association Board
 - Member, Canadian Anesthesiologists' Society Annual Meeting Committee
 - Member, Canadian Anesthesiologists' Society CEPD Committee
 - Member, Royal College of Physicians and Surgeons Council
 - Member, Royal College of Physicians and Surgeons of Canada Nominating Committee
 - Member, Health Quality Council of Alberta Board
 - Member, Health Quality Council of Alberta Research and Analytical Studies Committee
 - Member, University of Calgary General Faculties Council
 - Member, University of Calgary Faculty Council, Kinesiology
 - Member, Anesthesia and QI Committees, Resurge International, California, USA
 - CME Lead, Department of Anesthesia, AHS Calgary Zone
 - Member, Alberta Medical Association Board
 - Member, Canadian Anesthesiologists' Society Annual Meeting Committee
 - Member, Canadian Anesthesiologists' Society CEPD Committee
 - Member, Royal College of Physicians and Surgeons Council
 - Member, Royal College of Physicians and Surgeons of Canada Nominating Committee
 - Member, Health Quality Council of Alberta Board
 - Member, Health Quality Council of Alberta Research and Analytical Studies Committee
 - Member, University of Calgary General Faculties Council
 - Member, University of Calgary Faculty Council, Kinesiology
 - Member, Anesthesia and QI Committees, Resurge International, California, USA
 - CME Lead, Department of Anesthesia, AHS Calgary Zone
- Davis, M.**
- Preadmission Clinic Liaison Committee
 - Pre-clerkship Committee, Cummings School of Medicine University of Calgary.
 - CaRMS Selection Committee
 - CAS annual meeting Abstract Reviewer
- Davis, J.M.**
- Member, Residency Training Committee (Safety & Quality co-representative, with Dr Donal Finegan)
 - Member, Operating Room – Intensive Care Unit Hand-Over Working Group

ADMINISTRATIVE COMMITTEES



Pearce, C.M. Member - Alberta Health Services Calgary Zone Surgical Executive Committee
Member - Alberta Health Services Surgical Clinical Network
Member - University of Calgary Faculty of Medicine Department Heads Committee
Member - University of Calgary Faculty of Medicine Leadership Forum
Member - University of Calgary Faculty of Medicine Faculty Promotions Committee
•Member - Association Canadian Universities Departments of Anesthesia

Pitter, C. Member - Zone Women's Operations Committee
Member – Peter Lougheed Centre Obstetrical Leadership Committee
Obstetrical Lead – Peter Lougheed Centre Section of Anesthesia

Seal, D. Director – Cardiac Anesthesia, Department of Anesthesia
AHS Calgary Zone
Deputy Section Chief – Section of Anesthesia, Foothills Medical Centre, Calgary
Member – Zone Anesthesia Executive Committee, Calgary/
Member – Clinical Services Leadership Council – Department of Cardiac Sciences, Calgary.
Member – Mechanical Support/Ventricular Assist Device Committee, AHS Calgary Zone
Member – Quality Assurance Committee, Section of Anesthesia, Foothills Medical Centre, Calgary
Member – Quality Assurance Subcommittee, Department of Cardiac Science, AHS Calgary Zone

RESEARCH



Published

- Kalagara HK, Uppal V, McKinlay S, Macfarlane AJ, Anderson K. Effect of body mass index on angle of needle insertion during ultrasound-guided lateral sagittal infraclavicular brachial plexus block. *Journal of Clinical Anesthesia* 2015; 27:375-9.
- Lee AJ, Wells BJ, Chun R, Ball CG, Kirkpatrick AW. The abdomen in “thoracoabdominal” cannot be ignored: abdominal compartment syndrome complicating extracorporeal life support. *Case Reports in Critical Care* 2014; doi:10.1155/2014/351340.
- Ma IWY, Chun R, Kirkpatrick AW. Basics of ultrasound. In *Ultrasonography in the ICU*. Eds 2015. Ferrada P. Springer International Publishing, Switzerland, p. 1-36.
- Kramer CE, Wilkins MS, Davies JM, Caird JK, Hallihan GM. Does the sex of a simulated patient affect CPR? *Resuscitation* 2015; 86:82-7.
- Yoo KI, Davies JM. A request for regulatory revision: Instructions for passenger bracing for emergency landings. *Aviation Psychology and Applied Human Factors* 2015; 5:45-51.
- Davies JM. From the journal archives: safety at our fingertips. *Canadian Journal of Anesthesia* 2014; 61:671-5.
- Davies JM, Merchant RN. Reading in the operating. *Canadian Journal of Anesthesia* 2015; 62:936.
- Merchant RN, Davies JM. Fluid management issues in Enhanced Recovery after Surgery and Canadian Anesthesiologists’ Society Standards. *Canadian Journal of Anesthesia* 2015; 62:930.
- Hallihan GM, Baers JH, Wiley K, Davies JM, Kaufman J, Conly J, Caird JK. Human factors evaluation of simulated Ebola Virus Disease patient scenarios: system factors associated with donning and doffing during triage, treatment and transport. W21C, O’Brien Institute for Public Health, Cumming School of Medicine, University of Calgary, for Infection Prevention and Control, Alberta Health Services, 2015.
- Brasher PMA, Dobson G. Understanding non-inferiority trials: an introduction. *Canadian Journal of Anesthesia* 2014; 61:389-92.
- Watson CP, Mackinnon SE, Dostrovsky JO, Bennett GJ, Farran RP, Carlson T. Nerve resection, crush and re-location relieve complex regional pain syndrome type II: a case report. *Pain* 2014; 155:1168-73.

RESEARCH



Appoo JJ, Herget EJ, Pozeg ZI, Ferris MC, Wong JK, Gregory AJ, Gupta AK, Merchant N, Kent WD. Midterm results of endovascular stent grafts in the proximal aortic arch (zone 0): an imaging perspective. *Canadian Journal of Cardiology* 2015; 31:731-7.

Appoo JJ, Tse LW, Pozeg ZI, Wong JK, Hutchison SJ, Gregory AJ, Herget EJ. Thoracic aortic frontier: review of current applications and directions of thoracic endovascular aortic repair (TEVAR). *Canadian Journal of Cardiology* 2014; 30:52-63.

Fabbro M, Gregory AJ, Gutsche JT, Ramakrishna H, Szeto WY, Augoustides JG. Case 11—2014. Successful open repair of an extensive descending thoracic aortic aneurysm in a complex patient. *J Cardiothorac Vasc Anesth.* 2014; 28:1397-1402.

Ferris MC, Herget EJ, Gregory AJ, Wong JK, Harmse WS, Sheppard C, Appoo JJ. Aortic remodelling following zone 0 hybrid arch repair for the treatment of aortic dissection. *Can J Cardiol* 2014; 30:S136.

Gregory AJ, Prusinkiewicz CA, Herget E, Wong J, Kent WD, Appoo JJ. Subclavian graft thrombosis as an alternative cause for delayed spinal cord ischemia following hybrid aortic arch repair. *Journal of Cardiothoracic and Vascular Anesthesia* 2014; 28:718-22.

Gregory AJ, Hatem MA, Yee K, Grocott HP. Optimal placement of cerebral oximeter monitors to avoid the frontal sinus as determined by computed tomography. *Journal of Cardiothoracic and Vascular Anesthesia* 2015; in press.

Lorello GR, Hicks CM, Ahmed SA, Unger Z, Chandra D, Hayter MA. Mental practice: a simple tool to enhance team-based trauma resuscitation. *Canadian Journal of Emergency Medicine* 2015; 17:1-7.

Hutton MJH, Swamy G, Shinkaruk K, Duttchen K. Hypotension in the right later position secondary to inferior vena cava abnormality. *Anesthesia & Analgesia Case Reports* 2015; in press.

Lardner DR, Spencer AO. Throwing the baby out with the bath water. *Canadian Medical Association Journal* 2015; [Epub, June 2015].

Da Cuhna RJ, Al Sayegh S, LaMothe JM, Letal M, Johal H, Parsons DL, Ferri-de-Barros F. Intraoperative skull-femoral traction in posterior spinal arthrodesis for adolescent idiopathic scoliosis: the impact on perioperative outcomes and health resource utilization. *Spine* 2015; 40:E154-E160.

Livingstone M, Duttchen K, Thompson J, Sunderani Z, Hawboldt G, Rose MS, Pasiaka J. Hemodynamic stability during pheochromocytoma resection: lessons learned over the last two decades. *Annals of Surgical Oncology* 2015 Mar 31. [Epub ahead of print].

RESEARCH



Hébert PC, Fergusson DA, Hutton B, Mazer CD, Fremes S, Blajchman M, MacAdams C, Wells G, Robblee J, Bussi eres J, Teoh K. Regulatory decisions pertaining to aprotinin may be putting patients at risk. *Canadian Medical Association Journal* 2014; 186:1379-86.

Karkouti K, Grocott HP, Hall R, Jessen ME, Kruger C, Lerner AB, MacAdams C, Mazer CD, de Medicis  , Myles P, Ralley F, Rheault MR, Rochon A, Slaughter MS, Sternlicht A, Syed S, Waters T. Interrelationship of preoperative anemia, intraoperative anemia, and red blood cell transfusion as potentially modifiable risk factors for acute kidney injury in cardiac surgery: a historical multicentre cohort study. *Canadian Journal of Anesthesia* 2015; 62:377-84.

Cote J, Montgomery L. Sublingual buprenorphine as an analgesic in chronic pain: a systematic review. *Pain Medicine* 2014; 15:1171-8.

Noss CD, MacKenzie LD, Kostash MA. Adjuvant dexamethasone: innovation, farce or folly? *Regional Anesthesia & Pain Medicine* 2014; 39:540-5.

Noss CD, MacKenzie LD, Kostash MA. Dexamethasone a promising adjuvant in brachial plexus anesthesia? A systematic review. *Journal of Anesthesia & Clinical Research* 2014; 5:1000421.

Mulla SM, Maqbool A, Sivananthan L, Lopes LC, Schandelmaier S, Kamaleldin M, Hsu S, Riva JJ, Vandvik PO, Tsoi L, Lam T, Ebrahim S, Johnston BC, Olivieri L, Montoya L, Kunz R, Scheidecker A, Buckley DN, Sessler DI, Guyatt GH, Busse JW. Reporting of IMMPACT-recommended core outcome domains among trials assessing opioids for chronic non-cancer pain. *Pain* 2015 May 26. [Epub ahead of print].

Pash J, Kadry B, Bugrara S, Macario A. Scheduling of procedures and staff in an ambulatory surgery center. *Anesthesiology Clinics* 2014; 32:517-27.

Sadler MD, Ravindran NC, Hubbard J, Myers RP, Ghosh S, Beck PL, Dixon E, Ball C, Prusinkiewicz C, Heitman SJ, Kaplan GG. Predictors of mortality among patients undergoing colectomy for ischemic colitis: a population-based United States study. *Canadian Journal of Gastroenterology & Hepatology* 2014; 28:600-4.

Rae JM. Review: foraging a strong nursing future: insights from the Canadian context. *Journal of Research in Nursing* 2014; 19:634-5.

Cheung CC, Martyn A, Campbell N, Frost S, Gilbert K, Michota F, Seal D, Ghali W, Khan NA. Predictors of intraoperative hypotension and bradycardia. *The American Journal of Medicine* 2015; 128:532-8.

Girgis F, Shing M, Duplessis D. Thoracic epidural blood patch for spontaneous intracranial hypotension: case report and review of the literature. *Turkish Neurosurgery* 2015; 25:320-5.

RESEARCH



Clark AJ, Spanswick CC. Why anesthesiologists need to care about the way chronic pain is managed. *Canadian Journal of Anesthesia* 2014; 61:95-100.

Spencer AO, Tsui BC. Intermittent bolus via infraclavicular nerve catheter using catheter-over-needle technique in a pediatric patient. *Canadian Journal of Anesthesia* 2014; 61:684-5.

Spencer AO, Walker AM, Yeung AK, Lardner DR, Yee K, Mulvey JM, Perlas A. Ultrasound assessment of gastric volume in the fasted pediatric patient undergoing upper gastrointestinal endoscopy: Development of a predictive model using endoscopically suctioned volumes. *Pediatric Anesthesia* 2015; 25:301-8.

Spencer AO, Walker AM. Antral sonography in the pediatric patient: can transducer choice affect the view? *British Journal of Anaesthesia* 2015; 114:1002-3.

Spencer AO, Lardner DR, Perlas A. How may a mathematical model using ultrasound measurement of antral area be predictive of the gastric volume? *Pediatric Anesthesia* 2015; in press.

Spencer AO, Tsui BCH, Suresh S. Spinal anesthesia. In *Pediatric Atlas of Ultrasound- and Nerve Stimulation-Guided Regional Anesthesia* 2015; in press. Eds. Tsui BCH, Suresh S. Springer Science & Business Media, New York, NY.

Merchant R, Chartrand D, Dain S, Dobson G, Kurrek MM, Lagacé A, Stacey S, Thiessen B. Guidelines to the practice of anesthesia – revised edition 2014. *Canadian Journal of Anesthesia* 2014; 61:46-71.

Buttenschoen DC, Stephan J, Watanabe S, Nikolaichuk C. Health care providers' use and knowledge of the Edmonton Symptom Assessment System (ESAS): is there a need to improve information and training? *Supportive Care in Cancer* 2014; 22:201-8.

Waechter J. Brain disorders in critical illness: mechanisms, diagnosis, and treatment. *Canadian Journal of Anesthesia* 2014; 61:893-4.

Submitted

Ohashi Y, Baghirzada L, Sumikura H, Balki M. Remifentanyl for labor analgesia; potential usage in Japan. Submitted to the *Journal of Clinical Anesthesia* 2015.

Armstrong R, Xu F, Arora A, Rasic N, Syed N. General anesthetics and cytotoxicity: from harm to healing of young and adult brains. Submitted to *Anesthesia & Analgesia* 2015.

Vaid P, Green T, Shinkaruk K, King-Shier K. Low-dose ketamine infusions for highly opioid tolerant adults following spinal surgery: a retrospective before-and-after study. Submitted to *Pain Management Nursing* 2015.

RESEARCH



Abstracts/Conference Proceedings

Baghirzada L, Endersby R, Walker A, Denness K, Reyes R. Standardization of analgesic orders for joint replacement surgery. Canadian Anesthesiologists' Society 2015 Annual Meeting, Ottawa, ON, June 19-22, 2015.

Carr A#, MacKenzie L#, Lee A, Chow L. Low-molecular weight heparin and thromboelastography in pregnancy. Canadian Anesthesiologists' Society 2014 Annual Meeting, St. John's, NL, June 13-16, 2014.

Chow L, de Perrot M, Van Rensburg A. Platypnea-orthodeoxia syndrome after extra-pleural pneumonectomy. Canadian Anesthesiologists' Society 2015 Annual Meeting, Ottawa, ON, June 19-22, 2015.

Larson B, Chu A, Elliott SL, Maki K, Mbadiwe C. The influence of a global health concentration on the future career paths of undergraduate medical students: Pilot study results from a University of Calgary longitudinal study. *Annals of Global Health* 2015; 81:37. 6th Annual Consortium of Universities for Global Health (CUGH) Conference.

Cox R, McMann J, Letal M, Duncan D, Spencer A, Cooke L. Practice improvement by tracking pediatric tonsillectomy outcomes. Canadian Anesthesiologists' Society 2015 Annual Meeting, Ottawa, ON, June 19-22, 2015.

Cox R, Hardeggers K, Duncan D, Letal M, Spencer A, McMann J, Cooke L. Connecting patient outcomes to physicians' administrative health data reports to encourage reflective self-assessment in practice. Canadian Conference on Medical Education – Leadership for Medical Education, Vancouver, BC, April 25-28, 2015.

Vicas I, Cox RG, Aboulhoda A, McIntyre D, Letal M, Lardner D, Cooke L, Lockyer J. Providing sub-specialty practice-specific physician feedback: a practical process and some useful tools. Canadian Conference on Medical Education, Ottawa ON, April, 2014.

Vicas I, Cox RG, Aboulhoda A, Lockyer J. Use of an audience response system (ARS) to facilitate physician feedback group discussion. Canadian Conference on Medical Education, Ottawa, ON, April, 2015.

Davies JM, Coutts M. Another factor in anaesthetic safety. The changing face of anaesthesia and pain medicine. Annual Scientific Meeting, Australia and New Zealand College of Anaesthetists, Adelaide, South Australia, April 30 - May 3, 2015. Virtual ASM.

Hallihan G, Wiley K, Baers J, Davies J, Conly J, Caird J. Human factors evaluation of simulated Ebola Virus Disease patient scenarios. Systemic factors and the potential for health care worker .

RESEARCH



contamination. Surfing waves of change. 2015 National Education Conference. Infection Prevention and Control Canada (ipac-Canada), Victoria, BC.

Hallihan G, Davies J, Baers J, Wiley K, Kaufman J, Conly J, Caird JK. Potential health care worker contamination from Ebola Virus Disease during personal protective equipment removal and disposal. Proceedings of the Human Factors and Ergonomics Society 52nd Annual Meeting 2015; 59, in press.

Davies JM, Merchant R, Carli F, O'Neill T. Canadian anesthesiologists and enhanced recovery programs. ASA & NZSA Combined Scientific Congress, Australian Society of Anaesthetists & New Zealand Society of Anaesthetists, Darwin, Northern Territory, September 12 – 15, 2015.

Conly J, Hallihan G, Davies JM, Baers J, Wiley KH, Caird JK. Human factors evaluation to identify system factors to improve safety during donning and doffing personal protective equipment (PPE) in Ebola Virus Disease management scenarios. All Things Ebola. IDWeek 2015. Open Forum Infectious Diseases (OFID), in press.

Dyte C, Davis M, Baranieski C. Incidence of PONV following endoscopic endonasal skull base surgery. Canadian Anesthesiologists' Society 2015 Annual Meeting, Ottawa, ON, June 19-22, 2015.

Gregory AJ, Kruger M, Moore R, Maher N, Dobson G. Speckle tracking of the aorta and generation of pressure-volume loops. Canadian Anesthesiologists' Society 2014 Annual Meeting, St. John's, NL, June 13-16, 2014.

Gregory AJ, Vallabhajosyula P, Acker M, Levy W. High-venous pressure a risk for liver injury & death in heart surgery. Canadian Anesthesiologists' Society 2014 Annual Meeting, St. John's NL, June 13-16, 2014.

Gregory AJ, Kruger M, Maher N, Moore RD, Dobson G. Proximal aortic compliance determined by speckle tracking imaging and its contribution to aortic impedance. American Association of Thoracic Surgeons, 2014 Aortic Symposium, New York, NY, April 24-25, 2014.

Harmse W, Appoo JJ, Herget EJ, Gregory AJ, Ferris M, Sheppard CE, Wong JK. Quantification of true lumen area changes in descending thoracic aorta post DeBakey Type 1 aortic dissection. American Association of Thoracic Surgeons, 2014 Symposium, New York, NY, April 24-25, 2014.

Haber J. Caesarean for hereditary neuropathy with liability to pressure palsy. Canadian Anesthesiologists' Society 2015 Annual Meeting, Ottawa, ON, June 19-22, 2015.

Livingstone M, Duttchen K, Thompson J, Sunderani Z, Hawboltd G, Rose MS, Pasioka J. Hemodynamic stability in pheochromocytoma resection. Canadian Anesthesiologists' Society 2015 Annual Meeting, Ottawa, ON, June 19-22, 2015.

RESEARCH



MacKenzie L, Carr A, Lee A, Chow L. The effect of low molecular weight heparin on thromboelastography in pregnancy – an in vitro study. 46th Annual Meeting of the Society of Obstetrical Anesthesia and Perinatology, Toronto, ON, May 14-18, 2014.

McMillan L#, Letal M, Wong H. Reduction in code blue activations in the post anesthesia care unit. Canadian Anesthesiologists' Society 2015 Annual Meeting, Ottawa, ON, June 19-22, 2015.

Ng M, Davis M, Walker A. Perioperative management of renin angiotensin system antagonists. Canadian Anesthesiologists' Society 2015 Annual Meeting, Ottawa, ON, June 19-22, 2015.

Noss C#, Shinkaruk K, Sinnarajah A. Do externalized intrathecal or epidural catheters placed for palliative pain management lead to high-risk complications? A retrospective review. International Association for the Study of Pain (IASP), 15th World Congress on Pain, Buenos Aires, Argentina, October 6-11, 2014.

Rasic N, Rayner L. Development of the curriculum and clinical outcome measures for the Intensive Pain Rehabilitation Program (IPRP). 10th International Symposium on Pediatric Pain (ISPP), Seattle, WA, June, 2015.

Rasic N, Carter K, Bruno L, Foster L. Using methadone for sedation failure in critically ill children. 10th International Symposium on Pediatric Pain (ISPP), Seattle, WA, June, 2015.

Rock R, Hawkins D, Moser D, Werle J, MacAdams C. Blood conservation and transfusion rates in total joint arthroplasty: a ten-year analysis. Society for Advancement of Blood Management, Houston TX, September, 2014. Winner of best abstract at meeting

Spencer A, Walker A, Yeung A, Lardner D, Yee K, Mulvey J, Perlas A. Antral sonography in pediatric patients with large gastric volumes. Canadian Anesthesiologists' Society 2015 Annual Meeting, Ottawa, ON, June 19-22, 2015.

Winner of best pediatric paper

Projects (On-going and planned)

Archer D, Walker A, Appireddy R. The effect of anesthetics on neurological outcome in preclinical rodent models of transient focal cerebral ischemia. Protocol registered with the Collaborative Approach to Meta Analysis and Review of Animal Data from Experimental Studies (CAMARADES), <http://www.dcn.ed.ac.uk/camarades/research/html#protocols>. Sites: Departments of Anesthesia and Clinical Neuroscience, University of Calgary.

Baghirzada L, Endersby R, Walker A. Efficacy of ultrasound-guided transversalis fascia plane blocks for post-caesarean delivery analgesia: a pilot study. Sites: Department of Anesthesia, University of Calgary, South Health Campus.

RESEARCH



Baghirzada L, Endersby R, Walker A, Denness K, Reyes R. Standardization of analgesic orders for the management of postoperative pain for patients undergoing total hip or knee joint replacement at the South Health Campus: Phase II. Funded by the Office of the Chief Medical Officer of Health, \$20,000. Sites: Department of Anesthesia, University of Calgary, South Health Campus.

Bishop, G, Hurdle H, Oddone Paloucci E, McConnell Y, Temple W, Mack L, Shing M. A retrospective analysis of postoperative coagulation following cytoreductive surgery & hyperthermic intraperitoneal chemotherapy. Sites: Departments of Anesthesia, Surgery & Community Health Sciences, Division of Surgical Oncology, University of Calgary.

Bruce E, Duttchen K, Woolsey A, Rose MS. Does elevated perioperative lactate translate into poor clinical outcomes? Sites: Department of Anesthesia, University of Calgary. Funded by the Department of Anesthesia Academic Council.

Chow L, Carr A#, MacKenzie L#, Moazeni A#, Lee A, Walker A. The effect of low molecular weight heparin on the thromboelastometry (ROTEM®) and thromboelastography (TEG®) profile of healthy pregnant women; an in vitro study. Sites: Departments of Anesthesia and Hematology, University of Calgary, Foothills Medical Centre.

Chu A. University of Calgary anesthesia global health curriculum development study. Site: Department of Anesthesia, University of Calgary.

Chu A, Kostash M. Competency-based post-graduate training to improve Albertans' Healthcare. Site: Department of Anesthesia, University of Calgary.

Chun R, Duttchen K, Davis M, Haber J, Lockyer J. Survey of attitudes and perceptions of faculty and residents towards a formal mentorship program in a Canadian residency. Site: Department of Anesthesia, University of Calgary.

Davies JM, Hallihan G, Wiley KH, Yu C, Ocampo W. Testing the usability of a transcutaneous hemoglobin monitor. Site: W21C, TRW, Cumming School of Medicine, University of Calgary.

Davies JM, Steinke C. Reporting critical incidents: lessons for Canadian anesthesiologists. Commissioned editorial. Canadian Journal of Anesthesia. Site: Department of Anesthesia, University of Calgary

O'Neill T, Davies JM, Merchant R, Carli F. Canadian anesthesiologists and enhanced recovery programs. Survey construction and data analysis supported through Department of Psychology, University of Calgary. Sites: Department of Psychology, University of Calgary; Department of Anesthesia, University of Calgary; Standards Committee, Canadian Anesthesiologists Society; Department of Anesthesia, McGill University.



RESEARCH



Davies JM, Coutts M, Walker A. Review of the CSA Standard, Z314.8-14, decontamination of reusable medical devices. Site: Department of Anesthesia, University of Calgary.

Davies JM, Yoo KI. Review of evidence of various brace for impact positions – what the travelling public should know. Sites: Department of Anesthesia, University of Calgary; Aviation Service Department, Hotel and Tourism College, Wonkwang Health Science University, Iksan Jeonbuk, Korea (R.O.K).

Duttchen K, Davis M, McLuckie D#, Lo A#. Intraoperative ketorolac dose of 15 mg versus the standard 30 mg on early postoperative pain after spine surgery: a randomised, blinded, non-inferiority trial. Site: Department of Anesthesia, University of Calgary, Foothills Medical Centre.

Dyte C#, Davis M, Baranieski C#. Incidence of PONV following endoscopic endonasal skull base surgery. Site: Department of Anesthesia, University of Calgary.

Fineagan D. Sevoflurane and desflurane usage patterns in the Calgary Health Zone. Site: Department of Anesthesia, University of Calgary.

Hung L#, Moazeni A#, Lo A#, Walker A, Shysh S. Local infiltration analgesia vs. intrathecal narcotics on pain control and adverse effects in total knee and total hip arthroplasty. Site: Department of Anesthesia, University of Calgary, Peter Lougheed Centre, Rocky View General Hospital.

Krahn D#, Roberts DJ, Sunderani Z#, Chun R. The impact of head-elevated positioning on the safe apnea period in obese patients, a systematic review and meta-analysis. Site: Department of Anesthesia, University of Calgary.

Krahn D#, Sunderani Z#, Fox J. Operating room sharp disposal – a quality improvement study. Site: Department of Anesthesia, University of Calgary, Foothills Medical Centre.

Jack M, Kostash M, Brown N, Walker A. Determination of the minimal effective dose of dexamethasone as an adjuvant to regional anesthesia: a prospective randomized, double blinded, control study. Site: Department of Anesthesia, South Health Campus, University of Calgary.

Lebel C, Lardner D. Mock scanner in decreasing the need for anesthesia in MRI. Lardner D coordinator of Aim 3: Utility of repeated visits to a mock MRI scanner in decreasing the age at which neuro-oncology patients are able to complete MRI without the use of general anesthesia. Site: Departments of Anesthesia and Radiology, University of Calgary, Alberta Children's Hospital.

Letal M. Evaluation of post-operative life threatening respiratory events. Site: Department of Anesthesia, University of Calgary, Alberta Children's Hospital.

RESEARCH



Liepert D, Chrusch C, Walker A. Improving outcomes and efficiency together: the use of heart rate variability monitoring to improve quality of care for surgical and acute-care patients. Funded by the Industrial Research Assistance Program (IRAP). Sites: Departments of Anesthesia and Critical Care Medicine, University of Calgary, Rocky View General Hospital.

Karkouti K, Callum J, Crowther M, Grocott H, Scales D, Rao V, Wijeyesundera D; Principal Investigator at Foothills Medical Centre: MacAdams C; Study co-ordinators: Cutt C, Maier K. Blood conservation in cardiac surgery using a novel transfusion algorithm based on point-of-care testing A stepped-wedge cluster randomized controlled trial. Funded by CIHR \$30,000. Sites: National sites including Department of Anesthesia, Foothills Medical Centre, University of Calgary.

Mazer D, Shehata N, Fergusson D, Whitlock R, Thorpe K; Principal Investigator at Foothills Medical Centre: MacAdams C; Study co-ordinator: Maier K. TRICS-III: Transfusion requirements in cardiac surgery. Expect \$140,000 in funding. Site: National and International Sites including Department of Anesthesia, Foothills Medical Centre, University of Calgary.

McMillan L#, Letal M, Wang H. Reduction in code blue activations in the post anesthesia care unit. Site: Department of Anesthesia, University of Calgary, Alberta Children's Hospital.

Moazeni A#, Gregory A. Near-infrared spectroscopy (NIRS) and the front sinus: does location matter? Site: Department of Anesthesia, University of Calgary, Foothills Medical Centre.

Morrow F, Olivieri L, Walker A, Carlson L. Can mindfulness meditation reduce peri-operative pain and anxiety following total joint arthroplasty? Sites: Departments of Anesthesia and Oncology and Psychology, University of Calgary, South Health Campus.

Ng M#, Davis M, Walker A. Perioperative management of renin angiotensin system antagonists. Site: Department of Anesthesia, University of Calgary.

Noss C#, Gregg K#, Dobson G. Ultrasound quality control for Department of Anesthesia linear array ultrasound probes. Site: Department of Anesthesia, University of Calgary.

Xu F, Armstrong R, Urrego D, Qazzaz M, Pehar M, Armstrong JN, Shutt T, Syed IN. Mitochondrial division inhibitor Mdivi-1, rescues mammalian neurons from anesthetic-induced cytotoxicity. Sites: Departments of Anesthesia, Medical Genetics and Biochemistry and Molecular Biology, Hotchkiss Brain Institute and Alberta Children's Hospital Research Institute, University of Calgary.

Teoh D, Else S#, Lee A, Temple W, Mack L, Hutton M#. Evaluation of perioperative coagulation in patients undergoing heated intraperitoneal chemotherapy. Sites: Departments of Anesthesia, Hematology, Surgical Oncology, University of Calgary, Foothills Medical Centre.





Presentations/Invited Addresses

- Chow, L.** Speaker, Making a Mark (OB Anesthesia). Toronto, ON – February 2015
- Morbidity and Mortality Rounds, Platypnea orthodeoxia syndrome. Toronto, ON – July 2014
- Morbidity and Mortality Rounds – AutoPEEP and Cardiac Arrest. Toronto, ON – July 2014
- Chu, A.** Speaker, Peri-Anesthesia Nursing Association.
- Cox, R.** “Ethical Issues and Physician Wellness”, Ethics Symposium. Canadian Anesthesiologists’ Society Annual Meeting, St Johns, NL, June 2014. (Panel Speaker and Moderator)
- Moderator, Poster and Oral Presentations. Canadian Pediatric Anesthesia Society Meeting, Montreal, QC, Sept 2014.
- “Best Papers in Pediatric Anesthesia”. American Society of Anesthesiologists Annual Meeting, New Orleans, LA, Oct 2014. (Panel Speaker).
- Ho, Esther** Presenter, “MOC: What’s on your dashboard” SHC Anaesthesia Rounds. South Health Campus Section of Anesthesia, November 2014
- Presenter, “Anaesthetic Considerations in the Increased BMI Patient”. Rural Anaesthesia for GP Anaesthesiologists Conference. Banff, Alberta. January 2015
- Attendee, Royal College Of Physicians And Surgeons Simulation Education and Teaching Workshop. Edmonton Alberta. April 2015
- Attendee, American Society of Regional Anaesthesia Annual Meeting. Las Vegas, Nevada. May 2015
- Attendee, South Health Campus Department of Anaesthesia Retreat. Calgary Alberta. May 2015
- Instructor, PACU E-simulation sessions. Calgary, Alberta.
- Olivieri, L.** eSim Outreach OR Simulation physician facilitator, rural hospitals

EDUCATION



PGME / UME / CME

- Bharwani, F.** Modified Early Obstetric Warning System. February 20, 2015
Modified Early Obstetric Warning System. January 7, 2015
- Brown, N**
Chow, L. FATE/Lung/FAST Point of Care Ultrasound Course. 2014
Block Coordinator, Obstetrics block, Anesthesia Residency Program Half Day.
December 2014
Completed Thoracic Anesthesia fellowship, Toronto General Hospital, Toronto, ON.
Feb. 1 – July 31, 2015
Research supervisor for:
Dr. A. Carr
D. L. MacKenzine
Dr. W. Lam
Dr. A. Moazeni
Dr. N. Lange
Instructor - Difficult Airway Management Course. November 2015
Foothills Medical Centre OB Anesthesia Residency Rotation Coordinator
Instructor, OB epidural simulator individual sessions
Instructor - OB orientation Session for all PGY1 and GPA residents
Lecture to MFM Fellows, Medical Disorders in Pregnancy. Calgary, AB, December 2014
Lecture to MFM Fellows – Obstetric Emergencies. Calgary, AB. April 2015
Resident presentation – Obstetric emergencies. Calgary, AB. August 2014
Journal Club supervisor to: Drs. Mosser, Lo, Finningley and Hutton. Calgary, AB, June 2015
Presenter “Basics of Ultrasound Guided Regional Anaesthesia” Introductory Tutorial Session with University of Calgary Regional Anaesthesia Rotation Residents.
Attendee – AHS Calgary Zone and University of Calgary Department of Anesthesia Visiting Professor Rounds and Journal Clubs.
- Chu, A.** Instructor, Ultrasound-guided Regional Anesthesia Workshop, Bethune Round Table. June 2015
Moderator, Anesthesia Paper Session, Bethune Round Table. June 2015
Past Coordinator, Anesthesia Assistant Room Relief Program.
South Health Campus Anesthesia Rounds, “Global Health”
South Health Campus Anesthesia Rounds, “Medical Education”
South Health Campus Site Coordinator, Anesthesia Residency Program and Anesthesia Clerkship Program
Anesthesia Residency Core Program Staff Contributor
Instructor, Global Health Training Course for Anesthesia Residents and Clerks

EDUCATION



PGME / UME / CME

- Chu, A.** Staff Interviewer, Anesthesia CaRMS Selection Committee
Staff Member, Competency by Design Committee, Anesthesia Residency Training Committee
Supervisor, Med440 course
Staff Preceptor, Post-Trip Debriefing Sessions, Global Health Office
Staff Instructor, Clinical Skills Program, Anesthesia Undergraduate Education Program
Mentor, HonBSC Mentorship Program
- Cox, R.** University of Calgary Cumming School of Medicine, Medical Student Faculty Advisor.
Calgary CME Lead for Anesthesia
Member, Faculty of Medicine CME Committee
Examiner, Undergraduate Medical Education Clinical Skills
Alberta International Medical Graduate Examiner
Member, Cummings School of Medicine Medical Student Appeals Committee
Regular Presenter, Anesthesia Core Program
- Endersby, R.** Presenter, "Basic Ultrasound Guided Regional Anaesthesia Workshop – Interscalene and Supraclavicular Nerve Blocks". American Society of Anaesthesia Annual Meeting.
Presenter, "Regional Anaesthesia Nursing Lecture". SHC PACU Nursing Rounds.
Presenter, "Ultrasound Guided Regional Anaesthesia Nerve Blocks – Upper Limb Workshop". Rural Anaesthesia for GP Anaesthesiologists Conference.
Co-Presenter "Paediatric Regional Anaesthesia Workshop". Rural Anaesthesia for GP Anaesthesiologists Conference.
Presenter, "Post Course Comprehensive Workshop in Ultrasound Guided Regional Anaesthesia". Rural Anaesthesia for GP Anaesthesiologists Conference.
Co-Presenter, "Standardization of analgesic orders for the management of postoperative pain for patients undergoing total hip or knee joint replacement at the South Health Campus". South Health Campus Anaesthesia and Orthopaedics Joint Rounds Presentation.
Presenter, "Regional Anaesthesia PANASAC Nursing Lecture". PANASAC Conference. Calgary, April 2015.
Attendee, American Society of Regional Anaesthesia Annual Meeting. Las Vegas, Nevada. May 2015.
Attendee, South Health Campus Department of Anesthesia Retreat. Calgary Alberta. May 2015.
Attendee, ACLS Recertification course. Calgary Alberta. May 2015.

EDUCATION



PGME / UME / CME

- Darcus, K.** Teaching Scholars in Medicine Program – Administered by the Office of Faculty Development, University of Calgary. October 31, 2014
Coordinated oral exam question session for the R5 residents at PLC
Completed FATE/FAST course. October 4-5, 2014
- Davis, M.** Presenter Core Program for neuroanesthesia and peri-operative medicine.
Participation in resident talk rounds and R5 mock exams
Grand Rounds – “Perioperative Stroke”
“Preoperative Assessment in a Community Hospital”
“Anesthesia for Endovascular Treatment of Stroke”, and “Desirable Characteristics of an Anesthesiologist”
“Career Choice in Medical Students”
Teaching Procedural Skills
Master Teacher (small group, simulation across UME curriculum)
OSCE examiner
- Duttchen, K.** Foothills Medical Centre Section of Anesthesia Friday morning rounds coordinator
Presentations to operating room room and post anesthesia care unit nurses on peri-operative fluids
Educational sessions for peri-operative nursing course introduction to anesthesia.
- Ho, E.** Instructor, Obstetrical Anesthesia Simulation Session
Attendee, AHS Calgary Zone and University of Calgary Department of Anesthesia
Visiting Professor rounds and Journal Clubs
- Kostash, M** Attendee – AHS Calgary Zone and University of Calgary Department of Anesthesia
Visiting Professor Rounds and Journal Clubs
Block Manager, Regional Anesthesia & Pain Management block of Core Program
Member, Organizing Committee of CRAIG (Calgary Regional Anesthesia Interest Group)
American Society of Regional Anesthesia - Annual Meeting, Las Vegas. May 13-17, 2015
Bethune Round Table Conference (International Health). June 5-7, 2015
Cadaver Workshop - the use of Ultrasound in Anesthesiology (regional anesthesia & vascular access)
(Satellite workshops presented for Anesthesia Residents and Staff). 2012-2015
- MacAdams, C.** Afternoon in Arthroplasty: ABJHI: anesthesia and blood transfusion in arthroplasty surgery; presentation to patients. Radisson Hotel, Calgary. September 2014
Massive transfusion: presentation to hematology residents and fellows, Foothills Medical Centre, Calgary. November 2014 and March 2015
Blood Conservation in Cardiac Surgery: Presentation to APPROACH cardiac sciences. September 2014 database meeting

EDUCATION – PGME / UME / CME



MacAdams, C.

Broken Earth Medical Mission to Haiti: provided anesthetic care and teaching in Port-au-Prince Haiti. September 2014

Non ischemic heart disease: valves, cardiomyopathies, pericardium: cardiac anesthesia core program with Kyle Rogan. September 2015

Transfusion Algorithm in Cardiac Surgery: research study: Cardiac Surgery Grand Rounds. November 2014.

Non ischemic heart disease: valves, cardiomyopathies, pericardium. Department of Anesthesia, Calgary. September 2015

Transfusion Algorithm in Cardiac Surgery: research study: Department of Pathology Grand Rounds. January 2015

Transfusion medicine: medicine core program with Kevin Yee. January 2015

McAllister, D.

•Anesthetic Neurotoxicity in the Developing Brain, Pediatric Respiriology Grand Rounds, Alberta Children's Hospital, Calgary

Anesthetic Neurotoxicity in the Developing Brain, Pediatric Intensive Care Rounds, Alberta Children's Hospital, Calgary

•87 hours undergraduate medical education teaching, simulation and small group format

Maher, N.

FATE (Focused Assessed Transthoracic Echocardiography), emergency Lung ultrasound and FAST (Focused Assessment with Sonography for Trauma) workshop. Course director and instructor. October 4-5, 2014

Transesophageal echocardiography assessment for primary endoleaks during thoracic aorta endovascular stent procedure. May 28, 2015

Morrow, F.

PMI Course (Disruptive Behaviour). October 2015

SET Instructor Course. April 2015

Simulation instructor SHC OR September 2014 and April 2015

PMI Course (Self-Awareness). April 2015

Rabuka, S.

Obstetrical Anesthetist's Association (UK) annual meeting. May 18-20, 2015

Seal, D.

•Cardiac Monitoring – Arterial, CVP, PAC, TEE, Cerebral Oximeter, Non-Invasive CO – Core Program, Cardiac Anesthesia

•Management of the Cardiac Surgical Patient – Core program, Cardiac Anesthesia

Teoh, D.

Difficult Airway Management Course. March 2015