



Department of Surgery

Annual Report 2015/2016

April 1, 2015 to March 31, 2016



UNIVERSITY OF CALGARY
CUMMING SCHOOL OF MEDICINE
Department of Surgery

Report Designed, Compiled and Edited by Aysha Zafar and Christine Bourgeois

All Content and Photography (Unless Otherwise Stated) by Aysha Zafar

We wish to thank all of the surgeons, administrators and other team members whose tremendous efforts made this report possible.

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A Message from Dr. Sean Grondin

It is my pleasure to write to you as the new Head of the Department of Surgery at the University of Calgary. It has become increasingly apparent to me over the last few months that the Department has a wide breadth of dedicated members along with a management team that work extremely hard to support our mission.

Since accepting the position in early July, I have given considerable thought to the roles and responsibilities of the Department Head position and leadership team, as well as my own vision for the Department. This vision, to enhance the ability of surgeons to provide the highest quality patient care, is founded on discussions with numerous leaders past and present as well as my understanding of the strategic goals of Alberta Health Services and the Cumming School of Medicine. This vision is based on three core values for improving outcomes; these being access, quality, and cost.

The goals of delivering timely access to care and advancing the quality of healthcare services while maintaining cost effectiveness will be supported by three additional strategic priorities which include, research and innovation, education, and collaboration and engagement.



Dr. Sean Grondin
Professor and Head, Department of Surgery
Cumming School of Medicine, University of Calgary



Listed below are key initiatives in the strategic priorities plan that have been set into motion and which I look forward to sharing with you in greater detail in the near future.

Access

- Hire OR flow specialists to seek efficiencies in operating room utilization.
- Participate in the planning of the new cancer center.
- Develop additional metrics for accurately measuring OR utilization and capacity.

Quality

- Support implementation of innovative models of service delivery where deemed appropriate.
- Develop a comprehensive QA/QI plan by establishing an Office of Surgical Quality.

Cost

- Support the implementation of an academic alternative relationship plan.

Research and Innovation

- Review the strategic goals and resource allocation of the Office of Surgical Research.
- Recruit and support successful surgical investigators.
- Support the development of promising surgical technologies.

Education

- Review the structure and resource allocation of the Office of Surgical Education.
- Enhance the global clinical outreach programs.

Collaboration and Engagement

- Create an electronic directory for department members.
- Revitalize the departmental internet and social media presence.
- Re-engage faculty by restructuring activities such as Grand Rounds and business meetings.

The implementation of these strategic priorities will be challenging and require additional information as well as much consultation and engagement with faculty and AHS/CSM stakeholders. These goals must be developed in the context of shifting budgetary considerations and will require flexibility, teamwork, persistence, patience, and innovation for success. I look forward with optimism and enthusiasm to working together over the course of my term toward the achievement of these goals.

Department Members

We are a total of 424 members

304 Surgeons
 45 Members in Dentistry & Oral Health
 11 Members in Oral & Maxillofacial Surgery
 14 Members in Podiatric Surgery
 3 PhD Appointments
 29 Cross Appointments
 18 Adjunct Appointments
 14 Sections in Total

Surgical Executive Team

Dr. Sean Grondin, Department Head Surgery
Dr. Mary Brindle, Deputy Head, Department of Surgery
Mr. Darcy Andres, Manager, Department of Surgery
Ms. Ashley Ulmer, Administrative Assistant to Dr. Grondin
Dr. Kelley deSouza, Acting Associate Zone Medical Director and Facility Medical Director, RGH
Dr. Eduardo Kalaydjian, Section Chief, Dentistry and Oral Health
Dr. Elijah Dixon, Section Chief, General Surgery
Dr. Michael Ashenhurst, Section Chief, Ophthalmology
Dr. Richard Edwards, Section Chief, Oral Maxillofacial Surgery
Dr. Kevin Hildebrand, Section Chief, Orthopaedics
Dr. Wayne Matthews, Section Chief, Otolaryngology
Dr. Frankie Fraulin, Section Chief, Paediatrics and Facility Chief, ACH
Dr. Francois Harton, Section Chief, Podiatry
Dr. A. Robertson Harrop, Section Chief, Plastic Surgery
Dr. Greg McKinnon, Section Chief, Surgical Oncology
Dr. Sean McFadden, Section Chief, Thoracic Surgery
Dr. Anastasio Salazar, Section Chief, Transplant
Dr. Paul Petrasek, Section Chief, Vascular Surgery
Dr. Kevin Carlson, Section Chief, Urology
Dr. Jason Werle, Facility Chief, RGH
Dr. John Donaghy, Facility Chief, PLC
Dr. Donald Buie, Facility Chief, FMC
Dr. Beth Lange, Facility Chief, SHC
Dr. Jacques Bouchard, Director, Office of Surgical Education
Dr. Jim Powell, Director, Office of Surgical Fellowship
Dr. Fiona Costello, Director, Office of Surgical Research
Dr. Luke Rudmik, Physician Lead, Health Technology and Innovation
Dr. Duncan Nickerson, Physician Lead, Quality and Safety
Dr. Elaine Joughin, Physician Lead, Quality and Safety
Dr. Rohan Lall, Medical Director, Trauma Services
Dr. Maureen O'Brien, Faculty Ombudsman and Advisor on Diversity
Dr. Gary Dobson, Department Head, Anesthesia
Mr. Andrew Jenkins, Manager, Departments of Anesthesia and Cardiac Sciences
Dr. Doug Wilson, Department Head, Obstetrics and Gynecology
Dr. Imtiaz Ali, section Chief, Cardiac Surgery, Department of Cardiac Sciences
Dr. John Wong, Section Chief, Neurosurgery, Department of Clinical Neurosciences
Dr. Ken Thomas, Program Director, Spine Surgery
Ms. Caroline Hatcher, Acting Senior Operating Officer, FMC
Ms. Holly Mackin, Executive Director, Surgery, FMC
Ms. Margaret Fullerton, Executive Director, ACH
Ms. Jill Woodward, Executive Director, Inpatient Care, Child and Women's Health, ACH
Ms. Susan Reader, Executive Director, Surgery, RGH
Ms. Susan Rawding, OR Manager, RGH
Ms. Val Marsten, Executive Director, Surgery, PLC
Ms. Joanne Cabrera, Executive Director, Surgery & Women's Health, SHC



Appointments

Dr. Artan Reso, General Surgery, has accepted the position of Director, Office of Surgical Education

Dr. Duncan Nickerson, Plastic Surgery has accepted the position of Co-Director of Quality and Safety for Surgical Services, Calgary Zone

Dr. Lloyd Mack, Section of General Surgery, has accepted the position of Chair- Post Graduate Surgical Training Committee

Dr. Jeff Way, Section of General Surgery has accepted the position of Department of Surgery Representative on the Physician Assisted Death (PAD) Provincial Steering Committee

Dr. Andrew Crichton, Section of Ophthalmology has been appointed the Chair Block Booking Committee effective December 1, 2015. Thanks to Dr. Jeff Way as outgoing Block Booking Committee Chair

Dr. Borys O. Hoshowsky, Section of Otolaryngology, accepted the position of Medical Staff President at Rockyview General Hospital

Dr. Marcia Clark, Section of Orthopedic Surgery, has been appointed as ATSSL Medical Director

Dr. Justin LeBlanc, Section of Orthopedic Surgery, has been appointed as the Director, Surgical Foundations

Dr. Carol Hutchison, Section of Orthopedic Surgery, has been appointed to the Director of the Education Portfolio

Appointed Research Portfolio Co-Directors, Section of Orthopedic Surgery:

Dr. Paul Salo has responsibilities of Faculty research and liaising with the McCaig Institute

Dr. Marlis Sabo has responsibilities of trainee research

Dr. Simon Goldstein, Section of Pediatric Surgery has been appointed to the Clinical Knowledge Leader (CKL) for Surgery from the Clinical Knowledge and Content Management (CKCM) Service

Dr. Indraneel Datta, Section of General Surgery, has accepted the position of a Fees Representative for Alberta Medical Association

Promotions

Promoted to Professor

Dr. Donald Buie, Section of General Surgery

Dr. Elijah Dixon, Section of General Surgery

Dr. Lloyd Mack, Section of Surgical Oncology

Dr. Claire Temple-Oberle, Section of Oncology

Dr. Sean Grondin, Section of Thoracic Surgery

Dr. May Lynn Quan, Section of General Surgery, has received tenure

Promoted to Associate Professor with Tenure

Dr. Elizabeth Oddone-Paolucci, Department of Surgery

Promoted to Clinical Professor

Dr. James Powell, Section of Orthopedic Surgery

Promoted to Clinical Associate Professor

Dr. Kevin Carlson, Section of Urology

Dr. Richard Baverstock, Section of Urology

Dr. Adrian Harvey, Section of General Surgery

Dr. Luke Rudmik, Section of Otolaryngology

Promoted to Clinical Assistant Professor

Dr. Stephen French, Section of Orthopedic Surgery



Strategical Clinical Network

The Surgery Strategic Clinical Network is a community of health care providers, operational leaders and stakeholders who strive to achieve consistent quality evidenced based surgical care across the province. Our vision for the future is one where all Albertans receive the right surgical care at the right place and time. There were many major achievements and accomplishments throughout the year, but some highlights include implementation of a new quality based measurement and improvement program (NSQIP) at 5 major surgical sites in the province; optimization of current diagnosis based coding system to measure wait times of scheduled surgeries (aCATS); expansion of our Enhanced Recovery After Surgery (ERAS) Program and launch of our **Surgical REsearch Engagement and Development (SEED) Grant Award Program**. These achievements are briefly described below and any additional information on the Surgery SCN and its programs please contact Stacey Litvinchuk, Executive Director, Surgery Strategic Clinical Network at: stacey.litvinchuk@ahs.ca

National Surgery Quality Improvement Program (NSQIP)

The National Surgery Quality Improvement Program (NSQIP) utilizes clinical data and local clinical champions to drive quality improvement initiatives at surgical sites. In Alberta NSQIP has been implemented at 5 major surgical sites across the province including; Rockyview General Hospital, University of Alberta Hospital, Red Deer Regional Hospital, Queen Elizabeth II Hospital and Chinook Regional Hospital. The team at Rockyview (Dr. Lea Austen, Dr. David Liepert, Susan Reader, David Chakravorty and Renee Duckworth) has already seen meaningful improvements while working on a quality improvement project for a subset of urology patients. The development of patient education packages, a defined clinical

pathway, and a post-operative order set within the electronic health record to support improved outcomes for cystectomy patients were just some of the key improvement structures developed by the improvement team. This QI work under NSQIP has engaged front line staff from various departments to form small teams to implement the changes which in turn has helped to foster a larger culture of continual quality improvement at RGH.

The opportunity to participate in NSQIP has provided the RGH team with meaningful outcomes data in numerous surgical areas. One group that has consistently received exemplary accolades is the Colorectal surgical team who continue to remain in the top (1st decile) for their Surgical Site Infections rate, their Return to the OR rate as well as their Sepsis rate. Also of note, NSQIP reports on Provincial rates (5 NSQIP pilot sites) and National rates (52 Canadian Hospitals) and the colorectal team is consistently ranked exemplary in the same three outcome measures.

To find out more about NSQIP, please contact Stacey Litvinchuk: stacey.litvinchuk@ahs.ca

Enhanced Recovery after Surgery (ERAS)

Enhanced Recovery After Surgery (ERAS) is an international evidence-based way of providing care before, during and after surgery. ERAS helps patients prepare and recover from surgery with shorter hospital stays, fewer complications and less return visits to hospital. ERAS Alberta supports physicians and hospital clinical teams to provide best-practices care before, during and after surgery. Clinical and system data reports, integrated research projects, and patient and clinician feedback to help drive quality improvement and monitor ongoing adherence to ERAS guidelines.

In Calgary Zone, ERAS for elective colorectal surgeries has been implemented at the Peter Lougheed Centre (2012-present) and Foothills Medical Centre (2013-present) contributing to reductions in health services utilization e.g., length of stay, readmissions, emergency department visits, and net health system savings of \$2.3 million or \$1768 per ERAS patient across the initial 6 ERAS sites (Thanh et al, accepted for publication October 2016, Canadian Journal of Surgery). Currently, implementation is underway for new ERAS International guidelines at the Foothills Medical Centre (pancreas and gynecology surgery) and Rockyview General Hospital (cystectomy). Other ERAS International guidelines slated for implementation in the Calgary Zone in 2017 include liver, head and neck, breast reconstruction surgery at the Foothills Medical Centre, elective colorectal surgery at the Rockyview General Hospital, and major gynecology surgery at the Peter Lougheed Centre. The development of ERAS Alberta guidelines for vascular surgery is also being planned at the Peter Lougheed Centre with implementation in 2017.

To find out more about ERAS Alberta, please contact Alison Nelson, ERAS Provincial Lead: alison.nelson@ahs.ca

Adult Coding Access Targets for Surgery (aCATS): aCATS is an Alberta developed, standardized system to help prioritize elective surgeries offered at facilities throughout the province, depending on a patient's diagnosis and level of urgency. In November 2015, aCATS was at 32 sites, completing the provincial implementation spread. These sites conduct approximately 93% of the scheduled

surgeries in Alberta that aCATS covers. The creation of the aCATS Surgeon Advisory Group (13 surgeons from 11 services and five zones) resulted in increased physician engagement and provided critical feedback for aCATS optimization. As a result of this feedback and in partnership with the Calgary ORIS Business Team, modifications were made to the aCATS Surgeon Detail Report to include surgical procedure information and case time to aid in scheduling patients for surgery.

aCATS Quarterly Review and Summary reports are now being used at monthly site surgical executive meetings to generate discussion and understand surgical access and capacity gaps across services and sites.

PERFORMANCE

In 2015-16, the Calgary Zone completed 62,973 surgical cases using aCATS as a means to measure and assess whether cases were completed in or out of window in relation to their diagnosis access targets (see Figure 1 and Table 1). The total number includes cases from non-hospital surgical facilities (NHSFs) (18,479 total) and Tom Baker Cancer Centre (TBCC) (528 total). Note: 1) TBCC only includes GYN and not prostate brachy; 2) Calgary data does not include Calgary Rural facilities; 3) NHSFs = Surgical Contract Sites; and 4) Data for report pulled on August 31, 2016.

Figure 1.

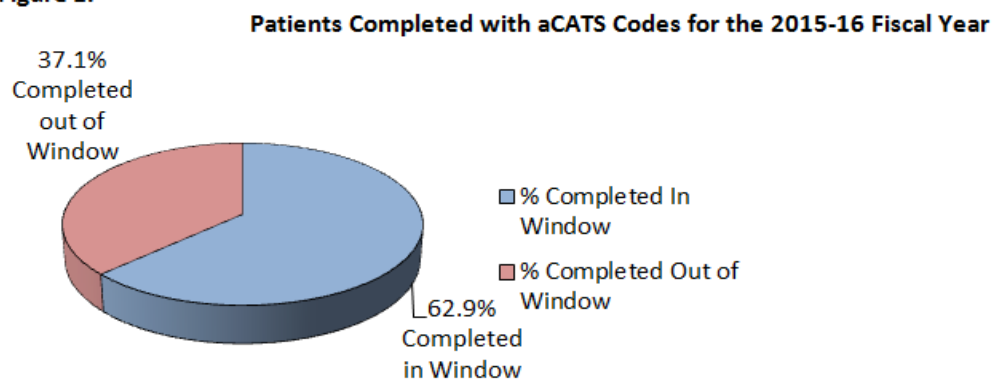
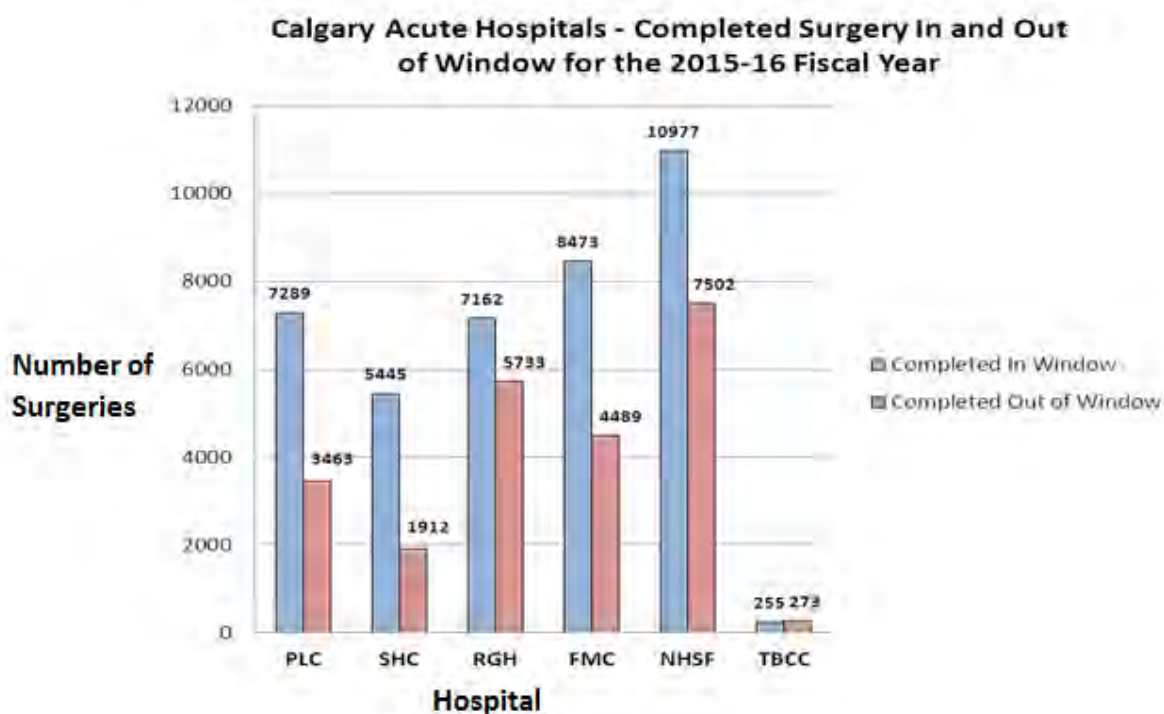


Table 1.

Total of patients completed in and out of target:

Site	Completed In Window	Completed Out of Window	Total Number
PLC	7289	3463	10752
SHC	5445	1912	7357
RGH	7162	5733	12895
FMC	8473	4489	12962
NHSF	10977	7502	18479
TBCC	255	273	528
Total	39601	23372	62973
	62.9%	37.1%	



Compared to the previous year, the total number of surgeries coded with aCATS has increased slightly by 1713 cases (0.03%). We also see slight differences in cases being completed in window at 62.9% in 2015-16, a drop from 64.7% in 2014-15. This means we see the reciprocal with cases completed out of window having a slight increase from 35.3% in 2014-15 to 37.1% in the past fiscal year of 2015-16.

CANCER SPECIFIC

In the 2015-16 fiscal year, the Calgary Zone completed 7318 cancer cases. 51.4% were completed in window and 48.6% per cent were completed out of window. This data does not include non-hospital surgical facilities. See below for details and the Zone data by each hospital site.

Figure 3.

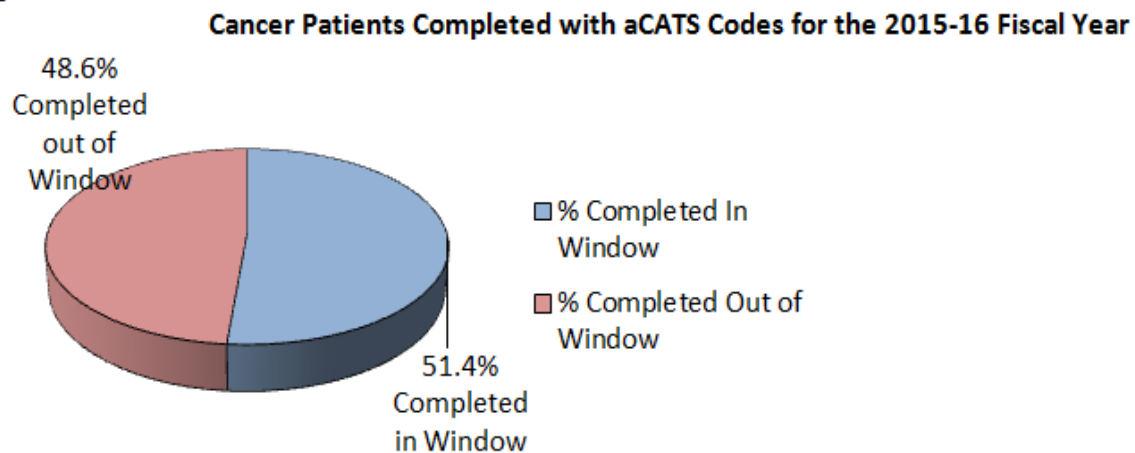


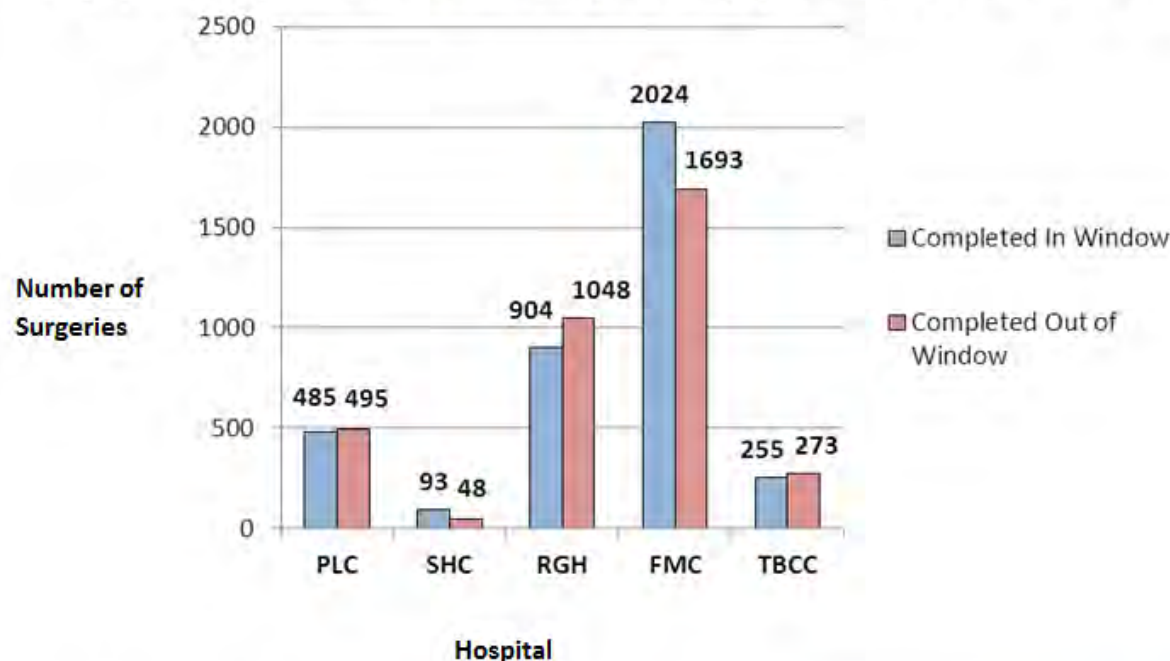
Table 2.

Total cancer patients completed in and out of target:

Site	Completed In Window	Completed Out of Window	Total Number
PLC	485	495	980
SHC	93	48	141
RGH	904	1048	1952
FMC	2024	1693	3717
TBCC	255	273	528
Total	3761	3557	7318

Figure 4.

Calgary Acute Hospitals – Cancer Patients Completed Surgery In and Out of Window for the 2015-16 Fiscal Year



To find out more about aCATS, please contact Bryan Atwood, aCATS Provincial Lead: bryan.atwood@ahs.ca

Head and Neck Surgery Pathway Update (supported by Cancer SCN)

A pathway for patients undergoing major head and neck surgery with free flap reconstruction is operating in both Calgary and Edmonton. Results from both centres show significant reductions in surgical complications, Intensive Care Unit (ICU) length of stay and overall hospital length of stay. As a result of this work, the Alberta team established an international enhanced recovery after surgery (ERAS) working group and an ERAS guideline for this patient population was created. The ERAS guideline was recently presented at a major head and neck surgery conference and it was also recently accepted for publication in JAMA - Otolaryngology Head & Neck Surgery. They are now in the process of implementing an ERAS pathway in both Calgary and Edmonton that will include an up to date interactive measurement and audit system.

In collaboration with Cancer Control Alberta's C-MORE group, they have also developed a provincial "dashboard" that enables sharing and reporting of both local and provincial clinical outcome data. These innovations set the stage for the 2 major Alberta head and neck programs to share and learn from each other's results. The ERAS implementation will spread to other collaborating centres and provide an opportunity to learn from their outcomes as well. The end result of these early steps will enhance our ability to deliver high quality / high value surgical care.

Rectal Cancer Clinical Care Pathway Update (Supported by Cancer and Surgery SCNs)

A diagnostic and treatment pathway for rectal cancer patients has been recently implemented across the province. Education sessions have been delivered to multidisciplinary groups of physicians that manage rectal cancer care to reinforce optimal care and highlight pitfalls in

practice. Synoptic reporting templates for rectal cancer MRI and surgery have been implemented. A measurement and reporting system to provide physicians with ongoing feedback on performance and outcomes has been developed. Participation in multidisciplinary tumor boards has been enhanced to ensure provision of care according to clinical practice guidelines. Results of this work include increased use of pre-operative staging MRI, increase in completeness of synoptic MRI and pathologic assessment reporting, and improved surgical technique. Expertise in real-time data management for oncologic care that is adaptable to other tumor groups is being developed through this work in collaboration with Cancer Control Alberta's C-MORE group.

Research Achievements: The Surgery SCN launched its first Surgical REsearch Engagement and Development (SEED) Grant Award Program in the spring of 2015. Thirty-nine proposals were developed from which five received funds totaling \$50,000. Research Agreements were executed with both the University of Alberta and the University of Calgary to support facilitation of research from this program. Two research grant applications (Canadian Foundation for Innovation – Cyberinfrastructure Initiative Challenge One and Canadian Foundation for Innovation – John R Evans Leaders Fund) were submitted on behalf of the Surgery SCN to support research capacity development. The Surgery SCN has also provided endorsement, in-kind support, and research support on over 22 external grant applications.

To find out more about the SSCN Research Office, please contact Kelvin Mok, SSCN Assistant Scientific Directory: kelvin.mok@ahs.ca

Enhanced Recovery After Surgery (ERAS)

The ERAS society launched their formal ERAS Colorectal program in 2013 at two different sites in the province: Peter Lougheed Centre in Calgary, and Grey Nuns Hospital in Edmonton. The next phase of ERAS involves the spread of the Colorectal program to an additional four sites (Foothills Medical Centre, Royal Alexandra Hospital, University of Alberta Hospital and Misericordia Community Hospital).

Dr Gregg Nelson, Gynecologic Oncologist at the Tom Baker Cancer Center, and Surgical Lead for ERAS Alberta, recently published the results of the Colorectal program implementation in the *World Journal of Surgery*. Based on a cohort of 1333 patients, there was an average reduction in length of stay of 2.3 days seen in the ERAS group which translated into a cost savings to the healthcare system of \$4.5 million dollars. "These cost savings are significant and Alberta Health Services is now starting to pay attention to this. In this era of resource allocation issues, AHS is really trying to look for projects that bend the cost curve to try to get more out of the system, at the same time, they don't want to diminish patient outcome. The ERAS project really meets these needs," explains Dr. Nelson.

Alberta surgeons are leading the way in developing international ERAS guidelines. Dr. Nelson leads the Gynecologic Oncology ERAS working group that recently published the ERAS guidelines for Gyn/Onc (part I and part II papers). Dr. Joe Dort is the lead for the ERAS Head & Neck Cancer ERAS guideline, and Dr. Claire Temple-Oberle is the lead for the Breast Reconstruction ERAS guideline. This work was showcased at the ERAS World Congress in Lisbon, Portugal April 27-30, 2016.

Further study of the benefits of ERAS at a provincial level is well underway. In 2014, the ERAS Alberta Team, co-led by Dr. Nelson and Dr. Leah Gramlich (Edmonton Gastroenterologist), received a PRIHS

(Partnership for Research in Innovation in the Health System) grant to study both the economic impact of ERAS but also to examine the barriers and enablers to ERAS implementation. The barriers and enablers work has just been written up and submitted for publication to the journal *Implementation Science*.

They are now focused on preparing a grant for submission to CIHR entitled: Scale and Spread of Enhanced Recovery (SaSER): A Patient Focused Health System Solution for Alberta. The focus of this project would be to bring the benefit of enhanced recovery principles to those patients where a formal ERAS guideline does not yet exist. Examples include Cesarean section patients and also children undergoing appendectomy. "Just because we don't have formal, published, ERAS guidelines for all surgery types, why can't those patients also benefit from the enhanced recovery approach? So that's really what SaSER is all about, it's about taking those enhanced recovery principles and applying them to all surgery types," says Dr. Nelson.

Another exciting part of the SaSER proposal will be to involve patients' feedback within the ERAS system. Patient Reported Outcomes (PROs) are being called for to ensure surgeons are not just telling patients what to do. Rather, through a new program called PACER (Patient and Community Engagement Research), the ultimate goal is to have trained surgical patients who can then collect feedback from other patients to ask questions like, "What was your experience with ERAS?" This method would remove the hierarchical bias and ease the intimidation some patients feel when asked by surgeons how they feel, and not prompting them to tell the surgeons what the doctors want to hear.

Non-Heart Beating Donors

Canada ranks one of the lowest in organ donations in the world-according to the annual report for Canadian Organ Replacement Register. Canada has 15 donors per one million people, and due to the drop in organ donation, medical associations are looking to examine non-heart beating donors (NHBD) as a way to increase their organ pools in Canada.

Did you know that one organ and tissue donor can benefit up to 80 people as a result of their donation?

Yet sadly, Canada's deceased organ donation ranks amongst one of the lowest in the world, 15 donors per million people -coming in behind United Kingdom at 49 per million, Spain at 34 per million, and United States of America at 26 per million¹ in 2013.

What does deceased organ donation mean?

Deceased organ donation is the process by which an individual decides to donate their organs upon death. Once they undergo brain death-irreversible complete loss of all brain function- their organs are still kept alive through a ventilator.

The next step involves a complete medical history check, along with blood work and ultrasounds to determine the health of the organs and ultimately, whether or not they are viable for use.

In 2014, about 278 people died in the hospital waiting for an organ for transplantation in Canada, and the numbers keep rising every year little by little².

Deceased organ donations are low due to a variety of reasons including; prevention of injury, lack of facilities, and dangerously low live organ donors.

In an interview with Dr. Anastasio Salazar, the Section Chief of Transplant Surgery in Southern Alberta, he conveyed some of the reasons regarding the low cadaver donation rate in Canada. Compared to other countries, Canada's Public Health regulations are compulsive and in this respect, there is a permanent campaign to prevent accidents to avert injuries from accidents through the use of tools like seat belts, helmets, etc. These tools are used to prevent individuals from having irreversible brain injuries.

Nevertheless, these policies and regulations of preventing injuries need to be seen in a positive light; but at the same time, this is the very reason for the urgent need to implement the use of allowing NHBD practice to launch.

Another reason for a lack of deceased organ donation deals with the lack of resources? Individuals have to express their desire for donating their organs. Although interestingly, Dr. Salazar points out, people in Canada are more willing to donate their organs compared to other countries.

The problem, however, still remains. With demands of organs such as; kidney, liver, lungs, heart, and pancreas transplants in high demand, the option of selecting? another method of obtaining organs from donors is increasing.

The alternative option besides deceased organ donations is known as non-heart beating donors. The NHBD concept was not socially recognized or culturally accepted until very recently, as recent as 2005.

"Non-heart beating donor was the way cadaveric transplants started many, many years ago... it sounds modern...but actually, that's the way cadaver organ transplant originated," clarifies Dr. Salazar.

A non-heart beating donor is a human being who has not reached the point of brain death and cannot be declared as brain dead either. In this case, the individual is still a person and not a cadaver.

Dr. Salazar stresses that although donation after cardiac arrest or non-heart beating donor is perceived by medical personnel and the public as a "new and innovative procedure," this is not the case. Ever since cadaver organ donation started, it was through the practice of using non-heart beating donors. Since the initiation of cadaver organ donation, the concept of Brain Death was not yet clearly defined, therefore, the consequences of all organs from cadaver donors were taken after the heart stopped.

It was not until the late 60's and the beginning of 70's in the 20th century, with the adoption of the "Human Gift Act" in the U.S. (followed soon by other countries) when the concept of Brain Death was adopted and donation with heart beating donors for cadaver organs started.

Since this modality permitted the donation of the heart, which was not possible with NHBD and in fact to make heart transplantation possible, was the motive behind the implementation of the concept of Brain Death as a valid definition of death for the procurement of organs for transplantation. Brain dead donors will soon be replacing NHBD.

This information begs the question, why NHBD donation was reintroduced.

The reason behind this concept came about from patients with irreversible brain injury. They do not reach the criteria of brain death and therefore, their organs cannot be procured for donation. However, life support of these patients is discontinued and their organs cannot be used for donation or transplantation despite the individuals or the family's wishes. To make this decision possible, NHBD were reintroduced.

The ethical debate surrounding NHBD has been ignited for decades, both sides claiming valid points. The introduction of NHBD in Southern Alberta is important for three major reasons. One being, despite the fact of optimizing live kidney

donation to a maximum in the last five years, there are still people dying in dialysis without the opportunity for a kidney transplant.

Secondly, although the NHBD program will not bring a substantial number of new organs from donations, it will however, contribute to an already scarce resource.

Thirdly, the NHBD program will increase the organ pool in kidneys and livers, but this will result in an indirect effect in increasing the cadaver donors from the brain death pool. This is because it will inevitably consider patients which were eliminated as candidates previously without considering them as a potential donor. In these circumstances, some cases will progress to brain death and they will then become normal cadaver donors. This may in fact not only contribute to a higher degree to the pool of organs than NHBD, but will also indirectly benefit other programs as Heart, Lung, Liver, and Pancreas transplants.

In all, the adoption of NHBD in southern Alberta is good news not only for kidney or liver recipients but for the entire transplant community in general and we should welcome it.

The NHBD practice has been accepted historically since ancient times and also accepted by modern society in the initiation of cadaver donation for transplantation. If society is educated regarding these facts, not only will it be better understood by the layman, but the practice would also be encouraged to continue.

Dr. Salazar clearly defines that the process of obtaining organs from a non-heart beating donor includes several-but fitting steps.

For NHBD, surgeons wait until the heart stops and death comes. After the individual is declared dead, the surgeon will then collect the organs. If the organs were to be harvested for use at a later time, they go through the same preservation processes as any other donation, just with a few logistical tweaks. Focus would be to keep the health of the organ in mind and try to transplant the organ as soon as possible.

In theory, the more brain dead patients society has, the less society would need to rely on living ones.

It may sound morbid, but non-heart beating patients cannot be tracked. Their health status is announced in the hospital, therefore, there is no definite way of knowing who will become a non-heart beating or brain dead donor.

The future of NHBD is something surgeons can only predict, however, both the pros and cons of accepting or declining this practice needs to be weighted and compared.

The byproduct [allowing the use of non-heart beating donors in Canada] which is increasing cadaver donations, will have a huge impact on the waiting list anticipates Dr. Salazar.

The future is still unknown, so far, there has never been an excess of organs. Therefore, there will still be an increasing demand for organs. With donations from the NHBD it will directly benefit kidney and liver recipients and indirectly (because of increase of organ donation in general) also recipients from heart, lung and pancreas.

"We performed approximately 40 kidney transplants five years ago. With the optimization of live donation in 2015, we reached 80. Finally, with the implementation of the NHBD program we project to reach 100 transplantations in the next two years from direct and indirect contributions from the NHBD program." Dr. Salazar explains, "Southern Alberta needs to adopt this practice as soon as possible."



Dr. Anastasio Salazar, Transplant Surgery Section Chief

¹Canadian Organ Replacement Register Annual Report: 2004-2013.

²<http://healthycanadians.gc.ca/diseases-conditions-maladies-affections/donation-contribution-eng.php#a21>

Lights, Camera, Action!

In 2014, TELUS Spark teamed up with the Rockyview General Hospital to broadcast live surgery from the operating room to the students at the TELUS Science Centre once every month.

The audience consists of junior high and high school students, all eager to watch closely as the surgical procedures take place before their very eyes.

The surgery is broadcasted through cameras from two different places. One light is embedded just atop the surgical field and secondly, along the walls of the operating room. Therefore, students from the science center can easily ask questions and they will receive answers in real-time.

Dr. Jason Werle, Orthopedic Surgeon and site chief of Rockyview General Hospital explains, "The response [from students] has been really quite positive in that they ask good questions, they're interested, they learn not just about surgery and surgeons-but also about nursing, anesthesia, and the different roles that support the operating room."

Since the launch back in 2014, there have been 25 surgeries broadcasted and completed live. Currently, the only types of live surgeries broadcasted are of orthopedic and total knee replacement surgeries. The reason behind this decision was due to the following.

"It's a fairly reproducible surgery, people don't tend to die during that surgery, we don't tend to have any complications...very amenable to this type of broadcast," tells Dr. Werle.

Dr. Werle recognizes that other science center's broadcast more complex surgeries such as heart surgeries, but he hopes this program can expand just as much in the future.

When considering which factors contribute to determine the live broadcasting of a patients' surgery, the health of the individual is taken into consideration.

Factors such as; risk of complication, body size, and overall health are looked at carefully.

Once a patient is selected, surgeons obtain the consent from the individual. The patient is phoned ahead of time, and also asked to sign paper consent to broadcast the surgery. In the end, the identity of the patients remains anonymous.

But due to the overwhelming positive response and demand from students and teachers, TELUS spark is looking at expanding this collaborative; through a variety of newer and more frequent broadcasting of surgeries.

The new surgery types being considered for this initiative include some urology surgeries, robotic partial nephrectomy procedures, and ophthalmology and surgery of the eye.

Although simultaneously, consideration of logistical and technological measures such as camera placement and audio techniques need to be carefully analyzed while considering the addition of these surgeries and the cost associated with this proposal.

Popularity along with education is one of the biggest motivators in launching new surgeries with the TELUS spark collaborative program.

"These programs align well with their curriculum so we know that through their study of the eye in high school, it fits nicely with the curriculum...there's a lot of physics involved as well so it ties in with other courses and if we can introduce people to careers in healthcare, it's going to grow. We're going to need people to be excited about careers in healthcare," Dr. Werle concludes.

The broadcasting of ophthalmology and urology surgeries are still in the infancy stage but will shortly be launched -because students and teachers are ready to mark their calendars!

Lung Cancer Pathway

A program known as Alberta Thoracic oncology program (ATOP) was launched in 2010-2011. The program was designed by a group of people who found the waiting time to a specialist and access of those patients to a lung cancer specialist was very much out of line compared with the rest of Alberta.

Therefore, ATOP was aimed at helping to reduce the time between the first hints of someone having lung cancer to the time the tests are done to initiate proper treatment.

In order for ATOP to succeed, the program needed to change and develop from different aspects. The biggest aspects were to work with the x-ray doctors to ensure they inform the patient their condition is worrisome of lung cancer and promptly recommend them to a lung specialist. The second aspect ATOP provided was allowing a greater access to additional resources for patients, such as, completing CT and PET scans done.

One of the biggest initiatives launched by ATOP was to open a clinic in which any practitioner can send information on lumps from patients that are worrisome for cancer. The team at the clinic consists of lung cancer specialists who would deal with new cases in the most effective and timely manner.

Through the process of this clinic and lung care specialists, the pathway was able to streamline the process from lung nodules to the surgeons to the cancer center for the processes of diagnosing, investigations, and cancer staging.

This process has reduced wait times for cancer patients significantly by one to two months on average.

ATOP is a provincial program that deals with lung cancer. The two main sites are located in Calgary-Foothills Medical Centre and Edmonton-Royal

Alexandria Hospital. ATOP makes an effort to build a link with all cancer center's such as, Lethbridge and Red Deer, as well as family doctors to cultivate the relationships with the patient.

ATOP also works with all sorts of administration including the areas of; operating rooms, inpatient clinics, outpatient clinics, endoscopy suites, etc. ATOP also has liaisons with the cancer center and representatives from the cancer center and other organized groups work with ATOP to help cancer patients as well.

In order for the lung cancer pathway to be evaluated, timelines needed to be created for each patient. The Steering Committee of ATOP reviewed 50 to 100 patients who had lung cancer, creating a timeline for all the steps that contributed to late care. These timelines included every step; 1. Time from the first scan at the physician's office, 2. The first CT scan, 3. The PET scan and wait for pulmonary doctors, 4. Waiting period to meet surgeons, 5. Finally, the waiting period for booking an operating room.

After a close analysis, the program found the time to the first CT scan was a big stumbling block and needed to work hard to get CT scans in a short period of time.

The second biggest stumbling block was getting the PET scans. This led to working with the diagnostic imaging doctors and two new scanners being brought to Calgary, thus, results of the scans would reach the doctors much faster.

The third aspect was getting patients to a cancer specialist as soon as possible. The process of patients getting diagnosed with lung nodule from their family doctor then pulmonary doctors, and finally to the surgeons, was taking too long. Also, pulmonary doctors see many different problems, whereas, lung cancer is a very small part of their practice therefore, they may not diagnose it in the timeliest manner.

As a result, interventional pulmonary teams were created by Dr. Tremble, Edmonton ATOP member and Thoracic Surgeon, and his team of doctors help to distribute patients for fast-paced diagnosing. The patients will then have nurse practitioners to aid in further reducing time frames for different treatment processes.

ATOP also managed to get approval for more operating time. Getting to the surgeon had become easier, however, it was harder to get OR time. Once the OR time increased, there were few surgeons who were able to operate. This led to the hiring of new specialists and the timeline for lung cancer patients shrunk from seven to four months, to five to two months.

It was extremely important to reduce the waiting time for a patient, because if a patient's lung cancer is not treated properly within a reasonable amount of time, the danger of the cancer progressing and becoming incurable and untreatable increases. The objective is to help patients at an earlier stage to create a greater chance for cure.

ATOP consists of a steering committee that oversees all data ATOP uses through multiple platforms such as; chart reviews, timelines for each patient, etc. Data regarding access to OR's, access to CT scans, completing biopsies, access to get to the ATOP clinic, is collected daily and compiled by an administrator and an analyst, and the Committee reviews this- data bi-monthly with them.

The program also looks at other aspects of the program, such as; recruiting, resources, implementation of lung screening for patients who are at high risk, etc.

Expectations from ATOP includes an overall better outcome. So far, there has never been a link between administrative changes and an increase of patients surviving their cancer, however, getting to patient's diagnosing earlier, treatment processes starting sooner, and positive results are projects ATOP can take part in.

Not much data is revealed yet, however, as this pathway continues, numbers will be provided in the coming years as to the exact improvement of ATOP.

Moreover, one of the areas that needs to be improved is the process and time frame of when the family physician receives the diagnosis of a lung nodule which is worrisome for lung cancer. After which the physician would need to be able to recognize the lump and forward the information to ATOP.

There has been several outcomes achieved since the implementation of the ATOP program. The biggest one being the development from radiology in Alberta oncology cancer programs. Although it is a very specific type radiology, the group is active, thus, allowing a big decrease in time for access in care. The second objective achieved is the ATOP clinic as a whole. The clinical team and their ability to see a large number of patients and also complete the diagnosing in the shortest period of time. The third objective achieved through this pathway is access to important diagnostic imaging-PET scans and CT scans. Taking a look back, the time period for getting a CT scan back was one to three months, however, now, it takes about a week or ten days, a HUGE difference

The future of the pathway includes an effort to encapsulate physicians of all sort to be familiar with ATOP and how it can help. Also, improve workforce to ensure better treatment of patients. This plan includes working actively to recruit surgeons at cancer centers and supporting other members of ATOP to attain the best resources for the patients future.

Annual Surgery Retreat 2016

The annual Department of Surgery retreat took place on April 21-22, 2016, at the Kinnear Centre for Creativity and Innovation, The Banff Centre, Banff, AB.

The retreat focused on two broad topics; conflict of interest and the relationship between the surgeons and the industry-especially in regard to surgical education, and secondly, innovation and entrepreneurship in surgery.

Dr. Jacques Bouchard was in charge of organizing the first half which dealt with conflict of interest and Dr. Robert Bray was in charge of the second portion- entrepreneurship and innovation topics at the retreat.

The retreat also included short presentations on the different aspects of conflict, as well as a debate including two scenarios. The debaters included; Dr. Ian Anderson, Dr. Neel Datta, Dr. Breanne Everett, Dr. Oliver Bathe, and Rose Carter.

After the debate, there was an animated discussion in which the audience gave their opinions as to where they stood on certain topics.

On the innovation side of the retreat, topics such as why the department should be involved in commercializing ideas and technologies were discussed through presentations and personal experiences. The short presentations covered all steps-from the conception of an idea surgeons have to making successful pitches and gaining financial support from their innovations.

Each presentation pushed participants to think outside of the box and challenged them to reach their full potential within their respected fields in the industry.

The objective of the retreat was to make this retreat less of a work activity and more of an informative and educational retreat compared to previous year's retreats. This objective was fulfilled as members gave favorable and entertaining feedback, ending the retreat on positive experiences and minds racing with exciting new ideas.





Profile Joanne Cabrera

Joanne Cabrera is an Executive Director at the South Health Campus; she has been serving in this position for three years now. Cabrera shares her journey from a young girl to a strong leader. A typical day in Cabrera's life includes meetings, meetings, and more meetings. These meetings range from other executive members to new staff orientations to communications personnel. She also works with other site leaders to develop, prioritize and implement the site's action plan for the coming year.

However, Cabrera's life was not always this busy.

Cabrera was born and raised in Calgary, Alberta. She grew up in a tight-knit family of two loving parents- whom still live in her childhood home-and three joyful siblings.

Cabrera knew what she wanted to become at a very young age as the sense of independence and ability to make firm decisions came to her naturally during her childhood.

Those skills put Cabrera to the test at the young age of six when she created one of her most memorable experiences as a young child.

Cabrera and her family were living with her grandparents in Tuxedo Park while they were building their house in another area of the city at the time. One fine afternoon, Cabrera decided to visit her father, who works as a tradesperson, since she thought he would be working on the house and always seemed to be working.

Little did Cabrera know her father would work on the house after he came back from his full-time job and on weekends. Having already decided she would visit her Father, she began to walk to her new house 44 blocks away in Huntington Hills.

So off trekked little Cabrera from 28th Avenue NW to 72 Avenue without telling anyone where she was headed. As she reached the new house-with no one in sight-she thought to herself, 'What a nice walk,' and turned right back around to walk back. After reaching about halfway back, the Police discovered her and took her home to her parents.

It was at that moment her parents realized just how independent Cabrera really was.

As Cabrera grew up, she turned her dream job into reality as she started to pursue her education as a Registered Nurse at Mount Royal University-Mount Royal College back then- and completed both her RN and Master's degree in Health Science with a Major in Administration from a distance program at the University of Toronto with Charles Stuart University out of Australia.

Charles Stuart allowed Cabrera to define her stream during her Master's that matched the values of AHS well and she found the university's course content complimented the career path she chose at the time.

Although Statistics was one of the hardest classes Cabrera took, she was an eager learner and fully participated in all activities and aspects of her education. As a result of her dedication, Cabrera was awarded Nursing Student of the Year during graduation.

One of the most important lessons Cabrera learned throughout her education was about keeping an open mind. An individual may not know what they will need until they get out into the working world and to use that knowledge in various situations. Throughout her education, Cabrera studied in-depth about planning, leadership, population growth, and programming. With a career in health, Cabrera believes she must pay attention to the future just as much as the past and present.

Cabrera started her career as a nurse in the ICU. After two years, she was moved to emergency and stayed there for approximately 15 years, after which Cabrera was sought out and received many wonderful opportunities, allowing her to expand her skills in diverse fields.

After moving from emergency, Cabrera managed six areas at once and then advanced to critical care as a result of re-organization. She then became the provincial director of RAPPID which was a great opportunity to having big exposure to all programs and also to give a sense of what the role of an executive director would be like. Once the role was open for the position of an executive director at South Health Campus, Cabrera seized the chance and made her dream job come true.

As the Executive Director, Cabrera has the responsibility at SHC for the departments of Surgery, Neuro sciences, Women and Children's health. AHS believes strongly in partnerships and one of the ways that is accomplished in Cabrera's roll is through a dotted line reporting structure with several other services; Lab, Diagnostic Imaging, Pharmacy, Academic Family Medicine and Palliative Care. This type of reporting structure allows services that support the site to operate smoothly and efficiently and be included in the sites structure.

For the South Health Campus she has responsibility for three larger portfolios. Cabrera also has Zone responsibilities and is the lead for CoACT and co-leads neurosciences and women's health with another executive director to ensure all staff and partners are informed of the latest program plan and are up to date on latest initiatives. This type of program leadership ensures smooth operations across the entire zone and the programs at each site move forward together.

One of the many achievements Cabrera is most proud of today was having a part in opening a brand new hospital which is not something that happens very often! She is proud of the work she and her team did to move surgery from the planning stages to opening it, and finally, running a fully operational hospital in the Calgary zone. Another memory was the day they cut the ribbon and the first surgery took place; something she will never forget.

Taking a look back, Cabrera would tell her younger self to realize her potential earlier. No matter the path her career took there were valuable lessons, wonderful memories, lasting friendships and always lots and lots of personal growth. Today, Cabrera absolutely loves her job and feels she is as extremely lucky to be able to do what she gets to do every day.

As for her legacy, Cabrera firmly believes when a person takes their journey and especially if they are near the end of one of their chosen paths, they need to turn around and go back to get the next person and bring them along. She truly hopes in the future there will be a number of people she played a part in helping them into the role they dreamed of.



*Joanne Cabrera, Executive Director
South Health Campus*



Profile Valerie Marsten

Valerie Marsten was born and raised in Calgary, Alberta. Her childhood was full of sweet memories from her loving parents, two sisters, and her brother. She distinctly remembers her parents encouraging her and her siblings to follow their dreams-whatever they may be, and always supported her in her decisions. Some of her fondest memories while growing up are from the friendships Marsten grew up with during childhood and school days- some of which have become lifelong bonds.

Growing up, Marsten did not focus her career goals until she was in High School, but it was extremely important for her to do well in school and utilize her education to the best of her abilities.

As Marsten has stayed in Calgary all her life and was working after high school, she chose to complete her undergraduate degree at the University of Calgary. She also attended The Holy Cross School of Nursing for her registered nurse education. Marsten also completed her Master's degree in Business Administration as part of a distance program from the Nova South Eastern University in Florida. Through this program, professors were brought into Calgary, therefore, allowing the students to both work and study full-time.

Although economics and statistics were some of the courses Marsten did not particularly enjoy, she did come across some important lessons throughout her education. Marsten learned to think differently. She believes she was fortunate to have been exposed to people from all walks of life as well as having a rounded out experience with the environment outside the healthcare system. It was quite valuable as it was a way to bring about a different perspective to the way she thought.

One of the things Marsten would tell her younger self if she could go back, would be to live life without any regrets, and would make sure she did that every day-not that she has regrets-but it is an important rule to live by.

Now, as an Executive Director, Marsten has had vast experiences and utilized the skills she learned throughout her education and work experience.

Much like the position suggests, Marsten's day consists of many meetings throughout the day. Many of them are held with her counterparts as well as meetings of all sizes. Marsten deals with issues of safety or patient concerns, solves problems, provides direction, and also provides leadership support for her team so they can do the work they need to do. This is one of the most important tasks of her day.

As the Executive Director for Surgery and Women's Health at the Peter Lougheed Centre, Calgary, Marsten is responsible for surgical services including; the operating room, recovery room, processing department, in-patient clinics, and many of the outpatient clinics.

As for the Surgery aspect, Marsten is responsible for both Women's Health at the Peter Lougheed Centre and the whole Zone in Calgary. Areas of labor and delivery and post partem are the bigger components in this area. Marsten's department has over 1300 staff and over 20 managers, thus, she has to work closely with all of them

to make sure they are delivering excellence in patient care-one of Marsten's many passions- and also working with leadership in terms of strategy and direction within the organization.

Besides working, Marsten loves to go to Malibu. She also enjoys hiking, spending time outdoors, and time with friends. She also likes to exercise through walking, playing tennis, and travelling.

Marsten believes her nursing career has rewarded her well by making a difference in patient's, their families', and staff's lives is what has made the fruit of her hard work even sweeter. Being able to teach leadership and how to support one another is one of the achievements Marsten feels proud of.

Working at the Peter Lougheed Centre has been one of the most memorable experiences for Marsten as she believes it is a place built on community and a sense of can-do attitude. People are committed to making a difference for the patients-not that that doesn't happen in other places-but in many ways, Peter Lougheed has a diverse nature of the people they serve and the people who work there; it fosters a community spirit which Marsten really appreciates.

For the future, Marsten sees herself in her current position as an executive director but at the end of the day, wants to be in a position that she finds challenging and working towards making a difference within society. She wants her legacy to be for her team to look back and say "look at what we did" not "look what I did or she did."



*Valerie Marsten, Executive Director
Peter Lougheed Centre*

Profile *Susan Reader*

Susan Reader is the Executive Director at the Rockyview General Hospital. Reader was born and raised in the small town of Drumbo in Southern Ontario, in an agricultural community with her parents and three siblings.

Growing up, Reader attended a one-room school and her extracurricular activities involved helping out in the community or on the farm. Reader also wanted to become a teacher when she was younger and later decided to focus her career elsewhere as she discovered other interests.

Although they were not able to go on vacations or outings due to the responsibility of the farm her family owned, one of Reader's most memorable childhood experiences occurred on snow days. Due to the snow, students could not get to school and the houses would not usually have power; however, they would have oil heaters to keep the house warm. During that time, Reader's cousins would come over and everyone would stay together. Making meals, milking cows with the generator, and taking old sleighs to use on roads, are just some of the activities she remembers well.

One of Reader's proudest memories during childhood was when she received the highest mark in the school. Her father did not think she could do it, and had promised her a bike if she did. After receiving her mark and realizing she got the highest mark in the class, she ran hurriedly home to show her father to tell him to buy her that bike he promised.

While embarking on her educational journey in Southern Ontario, Reader was part of the last group that took part in a "two plus one year," program. This program was hospital based training and included a one year practicum at the Toronto General Hospital. After completing this program, Reader completed her Bachelors of Nursing at Athabasca University. She chose Athabasca University for her undergraduate degree as it was more practical and respected her as an adult learner,

Reader then pursued her post graduate studies in health leadership at Royal Roads University in Victoria, BC. The focus of the degree was on leadership which included change management, team work, team-building, financials, organizational learning and organizational behavior. Not only was the reputation for Royal Roads University very high, Reader found the University to be geared and keyed into adult and online learners. The degree was designed to be completed in two years. There were four residencies which brought all the students together for a total of eight weeks. The remaining courses were completed on-line. Expectations and competencies to be achieved were clearly outlined which supported the students to complete and publish a thesis in the two year time frame. One of the most important lessons Reader learned throughout her education was to pursue school to develop self and awareness. Going to school was a way Reader had developed herself as an individual, asking herself questions like; what does she need to learn, what would she like to learn, where would she take her skillset, etc.

Reader kept her motivation going through school by putting one foot in front of the other and persevere through. In fact, when she first started studying nursing, it was not even considered a profession legally. That has changed over the span of years especially, in what nurses think, do, and practice.

One of Reader's most memorable experiences occurred when she was working in Manitoba. One of her duties included bringing patients into the clinic the day before their surgery. She met with a young man whose surgery involved the removal of his voice box and as a result, was going to lose the ability to speak due to cancer. He already had a plan, Reader remembers. He was learning sign language, and was going to be an interpreter for someone who was deaf. This surgery was going to change his whole life around. It was a very emotional experience to sit with him the night before and have the last conversation with him before his surgery changed his life the next day. Reader had followed up with him and he came back, a year later, as he was going to move to BC. He was going to work with the university in BC and he wanted to stop by and let Reader know he was leaving the province and this was the next step in his life. The connection people in healthcare can make with their patients was the most profound ability Reader had ever experienced.

In terms of her career, Reader is the Executive Director of Surgical Services and Allied Health at Rockyview General Hospital, thus, her work days are fairly full.

Reader is also a member of two strategical networks. The groups she interacts with drives her schedule but she always likes to have time to sit down and think through, plan and formulate the next idea. She engages her staff by building teams through teamwork encouraging them to grow and develop. Reader also believes her and her team continually need to reflect and evaluate where they currently are and what they need to achieve to meet, thrive and surpass the next objective.

A good day on the job Reader believes happens when she has the opportunity to interact one-on-one with the patient and their family and to learn how her team has been able to support them and make a major difference in a life.

Overall, Reader is proud of what her team has achieved, including the development of a business manager role. Healthcare is a people business; patient is first. Quality care requires engagement and partnership of all stakeholders, with the patient being at the center, the core of all decisions and actions.

By developing a framework that focuses on delivering quality care at the best cost, it is hoped that high value for the patient with the best outcomes is achieved. This project will definitely take some time to complete, however, learning to evaluate their progression and success is something that can be improved on.

If Reader could go back in time and give her younger self a piece of advice, it would be to go with her passion, look to thrive and be prepared for change. Even if she thought it was ABC, and she got into it and found out it's actually CDE, just to be flexible-but do something she is passionate about, whatever it is and however big or simple it may be.

For her legacy, Reader hopes what she and her team have done is noticeable and what they have built together is sustainable and continues to move forward and grow every day.



Profile Jill Woodward

Jill Woodward has served as the Executive Director, Inpatient Care, at Alberta Children's Hospital since 2011. Woodward was born and raised in the seaside town of Blackpool in North West England. Growing up, she lived with her parents, older sister and younger brother. Her hardworking parents always made time for their children, especially during school vacations. Woodward still has wonderful memories of summer vacation trips in the UK and Europe, and frequent day trips closer to home.

Some of her best childhood memories were created through the annual "Bonfire Night" festivities, which are held every 5th November to celebrate the failure of the "Gunpowder Plot" by Guy Fawkes, who plotted to blow up the Houses of Parliament in London in 1605. Bonfire Night was truly a family time. A big bonfire would be lit in the field behind the house, many fireworks were lit and delicious food, such as treacle toffee, toffee apples, Parkin cake, sausages and baked potatoes, were eaten.

Growing up, one of Woodward's proudest childhood moments was when she was selected to play a lead role in the local production of "Dick Whittington". Previously she had been in the chorus for many other shows, which she enjoyed, but to have a major speaking part was a significant achievement.

From a very young age, Woodward wanted to become a nurse. However, at around the age of 16, she became convinced that she would never be able to administer an injection or perform any other painful procedures on a patient, which stopped her aspirations until, after working in many clerical roles in healthcare and other settings, and with her two children now in school, Woodward decided that it was time she re-thought her passions and goals in life and decided she would finally pursue her nursing education.

Woodward completed her nursing education with Shropshire and Staffordshire School of Nursing in the UK, which was affiliated with Wolverhampton and Staffordshire Universities. Woodward completed a BSc in Nursing, specializing in paediatric nursing and has worked in paediatrics for her entire nursing career thus far. After moving to Calgary with her family in 2001 Woodward pursued her Master's degree through a distance-learning program with Manchester University in the UK. Woodward chose to study Health Care Ethics and Law. She was fascinated to learn about both the legal aspects and ethical considerations of healthcare.

One of her hardest classes during her Master's course was an ethics class and assignment on the topic of the Nazis' treatment of the inmates in concentration and death camps during the Second World War. It was a very challenging topic to review due to the subject matter and very complex ethical arguments. Woodward believes this was so challenging to complete because one had to carefully examine their own values before being able to provide legitimate ethical arguments.

To keep herself motivated while undertaking education, Woodward would try her best to have one day off a week from school work and from full-time work to spend time with her family and regain some lost energy. Although it was not always easy to maintain this routine around exam and assignment submission times, Woodward found taking time out for herself and family proved to be rewarding.

One of the most important lessons Woodward has learned throughout her education and career is to listen to the families of patients. Woodward has a firm belief that families understand and know their child better than anyone, hence listening to their concerns is really important, especially if they are indicating that their child is deviating from their normal selves. Often the healthcare provider will not notice subtle changes in the child, but a parent will notice – potentially alerting to an impending deterioration.

Currently, Woodward serves as the Executive Director for Inpatient Care at Alberta Children's Hospital, responsible for Surgical Services (OR, PACU, Surgical Short Stay Unit, Day Surgery and associated clinics) Inpatient Units, PICU, NICU and ED.

Woodward knew that management was something she was interested in because she wanted to be in a position where she could actively impact changes at a system level and work with many disciplines to provide high quality, safe care to patients and families. One of Woodward's ultimate career goals was to be in a significant leadership position in a paediatric setting, and she feels extremely fortunate to have been given the opportunity to undertake the position of Executive Director at ACH and fulfil this goal. This is one of her proudest achievements professionally in her career.

Woodward's day consists of multiple meetings and project management, visiting staff and managers in her areas of responsibility, ensuring that any issues arising in any of these areas are dealt with and that staff, patients and families are supported. Quality initiatives and planning for the future also play a large part of the role. In collaboration with her teams, she looks at ways in which the teams can move forward in order to provide on-going excellent care for all the children and families who require the services of the hospital, while being mindful of budget constraints and resource management. She works very closely with the managers and the physician leads to identify and promote best practices to promote safe care. An important part of Woodward's role is spent working with families, working through concerns, listening, supporting and helping to find solutions.

One of Woodward's most memorable moments in her career dates back to when she worked on a paediatric Hospital at Home Team in the UK. The team provided acute nursing care to children in the community. One of the patients was a 16 year old girl who had a very late diagnosis of Cystic Fibrosis made when she was 14, and her prognosis was quite poor. She was a very angry young lady and posed quite a challenge for anyone caring for her. When Woodward first joined the team, the teen only wanted one nurse to provide her care in her home, and Woodward was not that nurse!

It took Woodward a long time over many months to slowly build a trusting relationship with the girl. When Woodward finally left the position, the teenager gave her a gift and wrote her a beautiful card thanking Woodward for her care and support through many difficult times, and acknowledging the trusting relationship they had developed. This, to Woodward, is what nursing is all about – reaching out to patients through their darkest days and having a positive impact.

In 10 years time, Woodward would like to be retiring, however in the meantime, she would like to continue to serve the paediatric population and their families, as she believes there is still lots of work to be done to provide equitable access and health care services to all children across the province, and nationally.

If Woodward could go back in time to give her younger self a piece of advice, it would be to listen to what her heart is telling her to do, to not worry about what others think all the time, and to remember that it is impossible to please everyone, so to stop wasting time trying!

As for her legacy, Woodward would like to see that her work has helped provide easily accessible, excellent, safe care to children and their families when they are in the unfortunate position of having health care needs.



*Jill Woodward, Executive Director
Alberta Children's Hospital*



Profile Holly Mackin

Holly Mackin serves as the Executive Director at the Foothills Medical Centre (FMC). She has been in this position for approximately a year and a half. Prior to this, she has held a number of management roles, of which, she most recently was the Site Director at FMC for the last 9 years.

Holly Mackin was born in Whitecourt, Alberta, just North of Edmonton. Growing up, Holly experienced many changes and transitions as her family moved every two to three years starting at the age of 10. Although shifting places presented its own challenges, Mackin soon realized those opportunities also opened doors to new experiences.

Some of Mackin's most memorable childhood experiences include camping in the outdoors with her loving family-consisting of parents and her three siblings-under the massive skies of Alberta and British Columbia. Looking back, Mackin is extremely appreciative of the experiences and memories she created while enjoying the outdoors and believes those adventures have been truly a gift. She now shares this gift with her own daughter.

As a youth, Mackin had a passion for nursing. As she grew over the course of her career and learned more about herself as a leader and her passions, her career path lead her from clinical to academic roles and research, during which time, she continued her education.

Mackin pursued her Bachelors of Nursing at the University of Calgary and graduated in 1992. After completing her undergraduate degree, Mackin pursued two Master's degrees at Dalhousie University. Her first degree was a Masters of Nursing and her second was a Master's degree in Health Services Administration.

Although Mackin felt her finance courses were some of the hardest courses she had taken during her graduate work, she ended up appreciating these the most once she had completed them. Throughout her education, Mackin learned how to best develop her system thinking skills and applied those skills across a variety roles, including those in leadership, academics and research.

Mackin has a passion for learning, hence, she loved the content of her courses throughout her educational training. Her love for learning allowed her to experience unique and different opportunities through both her education and teaching experiences. Most recently, she completed the AHS Executive Education program in 2014.

As Mackin progressed throughout her career and learned more about herself along the way, her role in administration evolved on its own through learned experiences, varied leadership roles, educational opportunities and mentorship.

Mackin's day consists of multi-tasking a variety of clinical operational issues within her portfolio. This may include project related work, human resource planning, quality/process improvements, patient/family concerns or workplace safety, infrastructure, equipment, product procurement or patient safety issues; just to name a few.

Mackin also supports a large management team within her areas of responsibility. She feels very fortunate to have an outstanding leadership team who are passionate and dedicated to making a difference for patients and their families on a daily basis. The delivery of care to our patients would not be possible without them.

Mackin is in charge of the clinical operations for surgery at FMC. This includes seven inpatient units, day surgery, operating rooms, PACU, MDRD- medical device reprocessing, the trauma program for Southern Alberta, Anesthesia and the acute pain service for the Calgary zone, and lastly, the Southern Alberta Organ and Tissue Donation program.

In a nutshell, Mackin's work regularly involves that at a Zone and provincial level and more broadly at a national level across several areas.

If Mackin could go back to her younger self and give herself a piece of advice, it would be to always be true to your passion and focus on mindfulness, maintaining a healthy balance and staying grounded. Over the years, Holly has continued to make her health and wellness a priority through a commitment to her yoga practice and her love for downhill skiing, ultimate frisbee, biking, cooking and painting.

For the future, Holly sees herself continuing to work in her area of passion related to clinical operations in surgery and being able to influence the patient and family experience and continuing to support the development of strong teams.

As for her legacy, Mackin would want to be known for her passion and commitment as a value based leader to patient and family centered care as well as someone who cares, supports and is able to give back to her clinical teams to enable them to thrive and grow to be the best they can possibly be.

One of Holly's biggest achievements in her career has been her involvement in the planning and commissioning of the McCaig Tower. It is rare in one's career to have the opportunity to open such a complex building including the opening of new inpatient beds, rehabilitative space, operating rooms, day surgery, PACU and a transfer of existing services (e.g., arthroplasty, intensive care unit, medical device reprocessing, diagnostic imaging, Southern Alberta Tissue Program), as well as opening repurposed spaces that remained in the Main Building (e.g., Morgue, Supply Management, Clinical Engineering, Inpatient Pharmacy, Emergency Department). This was a remarkable transformation for the campus and for the teams who deliver the patient care in these remarkable new spaces.

Regardless of the role she has held over the course of her career, Holly fondly remembers her best days as those where she has been able to make a meaningful connection with a patient, family, staff or team member. These moments are what has kept her in health care for almost 25 years.

*Holly Mackin, Executive Director
Foothills Medical Centre*



Bone & Joint Health

Strategic Clinical Network

The Bone and Joint Strategic Clinical Network (BJSCN) was launched in 2010 to promote bone and joint health while transforming the way musculoskeletal care is provided for Albertans. Within the BJSCN, there are five areas supported through the network; trauma, hip and knee replacement, soft tissue knee, inflammatory arthritis, and spine care.

The trauma group has two main initiatives: The hip fracture pathway and fragility fracture prevention. The hip fracture pathway has been implemented across 15 hospitals in Alberta that provide operative treatment for patients suffering hip fractures. After three years of hard work by all teams across the sites, the goal of having 90 per cent of the patients having surgery within 48 hours of fracturing their hip across the province was achieved this past quarter. The quicker access by getting the patients to surgery within 48 hours of fracture translates to less pain, less delirium, and less confusion amongst the patients.

"By standardizing the pathway and trying to minimize the narcotics and other factors that might precipitate patient confusion, the patients experience fewer complications and the resources are used more efficiently," explains Dr. Kevin Hildebrand, Section Head of Orthopedic Surgery, Alberta Health Services – Calgary Zone.

The fragility fracture prevention project is employing 2 different strategies in separate populations at risk for osteoporosis.

Dr. Hildebrand explains, there are three "I"'s in the management of osteoporosis.

1. Identify. Being able to detect patients at risk for osteoporosis through the circumstances of the injury.

2. Investigate. Bone density testing for those with injury mechanisms suggestive of osteoporosis.
3. Initiate. Begin appropriate treatment if indicated and tailor towards the individual.

The first strategy for fragility fracture prevention is a fracture liaison service (FLS). With the FLS, all 3 "I"'s are provided. It has been trialed at two sites, the Misericordia Hospital in Edmonton and the Peter Lougheed Centre in Calgary. The FLS is confined to the hip fracture patients during this implementation stage. Previous research has determined that patients fracturing their hips with low energy trauma are almost certain to have osteoporosis. Thus, the identification and investigation aspect of osteoporosis management is assumed when patients present with a hip fracture.

The third "I", initiation of treatment is coordinated during the hospital admission. The FLS provides management for the first year after the fracture during which a transition strategy for ongoing care in primary care is developed. The next step is to spread the FLS to other centres in the Province.

The second fragility fracture prevention strategy is called Catch a Break. This strategy uses the identification step (single "I") in osteoporosis management in patients suffering potential fragility fractures other than hip fractures. In this strategy, diagnostic codes for distal radius, proximal humerus, and vertebral fractures are captured and given to Health Link. Health Link contacts the patients to determine if these fractures may be low energy fractures that warrant further osteoporosis management.

Information about vitamin D and calcium for bone health is given. If appropriate, the patients are counselled to follow up with their primary care physician for investigation of underlying osteoporosis and if detected, then to consider initiation of appropriate treatment. Health Link also sends notification to the primary care physician that the patient suffered a potential fragility fracture and the patient will be coming for follow up. Future work in fragility fracture prevention will bring the FLS and Catch a Break strategies closer together. Research is ongoing comparing the methods to determine if one or the other strategy is better in all cases, or whether selective use of either strategy may be best in different circumstances.

With the launch of new initiatives comes its own challenges, as Dr. Hildebrand has noticed with some feedback from the hip fracture liaison and Catch a Break pathways. "Many people believe they don't have osteoporosis, they don't really think about it. It's still not at the forefront of people's minds like heart attacks or diabetes or other things like that because people understand those conditions more. So there's a fair amount of denial around it which is puzzling," clarifies Dr. Hildebrand.

Orthopaedic Surgery is leading the hip and knee arthroplasty pathway. It was developed and implemented several years before the Clinical Networks were created in 2010. It has been the model for pathway development in other areas of the BJSCN. Orthopaedic Surgery contributes to the soft-tissue knee and spine working groups of the BJSCN. The large majority of the burden in these areas is managed nonoperatively and outside of the hospitals, which is unlike the hip and knee arthroplasty and hip fracture pathways. Surgery plays a smaller, although still significant role in these areas.

A number of Orthopaedic Surgeons are providing innovative and collaborative medical services

through activities outside the realms of the strategical clinical network. The Sport Medicine Center at the University of Calgary has been running an acute knee injury clinic (AKIC) for the last six-seven years. This clinic uses a self-referral process employing online questionnaires for patients to help determine whether or not their knee symptoms can be appropriately managed at AKIC. Using the experience acquired through AKIC, the Sport Medicine Centre hopes to develop a similar clinic based on rotator cuff pathology of the shoulder. The Foot and Ankle surgeons of the Section of Orthopaedic Surgery work in collaboration alongside the members of the Section of Podiatry to tackle common conditions relating to their field. Also, the Caleo clinic has been delivering spine care for several years through both operative and non-operative procedures in collaboration with many health professionals trained in spine disorders.

The future of healthcare, says Dr. Hildebrand, involves teamwork and that is exactly what has come about from the Strategic Clinical Network (SCN), and the efforts of Orthopaedic Surgeons/allied health professionals in various clinic settings outside of the SCNs. As coChair of the Trauma working group of the BJSCN, Dr. Hildebrand was impressed that the committees composed of front line workers from many health care disciplines pushed him more with enthusiasm, ideas, and pathway development than did the leaders of the BJSCN pulling the working group into action.

The culture of having more front line people who are interested in their surroundings and want to get their ideas out there are becoming more and more popular. "So I think working in teams and using collective expertise is the way to go. We have more ideas,-but also lots of people are invested in making it work better for the patients and that's awesome." Concludes Dr. Hildebrand.

Surgical Foundations

Surgical Foundations is a program created by the Royal College of Physicians and Surgeons. The original program was known as 'Principles of Surgery' and was modified in 2008. In the year 2010, the program was renamed to 'Surgical Foundations,' a non-accredited and mandatory program with the latest revisions made in 2013.

The program encompasses the first two years of all surgical residents in the department of surgery including the departments of neurosurgery, and obstetrics and gynecology. The main objective of Surgical Foundations is to fulfill the objectives laid out by the Royal College and set an even foundation of knowledge for all surgical residents after their first two years. They also have to ensure residents are fully competent with specific skills and are at the same level in regards to their attitudes and performance in their fields as they progress in their education and training. At the end of the curriculum, residents must pass a summative exam in order to continue their practice.

As of this year, there are a total of 49 residents; 22 of which are in their second year of surgical residency and will be expected to write their summative exam.

Over the two years, three major courses are taught which are essential for the residents as they train to become a surgeon.

The first major course is a PGY-1 skills course. Residents are taught skills that are applicable to all surgical backgrounds through this three month course. The material was modified into a boot camp style by the lead surgeons; Dr. Alica Ponton-Carrs and Dr. Adrian Harvey. The professors also try to incorporate some CanMEDS into the residents' skill as well. At the end of this course, a formal evaluation takes place to assess the skills of the

resident and pinpoint areas of improvement for the future.

The second major course residents complete is critical thinking. This course is led by Dr. Carmen Brauer, who is in the midst of modifying the course to keep it relevant to today's time. The objective of this course is to help residents develop skills of being able to critically analyze medical literature and create a research project on a topic which needs further research or has not been researched on yet. This course lasts for 10-12 weeks with a final evaluation in the form of a poster presentation, with a goal to continue their project through residency.

The third major course residents take is Principles of Surgery, which occurs as a PGY-2. This course is designed to ensure the objectives of training have been met in order for a successful exit from Surgical Foundations.

Alongside these lecture classes, residents take an online longitudinal course of 110 modules provided by the American College of Surgery which provides information on the fundamentals of surgery.

Some of the new courses being taught to residents includes the Fundamental Use of Surgical Energy (FUSE) which is being led by Dr. Christopher Armstrong.

Another recent course that has started is by Dr. Alicia Ponton-Carrs and Dr. Marcia Clark and is Team STEPPS (Strategies and Tools to Enhance Performance and Patient Safety). Through this course, residents are taught effective communication strategies and patient safety through both classroom and full group/classroom simulation.

One of the challenges faced by the program is an on-going situation-to provide a fully balanced assessment of residents and ensuring they achieve the objectives and standards the Royal College has directed for future surgeons.

To aid in combating this challenge, two solutions have been implemented to provide better assessment of the residents. A unique assessment is through a "portfolio" implemented by Dr. Marcia Clark. This portfolio reviews attendance to events (PGME and CanMEds seminars) and courses (listed above) that the resident must have successfully attended/completed during their first two years of residency. It also keeps track of an evaluator tool from the operating room known as the O-score.

The O-score itself looks at eight different aspects during a surgical or procedural skill that a resident is marked on by a preceptor or senior resident. This O-score is completed approximately two times during each rotation to assess improvement during that time frame. Resident meets with their home program director and the surgical foundations program director minimum once a year to complete the portfolio and makes changes if necessary, ensuring the resident is on track for successfully completing Surgical Foundations.

Feedback from residents within the program is received through three different methods.

The first form of feedback residents can provide to professors is through their pre and post-tests. At the beginning of every session during lectures, residents complete a small quiz on the topic being discussed based on readings. They then complete another quiz at the end of the session. This way, professors have an idea as to which teaching techniques work best with residents. A feedback form is also provided at the end of the post-test for residents to fill in what they liked or disliked throughout the session.

The second way for residents to provide feedback to the professors is through the Surgical Foundations Committee. The Committee consists of program directors as well as a resident from each year, PGY-1, 2, and 3. The residents can voice their opinions in various meetings throughout the year.

The third way in which residents can provide feedback is through directly contacting the program director with their concerns and come up with potential solutions.

For the future, Surgical Foundations will be undergoing some major changes starting in July of 2017. The program will be shifting to a Competence By Design (CBD) model of post graduate medical education. The Surgical Foundations program directors from around the country have met with the Royal College several times to discuss the switch and plans on implementing the objectives and the assessment of the program. Funding has recently been secured to help fund critical positions for the successful transition of Surgical Foundations to CBD. Dr Gail Kopp will help create a course training plan using her experience doing the same thing for NASA with the neuroArm; and Dr. Chris Armstrong will lead the charge being our new CBD Lead for Surgical Foundations. Surgical Foundations will be one of the first cohorts to convert to this model and create changes as the program continues to produce skillful and proficient surgeons.



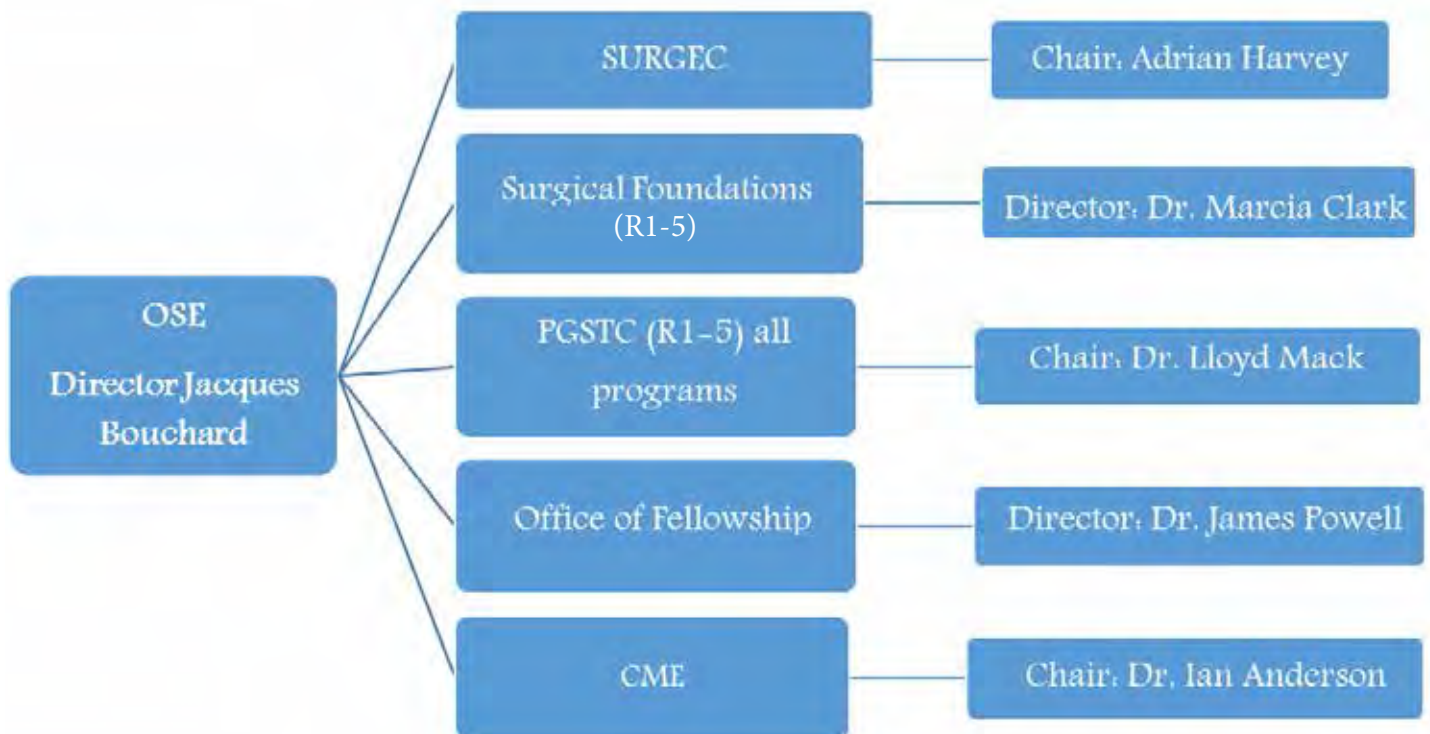
Office of Surgical Education

Section Structure and Organization

The Office of Surgical Education is designed and structured to assist, coordinate and enhance education in the Department of Surgery for undergraduate medical students, postgraduate learners like residents and fellows as well as continuing medical education and professional development of the surgeons in the Department. It also participates and facilitates education of surgical topics outside the Department in the community.



Dr. Jacques Bouchard
Director Office of Surgical Education



Accomplishments and Highlights

- **Dr. Michael Dunham** received the award for Ectopic Educator of the year.
- **Dr. Duncan Nickerson** was voted by the residents as Educator of the year.
- **Dr. Marcia Clark** received the McPhedran Award for Innovation in Surgical Teaching.
- **Dr. Chad Ball** received the award for Surgical Innovation.
- **Drs. Marcia Clark and Alicia Ponton-Carrs** led 2 sessions for Team STEPPS which involves working on team communication and patient safety in a group simulation.

Office of Surgical Fellowship: An Office of Surgical Fellowship was created by Dr. Kortbeek and its Director Dr. James Powell. The Office goal is to bring together the administration of all the Fellows in the Department of Surgery, regardless of the specialty,

to facilitate review of applications, licencing, immigration paperwork, creation and regular review of learning objectives and evaluations and to encourage the fellows in pursuing academic interests in education and research. For many years the Section of Orthopaedic Surgery staged an annual research evening for the Fellows to present their work. 2016 was the first year with 2 research sessions; one for orthopaedics and combined spine and the other for all other fellows in General Surgery, Ophthalmology, Urology and Plastic Surgery.

Department of Surgery Annual Retreat at the Banff Centre: The focus of the 2016 retreat was Industry, Conflict and Surgical Education on the first day and Innovation and Entrepreneurship in Medicine on the second day. Drs. Bob Bray and Jacques Bouchard Chaired the sessions organized by a dedicated organizing committee.

Program	Physician Chair	Function
UME/SUGEC	Dr. Adrian Harvey Dr. Jacques Bouchard	Course Chair of the Surgery Clerkship and chairs SUGEC. The section representatives of the Undergraduate Clerkship sit on the Surgical Undergraduate Education Committee (SUGEC) Sits on the University of Calgary UMEC and U of C clerkship committee
Surgical Foundations	Dr. Justin Leblanc Dr. Marcia Clark (outgoing)	Surgical Foundations coordinates the PGY1 and 2 curriculum, rotations, evaluations of participating Surgical programs (General, Orthopaedics, Vascular, ENT, plastics, Neurosurgery, Vascular, Cardiac)
PGSTC	Dr. Lloyd Mack Dr. Jacques Bouchard (Interim until December 2015)	Chairs the Post Graduate Surgical Training Committee and sits on PGME, University of Calgary
Fellowships	Dr. James Powell	Coordinates with PGME all Department of Surgery Fellowships
CME/CPD	Dr. Ian Anderson	Represents the Department of Surgery on University of Calgary CME/CPD committee, chaired by the Associate Dean CME/CPD

Undergraduate Medical Education

The Chair of the Office of Surgical Education represents the Department of Surgery on the Undergraduate Medical Education Committee (UMEC) which is a faculty wide committee formulating overall policy for the undergraduate years. UMEC is chaired by the Associate Dean, UME, University of Calgary.

The Undergraduate Medical Education curriculum comprises the activities of all of the departments through the standing course committees. As a member at large, Dr. Bouchard is able to contribute to the policy making with regard to the undergraduate curriculum and to carry information back to the Department to be disseminated throughout the various sections.

Surgery Clerkship

Dr. Adrian Harvey is the Course Chair of the Surgery Clerkship for the Department of Surgery and chairs the Surgical Undergraduate Education Committee (SUGEC). Ms. Dory Glaser-Watson, BScN, RN is the Education Coordinator for the surgery clerkship program and the Department of Surgery. The educational representatives, from each of the participating sections, sit on the Surgical Undergraduate Education Committee (SUGEC). The mandate of this committee is to revise and improve clerkship experiences in core general surgery, and in all specialties, as well as to guide the experiences that each of our clerks has within the surgical rotations. These rotations consist of compulsory surgical experiences in General Surgery and selectives in the other surgical specialties.

The clerkship Class of 2016 has a total of 161 clerks with 21 clerks completing their clerkship in the rural setting (UCLICs). The Department received 15-25 University of Calgary clerks (including UCLICs) for each of the eight surgery blocks. The 6 week rotation included 3 weeks in General Surgery, 2 weeks in either Orthopaedic surgery, Plastic Surgery or Urology and one week in any one of thoracic Surgery, Vascular surgery, Neurosurgery, Urology or Otolaryngology.

Pre-Clerks: The Surgical Department facilitated 2 week electives in surgery for 2nd year U of Calgary medical students. Approximately 30 pre-clerks requested/completed a surgical elective in July. These medical students will request a clerkship elective for January to mid-April each year. Approximately 30 surgical electives were facilitated during this time (Class of 2017).

Visiting Clerks: The AFMC – Association of Faculties of Medical Schools in Canada has an agreement with American Schools of Medicine as well as some International Schools of Medicine to accept medical students in their clerkship year for electives in Canada. The Education Coordinator processed 30 – 40 elective requests per month from visiting clerks within Canada. Visiting clerks requested electives in Plastic Surgery (adult and pediatric), General Surgery (HPB, Colo-Rectal, Oncology, Pediatric General Surgery, and Breast Surgery), Trauma Surgery, Thoracic Surgery, and Vascular Surgery. Visiting electives are facilitated from mid-April to mid-December each year.

Postgraduate Surgical Education

Surgical Foundation

Surgical Foundations is a Royal College requirement for many surgical specialties and there are specific Standards that are followed to manage and coordinate the rotations, curriculum and educational activities of the first 2 years of these specialties. The Surgical Foundations committee was chaired by Dr. Marcia Clark who was the Director of the program until January 1, 2016. The program has a new Director in Dr. Justin Leblanc (Orthopaedic Surgeon, South Health Campus). The committee members include the program directors of these specialties and resident representatives. The committee oversees the PGY-1 Surgical Skills course delivered by Dr. Alicia Ponton-Carss, the Surgical Foundations curriculum, the Critical Thinking Course and resident evaluations in collaboration with the home programs.

A very important part of Surgical Foundations is the PGY-1 Core Surgical Skills course which was designed and continues to be expertly directed by

Dr. Alicia Ponton Carrs. The sessions include sessions on asepsis and instrument identification, knot tying and suturing, tissue handling and wound closure, surgical biopsy, catheterization, chest tube insertion and thoracentesis, central line insertion, airway management and microsurgery. Every session also has incorporated CanMeds sessions. An OSPRE exam is used to evaluate all the first year surgical residents at the end of the course.

Surgical Residency programs

The PGSTC (Post graduate Surgical Education Training Committee) coordinates and plans the joint teaching activities to all Surgical residents, mostly non expert CanMEDS roles. These activities involve all years of residency and all residency programs including primary programs (eg. Gen surgery, Orthopaedics, Plastics, Otolaryngology etc), primary residencies of other Departments (Neurosurgery and Cardiac Surgery) secondary programs (eg. Colorectal, Pediatric General surgery, General Surgical Oncology, Thoracic etc) and non-Royal College programs (Dentistry). Dr. Rick Buckley chaired the committee for 10 years until February 2015. Interim chair was Dr. Jacques Bouchard. The new Chair of the committee is Dr. Lloyd Mack (General Surgeon and past Program Director for General Surgery). The Chair sits on the

University PGME committee and help formulate and consider all policies related to post graduate education at the University of Calgary.

The PGSTC also interacts closely with the Surgical Foundations committee and helps fill in gaps in the curriculum and avoid duplication. Some of the surgical education is done in collaboration with other Departments such as Anesthesia, OB-Gyn, Cardiac and Clinical Neurosciences. The Teaching Methods in Surgery (TIMS) course is offered to senior residents and fellows.

The PGSTC assists the surgical residency program in the preparation for the Royal College on site surveys which was done in Calgary February 2015. This occurs every 6 years for program with full accreditation and every 2 years for programs with provisional approval.

There are residency programs in Colorectal Surgery, General Surgery, General Surgical Oncology, Ophthalmology, Orthopaedic Surgery, Otolaryngology & Head/Neck surgery, Plastic Surgery, Thoracic Surgery, Vascular Surgery, Pediatric General Surgery and Dentistry/Oral health.

Program	Program Director	# of residents
Cardiac Surgery	Dr. William Kent	6
Colorectal Surgery	Dr. Don Buie	3
General Surgery	Dr. Lloyd Mack	32
General Surgical Oncology	Dr. Walley Temple	2
Neurosurgery	Dr. Jay-Riva Cambrin	17
Ophthalmology	Dr. Christopher Hanson	9
Orthopaedic Surgery	Dr. Jason Werle	22
Otolaryngology	Dr. James Brookes	8
Pediatric General Surgery	Dr. Steve Lopushinsky	2
Plastic Surgery	Dr. David McKenzie	11
Thoracic Surgery	Dr. Sean Grondin	1
Vascular Surgery	Dr. Joyce Wong and Jeff Clark	3 primary 1 secondary
Dentistry & oral health	Dr. Eduardo Kalydjian	2

Fellowships

The OSE manages the ongoing accreditation and approval of surgery Fellowships within the teaching sections. The number of fellows continues to increase and we currently have 27 fellows. Dr. James Powell is the new Director of the Fellowship programs for the Department of Surgery and the new Office of Fellow Education. Dr. Raul Kuchinad is the Director for the Orthopaedic program which has 14 fellows.

The Fellows, both national and international, are raising the awareness of the excellence of surgical programs in Calgary in addition to building academic clinical units at home.

The Department of Surgery, Faculty of Medicine and Alberta Health Services have completed a major project to establish guidelines, training objectives, evaluations, contracts and remuneration pathways for Clinical Fellows.

Section	Program	Fellows
Orthopaedic surgery	Combined Ortho/Neuro Spine	5
	Hand and wrist	1
	Orthopaedic Trauma	2
	Foot and ankle	1
	Pediatric Spine	0
	Upper extremity	1
	Joint reconstruction	3
	Sports medicine	1
	MSK oncology	1
	Trauma	1
General Surgery	HPB	2
	Endocrine	1
	Upper GI	1
Urology	Functional reconstruction	2
	Urologic oncology	1
Plastic Surgery	Microsurgery	1
Ophthalmology	Retina	2
	Occuloplasty	1

Continuing Surgical Education

Dr. Ian Anderson is the Department of Surgery representative on the University of Calgary Continuing Medical Education Committee. He coordinates activities and informs the various sections about opportunities for continuing professional development. The committee meets monthly and consist of CME representatives from every department in the medical school and the Calgary Zone and there are also plans underway to create a Department of Surgery committee that will host all of the various CME representatives from each Section to improve and enhance CME for Surgical specialists.

Dr. Ian Anderson represents the Department of Surgery on the University of Calgary CME/CPD committee which is chaired by the Associate Dean CME/CPD. This committee is responsible for setting

guidelines and providing oversight for accreditation of CME/CPD programs both within departments and sections in the faculty and external educational offerings.

Dr. Anderson has assisted in reaccrediting all of the Department rounds and educational activities with the guidelines provided by the Royal College of Physicians and Surgeons of Canada in line with the maintenance of competence program.

Surgical Simulation

Simulation has been an increasing component of the education of medical students, residents and surgeons. There are dedicated medical simulation sites in all the Calgary hospitals in addition to mobile units managed by eSIM south. Since its opening in April 2014, the ATSSL (Advanced Technical Training

and Simulation Centre) has been the site of a number of more complex surgical simulation activities. There are recurrent courses offered such as the yearly PGY-1 surgical skills course, the Spine and peripheral nerve course for senior residents and ATSL training to name a few.

ATSSL is a joint venture between the University of Calgary and Alberta Health Services and strives to provide safe and effective environment for learners to improve their proficiency in medical and surgical skills before these are applied to patients. While ATSSL staff provide the equipment and assistance to run these sessions, the Executive continues to

work at enhancing funding and endowment of the lab, set up effective governance, and plan to get Royal College Certification as a Simulation Centre/Program within the next few years. Dr. Jacques Bouchard has been the Co-Director of ATSSL for 5 years during the planning and construction and the Medical Director in 2014-15. After a rigorous selection process Dr. Marcia Clark was chosen as Medical Director of ATSSL.

Some of the surgical sessions provided in the ATSSL this year are shown in the following table:

Program	Event	Educational activity	Learner	# participants
Spine	Annual Spine and peripheral nerve workshop	Peripheral nerve anatomy	Residents	16
Spine	Annual Spine and peripheral nerve workshop	Anterior and posterior cervical spine approaches and instrumentation	Residents, fellows and NP	20
Spine	Annual Spine and peripheral nerve workshop	Posterior and anterior thoracolumbar approaches and instrumentation	Residents, fellows and NP	20
Neurosurgery	Annual Spine and peripheral nerve workshop	Cranial and skull base dissections	Residents	8
Orthopaedic Surgery	Arthroscopy	Knee arthroscopy	Residents	1
Orthopaedic Surgery	Arthroscopy	Knee arthroscopy and ACL reconstruction	Staff	1
Orthopaedic Surgery	Arthroscopy	Knee arthroscopy and ACL reconstruction	Staff	1
Orthopaedic Surgery	Arthroscopy	Shoulder arthroscopy	Residents	2
Orthopaedic Surgery	Arthroscopy	Knee arthroscopy	Residents	1
Orthopaedic Surgery	Arthroscopy	Shoulders arthroscopy	Residents	2
Orthopaedic Surgery	Arthroscopy	Shoulder arthroscopy	Residents	2

Orthopaedic Surgery	Arthroscopy	Knee arthroscopy	Residents	1
Orthopaedic Surgery	Arthroscopy	Shoulders arthroscopy	Residents	2
Orthopaedic Surgery	Arthroscopy	Shoulder arthroscopy	Residents	2
Orthopaedic Surgery	Anatomy	Summer anatomy and surgical exposures	Residents	25
Plastic Surgery	Cadaver lab	Trunk/pelvis flaps	Residents	3
Obs/Gyn	Gynecology Skills lab	Hysteroscopy, cystoscopy, IUD insertion	Residents	26
General Surgery	Surgical skills	Open and laparoscopic skills	Residents	14
Plastic surgery	Cadaver lab	Trunk/pelvis flaps	Residents	5
Cardiac surgery	Valve replacement	Mitral valve	Residents	7
General Surgery	CAGS exam	Written exam	Residents	30
Plastic Surgery	Cadaver lab	Upper extremity flaps	Residents	5
General surgery	Surgical skills	Open and laparoscopic skills practice	Residents	12
Plastic surgery	Cadaver lab	Upper extremity flaps	Residents	6
Neurosurgery	Neurosurgery	Brain Tactography Workshop	Residents, fellows staff	15
Plastic surgery	Synthes lab	Maxillofacial reconstruction	Residents, RNs	10
Ob- Gyne	Retroperitoneal dissection	Lap ureter dissection, cystectomy, removal of adhesions, suturing, FLS	Residents	20
General Surgery	Surgical skills	Open and laparoscopic skills practice	Residents	17
Surgical Foundations	Electrocautery course	Fundamentals Use of Surgical Energy	Residents	13

Challenges

Clerkship: Teaching all of what is important in multiple disciplines of Surgery in a 6 week clerkship is a real challenge. Mandatory rotations, selectives and the academic curriculum has been carefully designed and adjusted to provide optimal exposure for the medical students. We remain committed to offering a high quality experience for all University of Calgary clerks as well as those visiting from other medical schools. We need to continue to improve clinical opportunities within existing resources.

Post-graduate: With increased emphasis on simulation and the availability of the facilities the residency programs must adapt their curriculum to integrate simulation. Faculty development must continue to have a pool of Surgeons trained to teach in a simulated environment. The Royal College has started rolling out Competency by Design which will transform all the existing residency program into competency based training with enhanced evaluations and more structured learning. The first programs in the process of integrating CBD in their programs are Otolaryngology and Pediatric General Surgery. Surgical Foundations is next to implement the new curricula. This will involve a lot of work from key educators in the Department and in each section to change the culture of their program and implement a variety of new teaching and assessment tools. Much collaboration will be required and within 5 years we should see dramatic changes to all of our programs.

Post-graduate: 3 of our programs will be re-evaluated by the Royal College of Physicians and Surgeons in 2017. These programs have implemented major changes to address some of the weaknesses that were identified in the 2015 Survey of all the University of Calgary Programs.

ATSSL: The Advanced Technical Skills and Simulation Laboratory has provided an important resource for providing enhanced facilities and equipment for simulation in surgical education. An important future step is to gain Royal College Accreditation as a simulation program.

Workforce planning and future directions

A survey of surgeons in the Department indicated that all surgeons in the Department were expected and wanted to be involved in teaching and education of students, residents and fellows. It was felt that surgeons with a strong interest, additional training or degrees in education would be required to lead curricular changes and the implementation of simulation activities and competency based education. There is already a core of surgeons in leadership positions in education but as we recruit new recruits to fill in clinical gaps we must also consider finding and recruiting surgeons that will be an integral part of leading the changes in education.

Much of the energy of Program Directors and Educators will be focused on implementing Competency by design for all of our Surgical Residency program.

The Office of Surgical Education has been heavily involved in the education of medical students, residents, fellows and surgeons.

Educating patients or the general public has not been an activity of this office. There are several educational activities directed to the patients within AHS and individual sections of the Department of Surgery but no coordinated effort to provide practical information to the surgical patients and family. This may be a direction the Office could take by identifying champions in each Section and finding appropriate sponsorship.

Office of Health Technology and Information

Section Structure and Organization

Evidence Decision-Support Program (EDSP)

Programs

Surgery is using an Evidence- Decision-Support Program when introducing new health technologies with respect to the health needs of its target populations. The Program's purpose is: a) to introduce new health technologies into practice in a safe, effective, and evidence-informed manner while considering operational impact factors and b) to engage and educate physicians and managers throughout the province in the use of research evidence and organizational impact assessment for introducing new health technologies into practice. The Program was developed by Surgery for surgeons and is funded and operated by the Departments of Surgery from Edmonton and Calgary and the Surgery SCN.

Accomplishments and Highlights

Clinical Service: During the past year, the EDSP worked on several initiatives including: Reviewed more than ten new health technologies, procedures or surgical care processes including Digital Thoracic Drainage Systems, Normothermia surgery, Nanoknife, Joint transplant program, Type 1 Boston Keratoprosthesis Snap 1 device, Iris Implants, Robotic Assisted Surgery Nephrectomy, Skin Preparation Provincial Policy development, and Traffic and Disturbances in the Operating Rooms.

Education

To engage and educate physicians and managers throughout the province in the use of the Decision-Support Program, the EDSP team developed a series

of interactive workshops. The rationale behind the development of these workshops is to improve the adoption of evidence-informed process and clinical appropriateness when introducing new health technologies, apply technology appraisal and innovation concepts to real clinical case scenarios, provide real-world inquiry based education and engagement of clinicians to bring research evidence to practice, and to provide input for the further improvement of the Decision-Support Program.

Research

This year, the EDSP team continue to work on a Knowledge-To-Action research grant funding from Alberta Innovates Health Solutions to build capacity for evidence-informed decision-making around the introduction of new technologies. The team has also worked in collaboration on a PRISH-3 grant that has received funding and participated as external scientific reviewers for the review of the Surgery Strategic Clinical Network Seed Grant Program.

Challenges

The major challenge for the future involves adequate funding, staffing and resources support to ensure effective operational mechanisms to embed and support research and evidence-informed decision making by all members of the Department of Surgery when introducing new surgical technologies.

Workforce Planning

Future Needs

The EDSP team will be reviewing its program over the summer to make plans for new structure, operation, membership and resources requirements.

Quality Assurance, Quality Improvement, and Innovation

General

Our office ensures that patient access to promising and innovative technologies is not prevented by lack of evidence, but is managed in an accountable manner while also generating new evidence when necessary. We support knowledge, research, quality, innovation, continuous improvement, and excellence in health services.

Future Directions and Initiatives

We are now working to develop Knowledge Translation Plan and Implementation Strategies for innovative procedures collaboratively with the new Director of the Knowledge Translation Implementation Scientist Director, within the Knowledge for Change Unit of the Research Priorities and Implementation, Research Innovation and Analytics within AHS.



*Dr. Luke Rudmik
Photo provided by Dr. Paule Poulin*



*Dr. Paule Poulin, PhD, HTI Administrator
Photo provided by Dr. Paule Poulin*

Office of Surgical Fellowship

Section Structure and Organization

- The Office of Surgical Fellowship was established on October 12, 2015 under the direction and support of Dr. John B. Kortbeek.

Current Committees

Office of Surgical Fellowship Committee (Fellowship Directors and Leads) - Membership

- Dr. James N. Powell was appointed as the Department of Surgery Fellowship Director on February 1, 2015 following years of successfully guiding the Orthopaedic Fellowship Program.

Accomplishments and Highlights

Education - Fellows

Fellows in the program from April 1, 2015 to March 31, 2016

Stuart Aitken	Orthopaedic – Trauma
Khaled Almansoori	Orthopaedic Combined Spine
Saleh Alsaifi	Orthopaedic – Pediatric
Matthew Anderson	Ophthalmology – Retina
Matthew Andrews	Urology – Reconstructive & Functional
Jean-Michel Aubin	General Surgery – HPB
Marcio Barretto	Plastic Surgery – Oncology
Gillian Bayley	Orthopaedic – Foot & Ankle
Michael Carroll	Orthopaedic – Upper Extremity
Ivan Chua	Orthopaedic - Trauma
Hoover Cooper	General Surgery – Upper GI
Nathan Deis	Orthopaedic - Combined Spine
Nicholas Desy	Orthopaedic - Trauma
Elie Eid	Ophthalmology – Ocular Plastics & Reconstructive
Khaled Fawaz	Orthopaedic – Pediatric Spine
Eoin Fenton	Orthopaedic Combined Spine
Matthew Furey	Orthopaedic – Hand & Wrist
Kanwaljeet Garg	Orthopaedic – Combined Spine
Sebastian Guenkel	Orthopaedic – Hand & Wrist
Godefroy Hardy St. Pierre	Orthopaedic Combined Spine
Parag Jaiswal	Orthopaedic – Joint Reconstruction
Angus Jennings	Orthopaedic – Trauma
Michael Loewen	Orthopaedic – Banff Sport Medicine
Ian Lutz	Orthopaedic – Joint Reconstruction
Beatriz Lopez Obregon	Plastic Surgery - Microsurgery
Itay Magal	Ophthalmology – Retina

Simon Manners	Orthopaedic Combined Spine
Brad Meulenkamp	Orthopaedic - Trauma
Yohei Ono	Orthopaedic – Upper Extremity
Shalvin Prasad	General Surgery – Upper GI
Avi Rubinov	Ophthalmology - Ocular Plastics & Reconstructive
Raghav Saini	Orthopaedic – Joint Reconstruction
Rachel Schachar	Orthopaedic – Banff Sport Medicine
Alexandra Stratton	Orthopaedic Combined Spine
Ashish Taneja	Orthopaedic – Joint Reconstruction
Antonio Tsahtsarlis	Orthopaedic – Combined Spine
Stephan Van Zyl	Urology – Urological Oncology
Doug Wiseman	General Surgery - Endocrine
Ian Wright	Urology – Reconstructive & Functional

Workforce Planning

Goals and Strategies

- To support and facilitate all fellowship training programs within the Department of Surgery
- The office will help streamline fellowship policies and procedures to enhance the international reputation of the Department and to develop international collaborations, to learn best practices in clinical care and to enhance productivity in research and education.

Impact on other departments and zonal resources

- The OSF will work collaboratively with the Program Directors, Supervisors and Coordinators to streamline program development and overall requirements for successful facilitation and completion of training.

Office of Surgical Research

Overview

The mission of the Office of Surgical Research (OSR) is to promote, support, and enhance research initiatives within the Department of Surgery. By partnering with our membership, we endeavor to foster a vibrant research culture across a spectrum of surgical disciplines. The OSR performs numerous roles, including, but not limited to:

- a. Providing direction and support for discipline-specific research within the Department of Surgery.
- b. Fostering collaborations between sections within the Department of Surgery and thematically aligned institutes.
- c. Instructing our membership in the process of grant writing through workshops and statistical research consultation services.
- d. Enhancing internal grant review processes to optimize chances for funding success at the level of the CIHR and other external sponsoring agencies
- e. Offering assistance in formulating research policy, direction, goals, and priorities within the Department of Surgery in consultation with the Research and Surgical Executive Committees.
- f. Overseeing the administration of the Surgeon Scientist Program (SSP).
- g. Administering the Department of Surgery Research and Education Program Grants.
- h. Administering the Calgary Surgical Research Development Fund (CSRFD).
- i. Administering the Departments of Medicine and Surgery Research Development Fund (DOM-DOS)
- j. Organizing the annual Surgeons' Day Research Symposium.
- k. Distributing a monthly OSR newsletter, which provides updates on research related initiatives relevant to the Department of Surgery.
- l. **Website:** www.ucalgary.ca/osr

Membership

The OSR represents and is accessible to all members of the Department of Surgery. Currently, the OSR infrastructure includes: a Director, Associate Director, Administrative Assistant and Department of Surgery Research Group. The OSR directly reports to the Department Head (Dr. John Kortbeek) and to the City-Wide Surgical Executive Committee.

The OSR personnel include:

Director:

Fiona Costello, MD, FRCP,
Associate Professor, Departments of Clinical
Neurosciences and Surgery (Ophthalmology)
University of Calgary
Full Member, Hotchkiss Brain Institute

Associate Director:

Dr. Elizabeth Oddone Paolucci, PhD
Assistant Professor, Departments of Surgery and
Community Health Sciences
Graduate Program Director
Department of Community Health Sciences
Cumming School of Medicine

Administrative Assistant:

Chelsie O'Brien

Department of Surgery Research Group (Members):

- o Dr. Paul Beaudry
- o Dr. Mary Brindle
- o Ms. Kimberly Carcary
- o Dr. Marcia Clark
- o Dr. Fiona Costello
- o Dr. Gary Gelfand
- o Dr. John Kortbeek
- o Dr. Justin LeBlanc
- o Dr. Steve Lopushinsky
- o Dr. Tony MacLean
- o Dr. Paul McBeth

- o Dr. Michael Monument
- o Dr. Elizabeth Oddone Paolucci
- o Dr. Luke Rudmik
- o Dr. Marlis Sabo
- o Ms. Emi Sanders
- o Dr. Miller Smith
- o Dr. Claire Temple-Oberle.

Affiliated Programs, Groups, and Committees

The OSR partners with several existing programs within the Department of Surgery to strengthen research-related activities at the divisional, sectional, and inter-departmental levels.

City-Wide Surgical Executive Committee: The OSR directly reports to the Department Head (Dr. John Kortbeek) and to the City-Wide Surgical Executive Committee.

The Department of Surgery Research Coordinator Interest Group (SRCIG): Founded in 2008, the SRCIG is composed of researchers and coordinators working in different divisions within Surgery, and other Departments within the Faculty of Medicine. The SRCIG members meet every 2 months to share information, experiences, and challenges related to conducting successful research within Alberta. The SRCIG has grown from 5 to 25 members, and has hosted numerous informative presentations on topics of research interest (e.g., ethics, legal services, privacy office, and biostatistics).

The University of Calgary's Clinician Investigator Program (CIP) is a postgraduate medical training program for residents in any specialty or subspecialty who want to develop a strong foundation for a career in clinical research. It provides a tailored combination of research, clinical and coursework experiences that graduates need to be successful in clinical and translational research in their chosen field. The CIP is recognized and accredited by the Royal College of Surgeons and Physicians of Canada (RCSPC). The CIP program is increasing its profile and infrastructure with the goal of supporting more residents going forward, than it has in the past. Although it is a fairly flexible program with regards to timing and program

interests, the main stipulation and restriction is that the program must be done within the University of Calgary. For further details regarding the CIP program, interested parties can review this handbook cumming.ucalgary.ca/cip and/or contact the Director of the CIP, Dr. Zelma Kiss.

Surgeon Scientist Program (SSP): The SSP is a highly competitive, degree-based program for research training of residents within the Department of Surgery. The program provides the opportunity for residents to develop effective skills to conduct high-quality basic and/or clinical surgical research. Over the years, the SSP has supported a number of highly motivated residents who have successfully completed the program and in turn continued to produce excellent research within the Department of Surgery. Prospective applicants for the upcoming year are encouraged to submit their letter of intent by November 30, 2016.

The Research and Statistical Support Services Program: This program is directed by Dr. Elizabeth Oddone Paolucci. All consultation services are focused on further developing research skills and knowledge in our faculty and residents. Investigators are encouraged to seek assistance at the early stages of their research projects, but support is available at any phase of the research cycle, from research question formulation through to dissemination of results. For more information on the services offered by the OSR please visit our website: www.ucalgary.ca/osr

Department of Surgery Research and Education Program Grant: The Department of Surgery Research and Education Program Grant (up to \$100,000) rewards excellence, innovation, and the potential for future success and impact on the Department of Surgery. The Research stream assists promising new faculty members (within the first 5 years of their clinical appointment) in establishing their research program, while the Education stream assists any faculty member who wishes to pursue further training in a field relevant to surgical education. All faculty members of the Department of Surgery are welcomed to submit their applications, although

preference is given to those early in their investigative careers. Prospective applicants for the upcoming year are encouraged to submit their proposals by April 30, 2017.

Department of Surgery, Ethics Program: The Conjoint Health Research Ethics Board (CHREB) reviews protocols submitted by researchers from the University of Calgary's Faculties of Medicine, Kinesiology and Nursing. It is one of the three Health Information Act (HIA) designated Boards in the province. The Board considers approximately 800 new protocols per year and oversees 2500 active studies at any one time. In 2014, Dr. Fiona Costello joined the CHREB to represent the Department of Surgery.

Department of Surgery Health Technology and Innovation: The HT&I Office is continuing its work with the Surgery Clinical Networks in evaluating technology requests locally and/or province wide. For further information, please contact the Director, Dr. Luke Rudmik.

Internal Grant Review Committees: Several additional committees are required for the review of programs administered by the OSR. These review committees are assembled through the recommendation of the Department of Surgery Research Group and Chair, Dr. Fiona Costello. Review committees compiled and active over the last year include: the Calgary Surgical Research Development Fund Review Committee, the Surgery Research and Education Program Grant Review Committee, and the Surgeon-Scientist Program Review Committee, and the Departments of Medicine and Surgery Research Development Fund Competition Committee.

Accomplishments and Highlights in Research

The Calgary Surgical Research Development Fund (CSRDF): The CSRDF has been created to encourage, promote, and provide financial support for high quality, scientifically valid research activities within the University of Calgary Surgical Training Programs. The CSRDF provides small grants, annually, ranging in

amount from \$1,000 to \$4,000. In the 2016 funding year, four research projects across all divisions were supported:

- 1. Title:** "Surgical Education Needs Assessment in Nigeria." **Team:** Dr. Tito Daodu (Resident), Dr. Gwen Hollaar (PI), Dr. Nathaniel Usoro, and Dr. Temidayo Ogundiran.
- 2. Title:** "Evaluating the Utility of the Lateral Elbow Radiograph in Articular Olecranon Reduction: An Anatomic and Radiographic Study." **Team:** Dr. Jeremy Kubik (Resident), Dr. Ryan Martin (PI).
- 3. Title:** "An evaluation of in-office flexible fiber-optic guided biopsies for laryngopharyngeal lesions." **Team:** Dr. Francisco Lee (Resident), Dr. Kristine Smith (Resident), Dr. Shamir Chandarana, Dr. Wayne Matthews, Dr. Dough Bosch, Dr. Luke Rudmik, Dr. Joe Dort (PI).
- 4. Title:** "Can High Resolution Peripheral Quantitative Computed Tomography Determine Healing Time for Stable Distal Radius Fractures?" **Team:** Dr. Cory Kwong (Resident), Dr. Rob Korley, Dr. Steven Boyd, Dr. Prism Schneider (PI).

Surgeon's Scientist Program (SSP): The 2016 SSP recipient is Dr. Devon Livingstone, Otolaryngology, PGY3. He will be working on his Masters of Translational Medicine at the University of California Berkeley / San Francisco campuses.

Department of Surgery Research and Education Program Grant: The Department of Surgery Research and Education Program Grants (up to \$100,000) reward excellence, innovation, and the potential for future success and impact on the Department of Surgery. The Research stream assists promising new faculty members (within the first 5 years of their clinical appointment) in establishing their research program, while the Education stream assists any faculty member who wishes to pursue further training in a field relevant to surgical education.

In the 2016 funding year, the following project was supported:

Drs. Prism Schneider, Orthopaedics and Paul McBeth, General Surgery. Title of Proposal:

“Evaluation of Coagulation Abnormalities in the Trauma Patient: Point-of-Care Thrombelastography.”

Departments of Medicine and Surgery Research Development Fund: This annual competition was

established jointly by the Departments of Medicine and Surgery, provides two awards of up to \$12,500 annually based on the recommendations of a review committee, as well as on budget availability. In the evaluation process priority is given to projects involving students, residents, and junior faculty within the first five years of their appointment. A variety of clinical, translational or epidemiologic research project proposals are considered. In the 2016 funding year, the following projects were supported:

Title: “Proof of Concept Pilot Study Using OCT SD to Diagnose Impending Hypertensive Emergency: Relationship to Clinical Findings, Imaging and Outcomes (CREB 15-0374).”

Team: Dr. Robert Herman(PI), Dr. R. Geoff Williams, Dr. Trisha Lee-Ann Hawkins, Dr. Kara Nerenberg, Dr. Kelly Zarnke, Dr. Anshula Ambasta, Dr. Fiona Costello.

Title: “Improving Osteoporosis Management after Fragility Fracture in the Outpatient Cast Clinic Setting”

Team: Dr. Prism Schneider (PI), Dr. Natalie Rollick (Resident), Dr. Maysan Abu-Hakima, and Dr. Rob Korley

Annual Surgeons’ Day Research Symposium and Awards Banquet: Annually, Surgeons’ Day

is organized by the OSR and supported by the entire Department of Surgery. Resident and fellow research is presented by both podium and poster presentations. The Symposium is followed by an evening gala dinner and awards presentation.

In 2016, the Research Day Symposium was held at the Libin Theatre, Foothills Hospital, Health Sciences Centre on June 10, 2016. The 2016 McPhedran

Lecturer was Dr. Thomas Waddell, Pearson-Ginsberg Chair within the Division of Thoracic Surgery at the University of Toronto.

Dr. Waddell is the Head of the Division of Thoracic Surgery at University Health Network (UHN), including Toronto General Hospital. His lecture was entitled “What a long strange trip it’s been” - regenerative medicine approaches to lung and airway disease. Dr. Sean Grondin, a Clinical Professor of Surgery within the Section of Thoracic Surgery at the University of Calgary, delivered the 2016 McMurtry lecture, entitled: “Tips for Successfully Starting and Finishing A Research Project.”

Research Day award recipients included

- 1. Best Overall Research:** Dr. Alison Laws, General Surgery, R2. “Intra-operative margin assessment in breast-conserving surgery: A population-level comparison of techniques.”
- 2. Honourable Mention - Overall Research:** Dr. Arezoo Astanehe, Plastic Surgery, R4. “An enhanced recovery after surgery pathway for autologous breast reconstruction decreases postoperative pain, nausea, and length of hospital stay.”
- 3. Best Poster:** Dr. Sarah Lai, Pediatric General Surgery, R8. “Medium chain triglycerides are more potent than long chain triglycerides in inducing jejunal adaptation after massive ileocecal resection in rats.”

The Peter Cruse Memorial Award: In 1996, the Peter Cruse Memorial Award was established to honor the outstanding contributions of Dr. Cruse to medical education in the Department of Surgery. The Cruse Award is given to the medical student with the best surgery related research project. In 2016, the recipient and honorable mention for the Peter Cruse Memorial Award were:

Award Recipient: Ms. Cynthia Mardinger, University of Calgary, Faculty of Medicine.

Honorable Mention: Mr. Jamil Jivraj, University of Calgary, Faculty of Medicine

Newsletter: In 2014, the OSR created a monthly newsletter, which highlights the accomplishments of Department members and provides information about upcoming grant deadlines. The newsletter also publicizes updates from the CHREB aimed to improve the efficiency of the ethics review process for researchers.

Website: In 2016 the OSR launched its official website (www.ucalgary.ca/osr). This will be a useful resource for individuals seeking information regarding grant deadlines, teaching seminars, CHREB updates, and research related activities within the Department of Surgery.



*Dr. Fiona Costello, Director OSR
Photo provided by Dr. Fiona Costello*



*Dr. Elizabeth Oddone Paolucci, PhD
Associate Director OSR*

Section Highlights

Section of Dentistry and Oral Health

Section Structure and Organization

Current Committees

Division of Adult Dentistry - Division members representing Adult Dentistry in the following committees;

- ADA&C Hospital Committee – Dr. E. Kalaydjia
- ZMAC (Zone Medical Advisory Committee) – Dr. E. Kalaydjian
- SAIT Dental Assisting Program – Dr. E. Kalaydjian, Dr. A. Houghton
- Surgical Foundations PGSTC – Dr. E. Kalaydjian
- Calgary Zone Surgical Executive Committee – Dr. E. Kalaydjian
- Combined FMC OR Committee – Dr. E. Kalaydjian
- Dental General Practice Residency Program Training Committee – Dr. E. Kalaydjian, Dr. A. Paladino, Dr. G. Shariff, Dr. S. Switzer, Dr. T. Wierzbicki
- Provincial Head and Neck Tumour Team Executive Committee – Dr. E. Kalaydjian
- Canadian Association of Hospital Dentists – Co-founder and Secretary/Treasurer – Dr. E. Kalaydjian
- CDAC (Commission on Dental Accreditation of Canada) Health Facilities / Dental Internship Committee – Dr. E. Kalaydjian



*Dr. Eduardo Kalaydjian
Dentistry and Oral Health Section Chief*

Division of Pediatric Dentistry

Division members representing Pediatric Dentistry in the following committees

- ACH Operating room Committee – Dr. M-C. Cholette
- ACH Pediatric Surgery Executive Committee – Dr. M-C. Cholette
- Dental General Practice Residency Program Training Committee – Dr. M-C. Cholette
- Royal College of Dentists of Canada (Examiners) Dr. M-C. Cholette, Dr. R. Barsky, Dr. W. Loepky
- CDSA Board Member for the Canadian Academy of Pediatric Dentists – Dr. R. Barsky
- Alberta Academy of Pediatric Dentistry, President Dr. R. Barsky
- Western Society of Pediatric Dentistry, Vice-President – Dr. S. Hulland
- Oral Health initiative for the Calgary Backpack Program, Director – Dr. S. Hulland
- Alberta Academy of Pediatric Dentistry - Western Society Pediatric Dentistry Rep. – Dr. S. Hulland
- Alberta Children's Hospital - Medical Staff Association - President – Dr. S. Hulland

- Journal of The Canadian Dental Association, Expert Panel of Reviewers and Advisors – Dr. W. Loepky
- Dentistry for All, Executive Director – Dr. B. Krusky
- Society for a Healthy Mouth Healthy Child (Alberta) and Foundation For A Healthy Mouth Healthy Child(USA), Founder and President – Dr. L. Smith
- ACH Institute for Maternal and Child Health Research – Dr. L. Smith
- Children's Tooth Fairy Foundation Board – Dr. K. Badwi
- Calgary and District Dental Society, Past President – Dr. F. Saher
- Alberta Academy of Pediatric Dentistry, Secretary/Treasurer – Dr. S. Schwann

Division of Community Dentistry/Dental Public Health Clinic Program

- SAIT Sterile Processing Technician Program Advisory Committee – Dr. H. Rabie
- SAIT Dental Assisting Program Advisory Committee – Dr. H. Rabie
- Dental Public Health Clinical Planning Committee – Dr. H. Rabie
- Dental General Practice Residency Program Training Committee – H. Rabie

Programs

Division of Adult Dentistry
Regional After Hours On-Call Program

FMC Dental Clinic

Adult Special Needs and Medically Compromised Dentistry Clinic

- Dental Oncology Clinic
- Sedation Dentistry Clinic
- Dental Hygiene Clinic

Speciality Clinics including:

- Oral Medicine
- Endodontics
- Periodontics
- Oral and Maxillofacial Surgery

FMC DENTAL GENERAL PRACTICE RESIDENCY (GPR) PROGRAM

- Hosted at Foothills Hospital Dental Clinic
- Enrolment: 2 residents

CORRECTIONS DENTISTRY - Dental care for inmates and remanded population in Calgary Correctional Institutions

NHSF - Dental treatment for children and Special Needs patients under general anesthesia; insured service for children that meet established criteria.

Division of Pediatric Dentistry

The outpatient pediatric dental clinic at the Alberta Children's Hospital offers care to infants, children, and adolescents who present unique dental/oral challenges, behavioral issues and/or more complex special care needs. Treatment modalities include communicative behavior guidance/ non-pharmacological behavior modification, minimal/moderate oral sedation or general anesthesia in the Alberta Children's Hospital operating room. Community pediatric dentists with privileges also provide dental care for children under general anesthesia at AHS contracted Non-Hospital surgical Facilities and participate in after-hour call services.

Division of Community Dentistry/Dental Public Health Clinic Program:

The Dental Public Health Clinic Program serves as a safety net delivering low-fee dental care to disadvantaged people. The program operates from two sites in Calgary: Sheldon M. Chumir Health Centre and Northeast (Sunridge Mall).

Membership

Division of Adult Dentistry

As of March 31, 2016, Adult Dentistry Division membership composed of 25 privileged members

Dr. A. Paladino is the Chief of Adult Dentistry and the Clinical Director of the FMC Dental Clinic

FMC DENTAL GENERAL PRACTICE RESIDENCY (GPR) PROGRAM

- Dr. E. Kalaydjian is the Program Director of the Dental Residency Program
- Dr. A. Paladino is the Site Director of the Dental Residency Program
- Enrollment: two residents 2014-2015
- Preceptors for FMC Dental Residency

Program

- General dentists
- Specialists
- Oral and Maxillofacial Surgeons (OMFS)
- Periodontists
- Oral Medicine
- Endodontist

CORRECTIONS DENTISTRY

- Three casual dentists
- Actively recruiting to hire more dentists to work at Corrections Site

FMC DENTAL CLINIC

- 3 full time dentists
- Several casual general dentists
- Several specialist preceptors for the dental residency program

Division of Pediatric Dentistry: There are currently 22 pediatric dentists in Calgary 16 AHS privileges: Drs. Robert Barsky, Kari Badwi, Christine Bell, Aimee Castro, Marie-Claude Cholette, Sarah Hulland, J. Bradley Krusky, Choo-Kar Kua, Warren Loeppky, Orest Pilopowicz, Farida Saher, Sandra Schwann, Timothy Seto, Shirin Sheiny, Michele Thal and Rory Vinsky,

Dr. Leonard Smith has retired his clinical privileges but does retain an appointment with the AHS; he continues to work in private practice.

Dr. Cholette is the Chief of Pediatric Dentistry and the Clinical Director of the ACH Dental Clinic.

ACH Dental Clinic Workforce (2.25 FTE)

- Dr. Christine Bell (0.8 FTE).
- Dr. Marie-Claude Cholette (0.8 FTE)
- Dr. Aimee Castro (0.2 FTE) new

Casuals:

- Dr. Sarah Hulland (0.1 FTE)
- Dr. Choo-Kar Kua (0.1 FTE)
- Dr. Farida Saher (0.05 FTE)
- Dr. Tim Seto (0.1 FTE)
- Dr. Michele Thal (0.1 FTE)
- Staff orthodontist: Dr. Darrel Kemp (1/2 day every 2 months)
- Staff Oral & Maxillofacial Surgeon: Dr. Miller Smith (1/2 day every 2 months)
- Cleft Palate Clinic Dental Consultants:
- Orthodontists: Drs. Michael Bindman and Darrel Kemp
- Oral & Maxillofacial Surgeons: Drs. Miller Smith and Douglas Vincelli
- Pediatric Dentists: Drs. Christine Bell, Marie-Claude Cholette and Sarah Hulland

Division of Community Dentistry/Dental Public Health Clinic Program

- Dr. Adebayo Olowe, Dr. Heidi Rabie; Dr. Sylla Skaria; Dr. Sheila Varshney.
- Dr. Rafael Figueiredo is the Dental Public Health Officer.
- Dr. H. Rabie is the Chief of Community Dentistry and the Manager/Clinical Director of the Dental Public Health Clinics.
- The Public Health Dental Clinics have 2.3 FTE dentists on staff.

Accomplishments and Highlights

Clinical Service

Division of Adult Dentistry

FMC DENTAL CLINIC

- Comprehensive Primary Care
- Dental Specialty Clinics include
 - Oral Medicine
 - Endodontics
 - Periodontics
 - Oral and Maxillofacial Surgery
- Clinic maintains its accreditation by the Commission on Dental Accreditation of Canada (CDAC) for 5 year period of year 2013 - 2018.
- Surgical Implant Program: in progress

FMC DENTAL GENERAL PRACTICE RESIDENCY (GPR) PROGRAM

- Program maintains its accreditation by the Commission on Dental Accreditation of Canada (CDAC).
- Surgical Implant Program: in progress
- Continued partnership between FMC GPR PROGRAM, Adult Dentistry and OMFS for the after hour's on-call program (Calgary Zone).

NHSF - Dental treatment for children and 'Special Needs' patients under general anesthesia; insured services for patients that meet established criteria

CORRECTIONS DENTISTRY - Provincial Review of Mouth Care in Correctional Facilities

Division of Pediatric Dentistry

ACH Dental Clinic: comprehensive primary care.

- Dental specialty multi-disciplinary clinics: Orthodontics, Oral and Maxillofacial Surgery and Pediatric Dentistry.
- The in-hospital delivery of VPI speech appliance.- The ACH Dental Clinic continues to successfully offer NAM therapy.
- The ACH Dental Clinic maintains its accreditation by the Commission on Dental Accreditation of Canada (CDAC)

Division of Community Dentistry/Dental Public Health Clinic Program

- Dental Public Health Clinic Program maintains its accreditation by the Commission on Dental Accreditation of Canada (CDAC).
- Clinical Service- the Public Health Dental Clinics provide low income individuals with basic dental treatment. The individuals may include: working poor families, refugees and recent immigrants to Canada, the homeless, patients with mental issues leading to poverty and others who do not have any form of coverage.
- Continue to work with HPTP clinics and Urgent Cares, Emergency Rooms in order to reduce severe dental infections in target low income population.
- Received a grant from Green Shield Canada in

order to facilitate a coupon program thus, we are now able to offer free extraction for patients referred from HPTP, ER, UC and select community centers.

- Successfully dealing with the Syrian Refugee's dental care- hired casual dentists in order to accommodate 30% extra patient load.

Education

Division of Adult Dentistry

Residents:

- Enrollment: 2 dental residents (2015-2016)
- Once again we noted a large increase in the number of qualified candidates applying
- Staff hospital dentists continue to welcome residents from Radiation Oncology on a as requested basis- Staff hospital dentists participate in half-day academic teaching for Geriatrics and Emergency Medicine
- The Dental Residency Program maintains its accreditation by the Commission on Dental Accreditation of Canada (CDAC).

Fellows: None

Dental Students:

Foothills Medical Centre Dental Clinic hosted a total of nine third year dental students from the University of Alberta on an elective rotation in "Hospital Dentistry".

Division of Pediatric Dentistry

Residents:

- The staff pediatric dentists at ACH continue to welcome FMC GPR residents for 4 weeks per year, University of Alberta Dental students, Family Medicine and Pediatric Residents as requested on a regular basis.
- The pediatric dentists also participate in half-day academic teaching for the Family Medicine, Genetics and Pediatric Residents.

Fellows: None / Dental Students:

Alberta Children's Hospital Dental Clinic hosted a total of nine third year dental students from the University of Alberta on an elective rotation in "Hospital Dentistry".

Division of Community Dentistry/Dental Public Health Clinic Program

Residents:

The two FMC Dental General Practice residents each worked for 10 days in the Dental Public Health Clinics.

Fellows: None

Dental Students: The Dental Public Health Clinics hosted a total of nine third year dental students from the University of Alberta on an elective rotation in "Hospital Dentistry".

Research

Division of Adult Dentistry

- Clinical Trial (SWOG S0307). 'Phase III Trial of Bisphosphonates as adjunctive therapy for Primary Breast Cancer.' (Clinical Lead is Dr. Patterson, Tom Baker Cancer Centre).
- Clinical Trial (RTOG 1016). 'Phase III Trial of Radiotherapy plus Cetuximab versus Chemotherapy in HPV-Associated Oropharynx Cancer.'

Division of Pediatric Dentistry

Dr. Cholette is part of the Canadian Dental Sleep Apnea Network and is collaborating in a research project: "Incidence of Altered Craniofacial Morphology and Malocclusion in Children and Youth with Obstructive Sleep Apnea". [SickKids Foundation New Investigator Grant program (N114-012)]

Division of Community Dentistry/Dental Public Health Clinic Program

The clinics participated in one research project last year with Dr. William Connors from the infectious Disease HPTP unit. The study was aimed at providing a care pathway for patients presenting with orofacial abscesses of dental origin. The original study was submitted to Infectious Disease magazine, and we are awaiting review. The ultimate goal was to prevent repeat visits to the HPTP clinics by patients who could not afford to remove the infected tooth responsible for the abscess. This year, we continue our cooperation with the HPTP clinics by providing referral coupons with strict timelines in order to entice patients to come in for treatment. The project is partially funded by a

Greenshield Insurance Company grant. Information will be collected on use of these referral coupons and presented to Greenshield. This work and research is ongoing. Some results will be presented at the Canadian Association of Public Health Dentistry in Edmonton this fall. An abstract has been submitted.

Challenges

Response to Issues

Division of Adult Dentistry

- Quality Assurance
- Continued peer-lead QA strategies for Dental Cases (i.e. M&M Rounds)
- Both the FMC Dental Clinic and the Dental Residency Program continue to maintain accreditation by the Commission on Dental Accreditation of Canada (CDAC)

FMC DENTAL CLINIC

- Dental Implants - It remained a challenge in 2015-2016 to operationalize as well as initiate the provision of dental implants to our patient population.
- OR Access - Lack of dedicated OR blocks for our Special Needs patients at the FMC site continues to result in an increase in wait times for dental treatment under a general anesthetic. The service picks up scramble OR time whenever possible.

Funding

Inadequate provincial funding for dental services in the Calgary Zone continues to make it a challenge to provide optimal care within acceptable target times.

- The hospital based dental service is a fee for service dental clinic and the dental services provided are uninsured. The clinic must however accept significantly reduced fees for patients covered by third party social service programs.

FMC DENTAL GENERAL PRACTICE RESIDENCY (GPR) PROGRAM

- Recruitment and Retention
- Attracting qualified preceptors for dental residency program remains a challenge

CORRECTIONS DENTISTRY

- Recruitment and Retention
- Attracting qualified dentists remains a challenge

Division of Pediatric Dentistry

The greatest challenge continues to be the Division's inability to recruit a full time pediatric dentist for ACH Dental Clinic due to fiscal restraint. The ACH Dental Clinic is unable to maintain self-sufficiency caring for the most compromised, challenging and vulnerable children. We have unfortunately made no progress with advocating for this position in the last five years.

Our hospital-based dental service receives fee for services for uninsured dental services provided. The Clinic must however accept significantly reduced fees for patients covered by provincial Social Services, Child Health Benefits and Indian Affairs. The Hospital Dentists of Alberta have made recommendations to the ADA&C to support further negotiation with ADSC for increase in fees.

The lack of additional funding for professional staff to our service will result in tremendous pressure on current clinic staff, increased wait times and an inability to deliver prescribed treatment within our target times.

The Non-Hospital Surgical Facility (NHSF) AHS contract budget for general anesthetic services for dental patients has not seen an increase over the last 5 yrs. while the facility fees have increased during this time thus, resulting in a decrease of patients being treated. Limited OR Time impacts negatively on the recruitment of community-based pediatric dentists in the City of Calgary.

Division of Community Dentistry/Dental Public Health Clinic Program - Constant increase in demand by our population base. Some due to care pathways leading to our service being displayed in urgent care/ER's, some due to the Syrian Refugee Crisis, and some due to the general oil-based economic downturn

The program is experiencing a pronounced increase in emergency visits. Emergency visits consisted of

approx 35% of our total work. This has resulted in longer wait times for dental treatment in our clinics thus; appointments are being scheduled 6 months out.

We have managed to increase Dr. Sylla Skaria's position from 0.8 to 1.0FTE, but we are unable to establish additional 1.0 FTE permanent dentist position until funding can be made available.

Workforce Planning**Future Needs****Division of Adult Dentistry****FMC DENTAL GENERAL PRACTICE RESIDENCY (GPR) PROGRAM**

Preceptors Required

1. Prosthodontist – 0.5 day per month minimum (additional training in cancer prostheses an asset)
2. Periodontist – 0.5 day per month minimum (recruitment based on need)
3. Endodontist – 0.5 day per month minimum (recruitment based on need)

FMC DENTAL CLINIC**FMC Staff Dentists**

Recruitment of General Practice Dentist/Special Needs Dentist – No additional recruitment at this time

CORRECTIONS DENTISTRY

Recruitment of additional Casual Dentists

Division of Pediatric Dentistry

- ACH Dental Clinic: 1.0 FTE Pediatric dentist
- Community workforce: plan to increase our current workforce to meet the demands of the population. Currently 4 community-based pediatric dentists do not have OR privileges due to lack of funding for more OR Time.

Division of Community Dentistry/Dental Public Health Clinic Program

- The Dental Public Health Clinics would need to recruit a 1.0FTE dentist to reduce wait times

for patients and to increase capacity to see emergencies and/or urgent cases faster.

- An increase in Sr. Sylla Skaria's FTE from 0.8 to 1.0 was requested this year and accepted.

Goals and Strategies

Division of Community Dentistry/Dental Public Health Clinic Program

- Need to maintain our standing as safety net for disadvantaged patients.
- To help reduce dental disparities in our region.
- To keep our target patient population from developing serious infections that necessitate emergency room visits, IV antibiotics in the HPTP clinic, hospital admission and/or surgical intervention. This will result in cost savings for the healthcare system.
- Ultimately, we would like to see the clinics spread beyond the City of Calgary and eventually become a more provincial program

Impact on other departments and zonal resources

Division of Adult Dentistry

- Continued collaboration and support from community partners
- Continued collaboration and support from other AHS Clinical Departments & Divisions (i.e. Department of Surgery, Section of OMFS)

Division of Community Dentistry/Dental Public Health Clinic Program

- The Dental Public Health Clinics are funded by Public Health and work to reduce the impact of dental disease on Urgent Care, the HPTP clinic and the Emergency Rooms by delivering care to disadvantaged people before they require assistance from these acute care sites. We have had over 200 referrals from acute care sites this year.

Quality Assurance, Quality Improvement, and Innovation

General - Division of Adult Dentistry

- Quality Assurance
- Continue with peer-lead QA strategies for Dental Cases (i.e. M&M Rounds)

- Maintain accreditation for the FMC Dental Clinic and Dental Residency Program from the Commission on Dental Accreditation of Canada (CDAC)

FMC DENTAL CLINIC

- Dental Implants Program
- Complete work in progress such that can begin to offer treatment to patient population.

CORRECTIONS

- Mouth Care
- Review of current guidelines in Provincial Correctional Facilities

Division of Community Dentistry/Dental Public Health Clinic Program

- IPC
- A change in IPC leadership for the community sites.

Access of Family Physicians to specialists Division of Adult Dentistry

- Telehealth Dental Information updated.
- Dental Presentations provided to LTC Facilities in Calgary Zone.

Division of Community Dentistry/Dental Public Health Clinic Program

- Plans made for fall process review with AIM program hoping to increase efficiencies
- Patient flow through the Emergency Department Division of Adult Dentistry
- During business hours, dental patients can access urgent care through the hospital Emergency
- Department or directly through FMC Dental Clinic.
- After hours service: dental patients in need of urgent care can access the Regional On Call Program (Adult Dentistry & Oral Health). This is a partnership of the FMC Dental Residency Program with OMFS and Adult Dentistry.

Dental Presentations to Emergency Physician Group in Calgary Zone and assistance provided in development of Dental Emergency Kit for Calgary Emergency Departments.

Division of Community Dentistry/Dental Public Health Clinic Program: We continue to honour the continuity of care agreement with Sheldon Chumir Urgent Care which we developed in 2013. Our service is more definitive and less costly for the system than a visit to urgent care for antibiotics which attenuate the symptoms for a while, but do not solve the root cause of the problem. We continue to function within the care pathway which we had created in collaboration with HPTP Clinics; this has been distributed to urgent care and ER's in the area in order to funnel patients in this direction rather than acute care. We have recently also provided referral coupons to entice low income patients to come for treatment in our clinics. We continue to work with HPTP to reduce recurrent visits due to dental infections. Public health is funding this as well as a grant from Greenshield to prevent greater costs in acute care.

Future Directions and Initiatives

Division of Adult Dentistry

- Enhanced participation and engagement of members in divisional activities (eg. attending quarterly meetings, M&M Rounds, Region Wide Dentistry Rounds)

FMC DENTAL CLINIC

- Collaborate with FMC Dental Clinic Manager to fully operationalize the Dental Implant Program and begin to provide dental implant treatment to our patient population
- Provide Neuromodulator treatment to our patient population which may benefit from this service
- Maintain current standing with Commission on Dental Accreditation of Canada (CDAC).

FMC DENTAL GENERAL PRACTICE RESIDENCY (GPR) PROGRAM

- Expand program to include a third dental GPR resident
- Recruit prosthodontist as preceptor
- Recruit additional periodontist preceptors

- Recruit additional endodontist preceptors
- Begin dental implant surgery and restorations to patient population
- Maintain current standing with Commission on Dental Accreditation of Canada (CDAC).

CORRECTIONS DENTISTRY

Recruitment of additional casual dentists.

Division of Pediatric Dentistry

- Recruitment of third full-time hospital based pediatric dentist
- Goal to reduce wait-times at the ACH Dental Clinic by increasing the dentist workforce.
- Develop a one year Post-graduate Pediatric Dentist Fellowship/Residency Program
- Maintain the ACH Dental Clinic Accreditation with the Commission on Dental Accreditation of Canada (CDAC).

Division of Community Dentistry/Dental Public Health Clinic Program:

- Solidifying the care pathways to channel underprivileged patients from ER's, Urgent Care and HPTP clinics to our clinic for definitive low cost care. Providing innovative ways (such as our current coupon process) to encourage patient referrals and patient compliance with dental treatment.
- When funding from Public Health becomes available we would like to hire more fulltime dentists. This may not be possible in the short term as no increase in public health funding is planned to date.
- We would be glad to host dental residents for more days if the Dental GPR Program and Foothills Medical Centre Dental Clinic decide to increase the number of residents. This would solve a logistical clinical training space issue for the FMC Dental Clinic and would provide our clinics with a workforce to help.

Section of General Surgery

Section Structure and Organization

The Section has a new Executive Committee made up of the Site Chiefs at the four adult hospitals (Austen, Debru, Dunham, Maclean), the Program Director (Datta), the Head of Surgical Oncology (McKinnon), the Head of Trauma (Lall), and the Co-Chairs of the Finance Committee (McKinnon, Datta). The Executive Committee is chaired by the Section Head (Dixon). The Recruitment Committee is represented by the Executive Committee with the addition of ad hoc members as needed.

The Section has a new Finance Committee that has Co-Chairs (McKinnon, Datta), the Section Head (Dixon), and representatives from the other sites (Graham, Dunham). The Finance Committee has been drafting Financial Policies for the Section, is in the process of setting up a Sectional Foundation, and reviews all requests for funds and reimbursement.

In addition, the Section has an Academic Executive made up of the Program Director and Assistant Program Director (Datta, Reso), the Head of Sectional CME (Anderson-outgoing, Armstrong-Incoming), Resident Rep. (Lam), Clinical Clerk/Med School (Harvey), and Chaired by Section Head. This Committee reports to the Sectional Executive.

We have implemented a new Mentorship Committee Chaired by doctors Nixon and Pasioka. Other members are ad hoc. They will ensure that all new recruits have both a clinical and an academic mentor. They will help to select these with the Section Head and will play an important role in ensuring the relationship between mentor and mentee is working out, intervene as necessary, and in some cases change the mentor if required. This will be an ongoing process for all new recruits and will require careful oversight in the critical first two years after recruitment.

The Section has instituted a new City Wide monthly Rounds Program that includes all 4 adult sites and brings in exciting and provocative speakers once per month. This Rounds Committee is made up of Drs. Armstrong, Ball, Gill, and Mcbeth. Initially we rotated the Rounds between sites, however based on feedback these will now be held at the Glencoe with the exception of the 4 months that are telehealthed with U of A General Surgery which will be held in the TBCC Auditorium.

Accomplishments and Highlights

Dr. Mack completed his term as Program Director and Dr Datta has taken over, with Dr Reso acting as Assistant PD. Our program is in a great position because of all the work Dr Mack has done and we want to thank him for this. This past week all of our final year residents passed the Royal College exam. We want to congratulate doctors Ryan Rochon, Kenton Rommens, Jennifer Lam, Chris Blackmore, Ting Li, Ben Turner, and Janice Austin. Dr Mack has also been Promoted to Professor as of July 1, 2016, Chair, Post Graduate Surgical Training Committee (PGSTC), Acting Deputy Head, Department of Oncology, TBCC, Secretary, Canadian Society of Surgical Oncology (CSSO) and is the Interim Clinical Director, Cancer Surgery Alberta (CSA)

Dr. Heine has been appointed Site Chief for Surgery at the PLC and finishes a 10 year term as the Site Head of General Surgery. Dr Estifanos Debru replaces him as site head of General Surgery. At the FMC Dr. Maclean has taken over as Site Head of General Surgery.

Dr. Dunham won the Department of Surgery Ectopic Teaching Award for the second time – clearly he is a truly outstanding teacher.

Dr. Ball won the Department of Surgery Award. (for the extrapolation of the Aquamantys energy device into Trauma surgery) and is Founding board member of a new telehealth trauma conference entitled Trauma Conference International (TCI). It represents a new direction in telehealth via simulcast across South, Central and North America.

Dr. Kortbeek has completed his highly successful 10 year term as Department Head of Surgery; we are excited to have him back full time in the Section.

Dr. Kortbeek also won the 2016 College and Association of Registered Nurses of Alberta, Partner in Health Award, 2016 Charles Burns Trauma Association of Canada Board Recognition Award, Keynote Speaker Allegheny Health Network Trauma Symposium, Pittsburgh. He has now completed terms as: Governor Alberta Chapter American College of Surgeons, Co-Chair Alberta Strategic Surgical Network and again the Department Head Surgery AHS Calgary Zone and University of Calgary.

Dr. Pasioka has been the Brown Dobyns Lecture at Case Western, Cleveland; was awarded the Paul Harris Fellow award by the Rotary Foundation. She is also Secretary-Treasurer of the International Association of Endocrine Surgeons. The FMC was the leading Canadian and third rank recruitment center for the Telstar RTC in Carcinoid patients, and was the Course Program Chair of the 15th Post-grad course in Endocrine Surgery held in Chengdu China. As well she published her textbook on Endocrine Surgery this past year.

Dr. Way received his masters in Christian studies in May 2016.

Dr. C. Armstrong organized the first simulation based technical skills assessment session for our residents in the ATSSL this year. He also coordinated the FUSE (Fundamentals for the use of surgical energy) session for the surgical foundations program.

In addition to pulling a full clinical load, Dr. Oliver Bathe has had continued success in his translational

research efforts. Research has focused on tissue banking, metabolomics and genomics. The HPB/GI Tumor bank directed by Bathe was the single largest contributor of several tumor types analyzed by the international effort called The Cancer Genome Atlas Project. This year, several patents were produced related to metabolomics-based blood tests, and these have caught the attention of venture capitalists. In addition to clinical and research activities, Bathe has played a leadership role as Lead, Provincial GI Tumour Team and as Co-chair of the Hepatobiliary Group of the Canadian Cancer Trials Group.

Dr. Hollaar Published 2 journal articles and 2 abstracts and gave podium presentation at an international medical education conference.

Organized and taught at CME event in Lao PDR for FM graduates and residents focusing on "Family Medicine Specialists as 5-Star Doctors". As well as organized meetings with faculty members and residents from various divisions to begin curriculum development for global health electives in PGME at the University of Calgary.

Dr. Rosen continues to chair the Medical Skills Course at the Cumming School of Medicine and continues to co-Chair the Bioethics Unit at the Cumming School of Medicine. We launched the "Core Online" Initiative at the Cumming School of Medicine, which is a multimedia online resource for Medical Skills. We have rolled out a formal referral process for the Anorectal Clinic at the South Health Campus and it continues to prosper and expand.

Dr. Rosen has also presented a poster at the American Society for Bioethics and Humanities Meeting in Houston in October 2015 and was selected as a member of the Cumming School of Medicine Honour Role for teaching.

Challenges

The main issue for general surgery currently is manpower for the on-call/acute care surgery teams at the four adult sites. With decreasing resident work

hours along with less residents overall in the programs anticipated in the next 10 years along with increasing acuity and volume of emergency surgical patients; it has become difficult to fill in the call schedules. We are in the process of working on a number of possible solutions to this problem, which we believe will continue to be an issue for the foreseeable future.

Workforce Planning

Over the past year we have been able to hire 5 outstanding new surgeons to Calgary. These include: Richi Gill (Upper GI and Bariatrics) at the PLC, Renelle Daigle (Colorectal Surgery) at SHC, Michael Kwan (General Surgery) at SHC, Antoine Fortier (Surgical Oncology), Christopher Armstrong (Minimally Invasive Surgery) at RGH. Dr Kwan will be taking a sabbatical to complete subspecialty training in the coming year.

Currently there are no recruitment positions needed or anticipated in the next year. In the next 2-3 years the PLC anticipates one position for a surgeon with colorectal expertise and one position for a breast surgeon. The FMC will need one colorectal surgeon and one surgeon with endocrine/surgical oncology expertise. The RGH will need one surgeon with expertise in acute care surgery and education. In addition, further recruits may be needed based on retirements.

If an AARP is secured then more positions are anticipated at all sites.

Quality Assurance, Quality Improvement, and Innovation

We are excited about the possibility of a new app under development to be potentially used as a mechanism to evaluate and provide feedback around our educational rounds as well as our Morbidity and Mortality Conference. We anticipate implementation and rollout in the next year.

As well, we hope to have Faculty 360 Evaluation program that will allow interested Faculty to undergo a 360 assessment and evaluation by an independent third party with the focus being on Continuing Professional Development and identification of personnel areas for improvement and leadership development. This program will hopefully commence in the next year.

Future Directions and Initiatives

A letter of intent will be submitted to be considered for an AARP. We are optimistic this will become a reality in the next cycle.

We have engaged a fundraising company and are in the process of planning a fundraising initiative with a focus on the development of an endowed research chair in the Section of General Surgery – this will be discussed at the September City Wide Business Meeting.



Dr. Elijah Dixon, General Surgery Section Chief

Section of Ophthalmology

Section Structure and Organization

- Administrative: Admin Committee
- Section chief: Dr. Michael Ashenhurst
- Program Director: Dr. Chris Hanson
- Fellowship Director: Dr. Andrew Crichton
- Undergraduate education: Dr. John Huang
- Course Five coordinators: Dr. Karen Verstraten and Dr. Vivian Hill
- Research Day: Dr. Bryce Ford
- Fellowship Program Subcommittee chaired by Dr. Andy Crichton.
- Undergraduate Medical Education Subcommittee chaired by Dr. John Huang.
- Sectional Research Subcommittee chaired by Dr. Feisal Adatia
- Grand Rounds Subcommittee chaired by Dr. Andy Crichton.
- Research Day Subcommittee chaired by Dr. Bryce Ford.
- The Section of Ophthalmology provides clinical services through Alberta Health Service Facilities, Non Hospital Surgical Facility's and private offices.
- There are outpatient clinics located at the Rockyview General Hospital and Alberta Children's Hospitals.
- We operate at five non hospital surgical facilities for cataract and non-cataract ophthalmic surgery.
- We provide primary on call coverage for the five major hospitals in Calgary and subspecialty coverage for Southern Alberta.
- We have active residency and fellowship programs
- Dr. Lisa Lagrou will be commencing practice September, 2016 with a primary focus on paediatric ophthalmology and strabismus.

Current Committees

- Chief's advisory, consisting of Dr. Anna Ells, Dr. Chris Hanson, Dr. Jit Gohill, Dr. Nand Goel, and Dr. Andrew Crichton.
- Monthly business meetings (all ophthalmologists with privileges in the Calgary Health Zone, three neuro-ophthalmologists, one affiliated vision research scientist, and guests)
- On-call Subcommittee chaired by Dr. Nand Goel.
- Residency Program Committee chaired by Residency Program Director, Dr. Chris Hanson.

Programs

- Lions Eye Bank of Southern Alberta at Rockyview General Hospital
- Sight Enhancement Clinic at Rockyview General Hospital
- Dr. Bill Astle participates in the Children's Travelling Sight Enhancement Clinic for Southern Alberta.
- University Eye Foundation (President Dr. Amin Kherani).
- Calgary Ophthalmic Medical Technology Training Program at Rockyview General Hospital
- Subspecialty clinics at Rockyview General Hospital: Cornea, Glaucoma, Marfan's Syndrome Connective Tissue Disorders Eye Clinic, Neuro-Ophthalmology, Ocular Oncology, Retina, Solid Organ Transplant Eye Clinic, Adult Strabismus, Urgent Eye And Thyroid.
- Retinopathy of prematurity screening service to the Neonatal Intensive Care Units at Alberta Children's Hospital, Foothills Medical Centre, Peter Lougheed Centre, Rockyview General Hospital and South Health Campus.

The University of Calgary Ophthalmology program will under go an external review in one year. The past Royal College review has given us some direction for restructuring of the training program. These changes have been started this year.

RTC: The training program committee includes the following staff.

- Dr. Hanson Chair- Program Director
- Elected Junior and Senior resident
- Dr. Feisal Adatia - Research Chair
- PGY1 coordinator (by correspondence)
- Dr. Ashenhurst - Section Head
- Dr. Fielden - Curriculum
- Dr. Bill Fletcher
- Dr. Dotchin
- Dr. Wong - Evaluations

Program coordinators will be:

- Comprehensive- Bill Chow
- Cornea- Peter Huang
- Glaucoma- Patrick Gooi
- Pediatrics- Stephanie Dotchin
- Plastics- Karim Punja
- Retina- Patrick Mitchell

Surgical teaching (R. Mitchell) The surgical teaching coordinator will be responsible for tracking and organizing the surgical teaching experience for the residents to ensure adequate surgical exposure.

A resident mentoring program has been instituted and an external ombudsman has been engaged.

- The On-call duties for the residents have been adjusted.
- Teaching curriculum has been formalized and updated.

Membership:

J	Anand	P	Huang
ME	Ashenhurst	J	Kassab
WF	Astle	A	Kherani
AE	Ball	F	Kherani
J	Bhamra	AH	Kirk
BP	Chow	R	Lang
L	Cooper	JA	McWhae
F	Costello*	P	Mitchell
AC	Crichton	RJ	Mitchell
RC	Culver	K	Punja
T	Demong	KG	Romanchuk
S	Dotchin	PR	Savage
G	Douglas	C	Shah
AL	Ells	CM	Skov
M	Fielden	SS	Smith
WA	Fletcher*	S	Subramaniam*
B	Ford	JA	van Westenbrugge
PF	Gibson	KL	Verstraten
HV	Gimbel	E	Weis
N	Goel	RG	Williams
J	Gohill	J	Wong
P	Gooi	JP	Wyse
R	Gordon	R	Yau
C	Hanson	R	Yau

Accomplishments and Highlights

New staff

Clinical Service:

- Kyla Lavery RN has joined us as clinical coordinator for the ROP program
- Dr. Brenda Gallie has joined us on a part-time basis. Dr. Gallie is a world authority on retinoblastoma and heads the program at Toronto Sick Kids Hospital. This program receives referrals from all over Canada. Families and patients travel from Alberta as well as elsewhere in the country on a frequent basis to see Dr. Gallie for follow up visits and treatments for retinoblastoma. Dr. Gallie will be able to offer services to Calgary patients via the Alberta Children's Hospital. This will greatly reduce stress on these families and will also realise significant cost savings.
- A new operating microscope is being installed at the Rockyview with plans for ACH to receive a new Microscope as well. Funds have been raised by collaboration between Value Adds from industry, the University Eye Foundation and ACH Foundation.

Education

Residents

- We have two new residents Dr. Ammar Khan and
- Dr Alexander Ragan in the PGY1 year as per our CARMS match.
- The visiting professor program continues to be a success with four or more visitors per year. We were able to teleconference with Edmonton this year, which will be an on-going collaboration.

Fellows

- We presently have fellows training in our Retina and Oculoplastics programs. We are participating in the re-structured billing program for fellows with in Department of Surgery.

Medical Students

- Teaching of undergraduates continues in small group settings, surgical clinical clerkship rotations, and electives. Dr. Vivian Hill and Dr. Karin Verstraten have taken leadership roles in teaching ophthalmology in the newest undergraduate medical curriculum. Dr. John Huang has been active in coordinating ophthalmology electives and evaluations for medical students from University of Calgary and other Canadian universities.

Family Medicine

- Dr. Dotchin will be heading a program to expand teaching in Family Medicine.

Participation in local, provincial, national and international organizations:

- Our section members continue to be very active in research including numerous publications, clinical trials, presentations, and grants.

Workforce Planning

Goals and Strategies:

- Regular survey of the section of ophthalmology for recruitment needs.
- Recruitment is advertised, with an established open process by search and selection Subcommittees.

Impact on other departments and zonal resources:

- Recruitment is designed to provide more timely access for patients requiring ophthalmological care.
- Additional resources are required for new recruits, as the retiring ophthalmologists tend to use fewer resources than those incoming.

Quality Assurance, Quality Improvement, and Innovation:

General

- Continued Morbidity and Mortality rounds.
- Investigation of patient concerns brought to the attention of Section Chief by the Office of Patient Concerns, Calgary Zone, Alberta Health Services.
- Regular submissions by members of the section to the Health Technology Assessment Committee of the Department of Surgery.
- Continuing initiative for coverage of retinal eye examinations for retinopathy of prematurity now at all five existing neonatal intensive care units, including the South Health Campus and the expansion at Alberta Children's Hospital.

Access of Family Physicians to specialists:

- This has been improved through recruitment to positions in comprehensive ophthalmology, changes in RAAPID

Patient flow through the Emergency Department:

- There has been continued positive feedback from emergency room physicians by allowing direct booking into the Urgent Eye Clinic by emergency room physicians after regular office hours, and also by continued running of the Urgent Eye clinic on weekends and statutory holidays in the Eye Clinic at Rockyview General Hospital.

Future Directions and Initiatives

- Our section requires additional space at Rockyview General Hospital to accommodate expanding clinical, teaching and research needs.
- We are still working towards creating our first endowed chair in ophthalmology



Dr. Michael Ashenhurst, Ophthalmology Section Chief

Section of Oral & Maxillofacial Surgery

Membership

The section of Oral and Maxillofacial surgery (OMFS) has fifteen members and is consolidated at the Peter Lougheed hospital. Dr. S. Bureau, Dr. G. Cobb, Dr. R. Edwards, Dr. R. Goos, Dr. B. Habijanac, Dr. S. Higashi, Dr. L. Kroetsch, Dr. M. Smith, Dr. S. Touchan, Dr. D. Vincelli and Dr. C. Young provide call coverage. Dr. T. Fairbanks has surgical assisting privileges. Dr. D. Wakeham, Dr. B. Whitestone and Dr. H. Williams are senior surgeons. Dr. T. Summers has retired after 38 years of service. The division provides call coverage to the Calgary zone (all five hospitals and urgent care centres) as well as southern Alberta and the Crowsnest Pass area.

Current OMFS Committees and committees that OMFs are part of:

- City Wide Surgical Executive Committee
- (Dr. R. Edwards)
- The non- hospital surgery committee (NHSF) which manages outpatient oral and maxillofacial surgery in non-hospital surgical facilities (Dr. B. Habijanac, Dr. R. Edwards)
- Search and selection committee regarding OMFS manpower issues (Dr. R. Edwards, Dr. S. Bureau, Dr. S. Touchan)
- Hyberac oxygen committee for oral and maxillofacial surgery HBOT requirements (Dr. R. Edwards)
- Alberta head and neck cancer committee (Dr. M. Smith, Dr. G. Cobb)
- Calgary zone new cancer centre committee (Dr. M. Smith, Dr. G. Cobb)
- Peter Lougheed hospital surgical suite committee (Dr. R. Goos)
- Pediatric surgery division and operating room committee at the Alberta Children's Hospital (Dr. M. Smith)
- Office of surgical research committee (Dr. G. Cobb)
- Alberta Adult Coding Access Targets for Surgery Committee (aCATS) (Dr. R. Edwards)



*Dr. Richard Edwards, Oral and Maxillofacial Surgery
Section Chief - Photo provided by Colin McHattie*

Clinics

The OMFS Section provides OMFS services at the Foothills hospital through the Foothills hospital dental clinic. Dr. G. Cobb, Dr. S. Higashi, Dr. M. Smith and Dr. S. Touchan rotate through the clinic. The OMFS division provides coverage to the cleft palate clinic at the Alberta Children's Hospital. Dr. M. Smith and Dr. D. Vincelli are part of the cleft palate team. The Section also has a sleep apnea clinic at the Children's hospital.

The OMFS section is collaborating with Otolaryngology, Plastic surgery and the Foothills hospital dental clinic in the treatment of head and neck cancer patients through the Tom Baker head and neck cancer clinic. OMFS members attend the head and neck tumour board rounds. Dr. G. Cobb and Dr. M. Smith have privileges in the Head and Neck clinic. The division also has members that teach and cover clinics at the University of Alberta Dental School in Edmonton.

Education

The general practice residents from the Foothills hospital dental clinic (Dr. Michael Barbalinardo and Dr. Alan Poole) rotated through our service (hospital and office). Plastic surgery residents (Dr. Hadal El-Hadi and Dr. Anna Steve) also did two week rotations through our service this year.

Quality Assurance

The OMFS surgeons meet every two months to discuss clinical issues and have morbidity and mortality rounds.

Goals

The goals of the Section of Oral and Maxillofacial Surgery is to continue to provide excellent OMFS surgical care to southern Alberta patients and work towards more involvement in treating head and neck cancer patients, sleep apnea patients and craniofacial deformity patients.

Section of Orthopaedic Surgery

Section Structure and Organization

Current Committees:

- Orthopaedic Executive Committee
- Operations Committee (Site Chiefs)
- Orthopaedic Surgery Residency Training Committee – OSRTC (Education Leads)
- Orthopaedic Surgery Fellowship Training Committee (Fellowship Program Directors)
- Research Committee (Research Leads)
- Education Committee (Education Directors)

Membership

- The membership is currently 63 teaching faculty and 5 non-clinical faculty as at March 31, 2016.
- Dr. Kevin Hildebrand was appointed Deputy Director, McCaig Institute for Bone and Joint Health, January 2016.
- Dr. Michael Monument was appointed an Assistant Professor GFT November 1, 2015.
- Dr. Alex Rezansoff started August 7, 2015.
- Dr. Prism Schneider started September 7, 2015.
- Dr. Lowell Van Zuiden stopped his operative practice May 2015.

Accomplishments and Highlights

- Dr. Maureen Topps awarded Dr. Marcia Clark with a PGME award for outstanding commitment to the residency program through program development and innovative education.
- Dr. Marcia Clark received the 2016 Canadian Association for Medical Education (CAME) Certificate of Merit Award.
- Dr. Norman Schachar & the late Dr. Cy Frank became Fellows of International Research (FIOR).
- Dr. Norman Schachar's book "The Department, a Surgeon's Memories...Before I Forget" was submitted to the 2016 Alberta Literary Competition for Wilfrid Eggleston Award for Nonfiction.



Dr. Kevin Hildebrand, Orthopaedic Surgery Section Chief

Education

Medical Students (UME)

- 4 Orthopaedic faculty, 4 residents and 2 fellows were involved with teaching undergraduate medical students for MSK course 2 and clinical core.
- Peter Lewkonja took over as the Course 2 Chair from Carol Hutchison this year.

The following orthopaedic surgeons received recognition on February 9, 2016 at the Faculty Appreciation Night for their UME teaching:

- *Course 2 Gold Star Awards:* Carol Hutchison, Mike Monument
- *Special Recognition Awards:* Lifetime Achievement Award – Dr. Cy Frank
- *Jersey Awards:* Carol Hutchison
- *Honour Roll:* Jeremy LaMothe, Peter Lewkonja, Neil White.

Postgraduate Medical Education (PGME)

- Five residents successfully passed their Royal College of Physicians and Surgeons of Canada Examinations in June, 2015: Tristan Camus, Ewen Jones, Michaela Kopka, David Weatherby, and Joan Wheat-Hozak.
- Four new residents began their Orthopaedic Surgery residency training on July 1, 2015: Jonathan Bourget-Murray (McGill University); Eva Gusnowski (University of British Columbia); Joseph Kendal (University of Calgary); Kate Thomas (McMaster University).
- In November 2015 we were successful with an Infrastructure and Simulation Teaching Grant from PGME totaling \$65,395.00. This funding was used to outfit the simulation lab with 4 fully functional arthroscopy stacks, cover expenses for cadaveric tissue for 12 sessions, support our Education Retreat as well as faculty to attend simulation education workshops/conferences. With the new arthroscopy equipment, we were able to hold 2 large group simulation sessions in the ATSSL (Aug. 20 and Dec. 17, 2015) involving 23 residents, 1 fellow, 9 faculty and 6 industry representatives (3 companies). In addition, we held 12 small group arthroscopy simulation sessions with 2 residents at a time (junior/senior) and 1 preceptor. These sessions were rated so highly that we have scheduled 4 large group session and 12 small group sessions for the upcoming academic year and plan to expand to other joints beyond knees/shoulders.
- In February 2016, we were notified that Orthopaedics was successful with 2 out of the 3 categories for the Annual PGME Appreciation Awards (out of all residency programs). Dr. Justin LeBlanc received the award for "Outstanding Commitment to Residency Education" and Charmaine Martens, our residency program coordinator for the "Award of Service in Support of Residency Education".
- The 3rd Annual Resident Research Day was held on May 7, 2015 – please see Research Section below for full details including information on the visiting professor.

- Canada-France-Belgium-Swiss Travelling Fellowship (CFBS) – please see Research Section below for full details.
- The Annual Spencer McLean Award was given to Richard Ng (R4) in June 2015. Dr. Spencer McLean completed his Orthopaedic Surgery Residency at the University of Calgary in 2013 and received his FRCSC just prior to his untimely passing. Spencer is remembered for his kind and engaging manner, great sense of humour and willingness to help others in need. It is awarded to the resident who best exemplifies Spencer's altruism and caring manner in service to others.

Graduate Medical Education (GME)

Dr. Raul Kuchinad – Director

Eight active fellowship programs from April 1, 2015 – March 31, 2016

- Khaled Almansoori – Combined Spine
- Saleh Alsaifi – Paediatric
- Gillian Bailey – Foot and Ankle
- Michael Carroll – Upper Extremity
- Ivan Chau – Trauma
- Nathan Deis – Combined Spine
- Nicholas Desy – Trauma
- Khaled Fawaz – Paediatric Spine
- Eoin Fenton – Combined Spine
- Matthew Furey – Hand and Wrist
- Kanwaljeet Garg – Combined Spine
- Sebastian Guenkel – Hand and Wrist
- Godefroy Hardy St. Pierre – Combined Spine
- Parag Jaiswal – Joint Reconstruction
- Angus Jennings – Trauma
- Michael Loewen – Banff Sport Medicine
- Ian Lutz – Joint Reconstruction
- Simon Manners – Combined Spine
- Brad Meulenkamp – Trauma
- Yohei Ono – Upper Extremity
- Raghav Saini – Joint Reconstruction
- Rachel Schachar – Banff Sport Medicine
- Alexandra Stratton – Combined Spine
- Ashish Taneja – Joint Reconstruction
- Antonio Tsahtsarlis – Combined Spine

8th Annual Fellows Research Symposium – Wednesday, May 6, 2015. Presentations were given by 14 of the current fellows; Guest Adjudicator was Dr. David Backstein from the University of Toronto, Mount Sinai Hospital; Local Adjudicators were Dr. Neil White and Dr. Rajrishi Sharma; Moderator was Dr. Marcia Clark.

The awards were as follows:

- 1st Place and the recipient of the Norman Schachar Research Award: Dr. Brad Meulenkamp – Trauma Fellow, “Incidence, Risk Factor and Location of Articular Malreductions of the Tibial Plateau”
- 2nd Place: Dr. Angus Jennings – Foot and Ankle Fellow, “Does Spect-CT Improve Diagnostic Accuracy in Patients with Foot and or Ankle Arthritis?”
- 3rd Place: Dr. Parag Jaiswal – Joint Reconstruction Fellow, “Early Surgery for Proximal Femoral Fractures is Associated with Lower Complication and Mortality Rates”

In October 2015 our orthopaedic fellowship coordinator physically moved over to the North Tower in AHS (from the U of C) to initiate the development of a centralized fellowship office for all surgical disciplines under the guidance of Dr. James Powell and Dr. Raul Kuchinad. Over the past 8 years, orthopaedics has established policies, procedures and templates for our fellowship program, modelled after Royal College guidelines for Residency Programs. Best practices are now being shared with all other surgical disciplines through the creation of the Office of Surgical Fellowships (OSF) in the Dept. of Surgery.

Continuing Medical Education (CME)

2015 Canadian Orthopaedic Resident Forum (CORF) was held April 10th-13th at the Fairmont Palliser Hotel. CORF was attended by 67 final year Orthopaedic Residents. Educational and oral examination sessions were facilitated by 36 Faculty members from across the Nation.

The 18th Annual Glen Edwards Day: October 30th, 2015 at the Glenmore Inn; hosted by the Arthroplasty Division. 2015 Glen Edwards Day had 36 attendees.

Afternoon in Arthroplasty: Monday, September 8th, 2015, at the Radisson Hotel. This public education course for patients waiting for or curious about Hip and Knee Replacement Surgery was well attended.

The 43rd Annual Paediatric Orthopaedic Seminar and Townsend Lecture: Dr. Andrew Howard from the Hospital for Sick Children in Toronto, Ontario, and Dr. David Little from the Children’s Hospital at Westmead in Australia, were welcomed as visiting professors for Paediatric Townsend Day and spent time with the orthopaedic surgery residents on October 22-23, 2015, along with local speaker, Dr. Gerhard Kiefer from the Alberta Children’s Hospital in Calgary.

1st Hand and Wrist Course – January 29, 2016 at South Health Campus (plan to host this course every other year). There were over 85 registrants including Emergency Physicians, Family Physicians, Allied Health Professionals with Interest in Hand & Wrist disorders (Hand Therapists, Physiotherapists, Nurse Practitioners). 19 faculty presented - primarily orthopaedic and plastic surgeons.

Citywide Orthopaedic Surgery Rounds are held the third Friday of every month except July and August and are accredited. A few of the guest speakers included: Mike Paget, “E-learning Information Session”, Liz Evans, “South Sector Hip Fracture Update”, Janelle Wakaruk/Barb Giba, “Money Matters! What can Fund Development do for you?”, Gail Kopp, “Rocket Science and Wet Jello”.

Research

- Dr. Marlis Sabo, Director of Research (Residents and Fellows)
- Dr. Paul Salo, Director of Research (Faculty)
- Within the Section of Orthopaedic Surgery, each Division has a Research Lead as part of the Section Research Portfolio Committee: Dr. Jeremy LaMothe (Foot and Ankle); Dr. Aaron Bois (Shoulder and Elbow); Dr. Neil White (Hand and Wrist); Dr. Alex Soroceanu (Spine); Dr. Alex Rezansoff (Sport Medicine Knee); Dr. Rick Buckley (Trauma); Dr. Raj Sharma (Hip and Knee Reconstruction); Dr. Michael Monument (Oncology); and Dr. Elaine

Joughin (Paediatrics). The Research Portfolio Committee also has two basic scientists (Dr. David Hart and Dr. Roman Krawetz) from the McCaig Institute from Bone and Joint Health and one Resident representative (Dr. David Cinats) as part of its membership.

4th Annual Resident Research Day – Thursday May 7, 2015:

Presentations (podium or e-poster) were given by 19 of the residents (R1-R4); Guest Adjudicator was Dr. David Backstein from the University of Toronto, Mount Sinai Hospital; Local Adjudicator was Dr. Ganesh Swamy; Moderator was Dr. Marlis Sabo. The awards were as follows:

- Recipient of the Dr. Robert Townsend Scientific Award for the Best Presentation: Dr. Dr. Devin Lemmex (R3), "Aging Affects Mechanical Properties and Lubricin/PRG-4 Expression in Norjmal Ligaments"
- Recipient of the Dr. Robert Townsend Scientific Award for the Best Poster: Dr. Jessica Page (R3), "Simple Multidisciplinary Arthroplasty WoundAssessment (SMart) Tool: Assessment of Validity, Reliability and Responsiveness"
- Recipient of the Gary Hughes Resident Research Award for Runner Up Poster: Dr. Natalie Rollick (R3), "Randomized Controlled Trial on the Use of the Low-Intensity Pulsed Ultrasound in the Healing of Scaphoid Non-Unions Treated with Surgical Fixation"

COREF Research Awards were as follows:

Spring 2015 Competition:

- Dr. Sabastian Guenkel – Hand and Wrist Fellow (Preceptor Dr. Neil White), "Accuracy of Surgeons Assessment of Intraoperative Fluoroscopy" – Awarded \$3,300.00
- Dr. Jennifer Leighton – R3 (Preceptor Dr. Kelly Johnston), "Unicondylar Knee Arthroplasty Versus Total Knee Arthroplasty in Patient with Anteromedial Osteoarthritis of the Knee" – Awarded \$5,000.00
- Dr. Devin Lemmex – R3 (Preceptor Dr. Carmen Brauer), "Loading of the Paediatric Hockey Wrist During Hockey Slap Shots) – Awarded \$4,021.00

Fall 2015 Competition:

- Dr. Stuart Aitken – Trauma Fellow (Preceptor Dr. Prism Schneider), "The Femorotibial Ratio for Judging Length in Comminuted Diaphyseal Femoral Fractures" – Awarded \$4,987.35
- Dr. Matthew Furey – Hand and Wrist Fellow (Preceptor Dr. Neil White), "Scaphoid Imaging Study" – Awarded \$5,000.00
- Dr. Angus Jennings – Trauma Fellow (Preceptor Dr. Ryan Martin), "Evaluating the Utility of Accessory Lateral Tibial Plateau Radiographis in Tibial Plateau Fracture Reduction: An Anatomic and Radiographic Study" – Awarded \$4,858.00
- Dr. Cory Kwong – R2 (Preceptors Dr. Prism Schneider, Dr. Rob Korley and Dr. Stephen Boyd), "Can High Resolution Peripheral Quantitative Computed Tomography Determine Healthing Time for Stable Distal Radius Fractures?" – Awarded \$4,995.99

A "Speed Dating" event involving the researchers of the McCaig Institute for Bone and Joint Health, the Section of Orthopaedic Surgery and the Division of Rheumatology took place on November 2, 2015. This event was used to promote new collaborative research. From this event the following "Clinician-Basic Scientist Collaboration Seed Grants" (\$10,000.00 for each grant) were awarded (please note that we are only listing grants involving Orthopaedics – one other award was also granted to a non-orthopaedic project):

- Dr. Michael Monument and Dr. Campbell Rolian, "Osteosarcomagenesis in the Longshanks Mouse" (awarded by Section of Orthopaedics)
- Dr. Carol Hutchison and Dr. David Hart, "Epigenetic Modifications and miRNA Expression Profiles Which Potentially Identify OA Patient Subsets" (awarded by Section of Orthopaedics)
- Dr. Roman Krawetz, Dr. Nick Mohtadi, and Dr. Alex Rezansoff, "Characterization of Mesenchymal Stem Cells from the Synovial Fluid and Synovium of Patients with Interarticular Knee Injury" (awarded by the McCaig Institute for Bone and Joint Health)

Our Section hosted the Canada-France-Belgium-Swiss (CFBS) Travelling Fellows from June 13-16, 2015.

The Fellows were Dr. Frederick Paternostre from Belgium and Dr. Eric Nectoux from France. The CFBS Fellows had opportunity to meet with various faculty and all residents. The Grand Rounds presentations were well attended and their topics were "Sagittal Balance in Adult Cervical Hyperkyphosis Treated with Posterior Instrumentation" (Dr. Paternostre) and "Femoroacetabular Conflict in SCFE" (Dr. Nectoux)

Research Value Add Funding Awards were granted in Winter 2016 to the following:

- Dr. Prism Schneider received the faculty award
- Research Assistant Awards, eleven applications were received. Four applications were funded in the following areas: Joint Transplantation; Alberta Hip and Knee; Peter Lougheed Centre Trauma; and South Health Campus Group (these awards provided matching funds for salary support in the amount of \$25,000 each x 3 years).
- 2 Federal Government Awards (Service Canada) were received to support orthopaedic summer students (Monument Lab, White/Sabo Lab).

Challenges

Ongoing Matters and Plan of Action:

- There have been concerns about On Call coverage as resident numbers decrease. A Clinical Assistants program has been developed and overseen by Dr. Linda Mrkonjic to train Clinical Assistants to cover call at Calgary acute care sites.
- Another challenge is the lengthy wait lists for patients to see Orthopaedic surgeons and then to get to the OR. Orthopaedics is recruiting further surgeons as well as exploring other management processes and continuing to advocate for more surgical resources.

Workforce Planning

Future Needs

- Dr. Andrew Dodd has been recruited for Foot & Ankle trauma at the South Health Campus. He will start July 1, 2016.
- Dr. Lisa Phillips will start in Paediatrics Orthopaedics January 2017.
- At present Orthopaedics is advertising and recruiting for 3 new positions; one in Adult spine, one in Arthroplasty and one in Paediatric Orthopaedic.

Goals and Strategies

- Academic Medical Framework application with Department of Surgery
- New recruits are encouraged to become members of the McCaig Institute for Bone & Joint Health and to collaborate in research.

Quality Assurance, Quality Improvement, and Innovation

- General
- Access of Family Physicians to specialists (see Challenges above)
- Patient flow through the Emergency Department

Section of Otolaryngology

Section Structure and Organization

Current Committees

Section Executive Committee

- Chair Dr. TW Matthews

Membership

- Dr. P Park (SHC Head)
- Dr. JC Dort (FMC Site Head)
- Dr. JD Bosch (PLC Site Head)
- Dr. J Warshawski (RGH Site Head)
- Dr. D Drummond (ACH Site Head)
- Dr. J Brookes (Program Director)

Resident Training Committee

- Chair Dr. J Brookes

Members

- Dr. SP Chandarana
- Dr. J Warshawski
- Dr. W Yunker
- Dr. Justin Chau
- Dr. A Hui
- Dr. TW Matthews
- Dr. M Hoy (ex officio)

Undergraduate

- Director Dr. M Hoy

Members

- Dr. SP Chandarana
- Dr. J Brookes
- Dr. TW Matthews (ex officio)
- CME Director, Dr. J Warshawski
- Research Director, Dr. L Rudmik
- Simulation Committee, Chair Dr. J Brookes
 - Membership Drs. J Chau, P Park

Programs

Resident Training Program – the program currently accepts one and two residents on alternating years through the CaRMS process

- Senior Medical Director – Cancer Strategic Clinical Network Dr. J Dort
- Bone Anchored Hearing Aid Program, Drs. J Chau, E. Lange and W Yunker
- Cochlear Implant Program, Dr. P Park (Adult and Children), Dr. J Brookes (Children)
- University of Calgary – Head and Neck Surgical Oncology Program (HNSOP) – Dr. J Dort
- Drs. TW Matthews, SP Chandarana (Otolaryngology – Head and Neck Surgery) C Schrag (Plastic Surgery)
- Dr. Jennifer Matthews, C Schrag, C.D. McKenzie (Plastic Surgery)

Accomplishments and Highlights

Highlights

University, Zone, Provincial and National Professional Service

Dr. SP Chandarana

- Co-Chair, Provincial Tumor Group - Head and Neck Cancer, Alberta Health Services.
- Surgical Representative – Executive Committee University of Calgary Medical Group.
- Member – Calgary Zone Medical Staff Support Framework Alberta Health Services/University of Calgary.
- Chair –Major Clinical Surgeons, Executive Committee, University of Calgary Medical Group, Department of Surgery.
- Member – Minor Surgery Clinic Task Force - Department of Surgery, University of Calgary
- Member – Provincial Tumor Group for Endocrine Cancer Alberta Health Services.
- Director – Residents' Clinic, University of Calgary, Division of Otolaryngology.

Dr. JC Dort

- Director of Ohlson Research Initiative, Ohlson Professor of Head and Neck Surgery.
- Member – Provincial Tumor Group for Head and Neck Cancer Alberta Health Services.
- Director of the Provincial Oncology Strategic Clinical Network.
- Co-Chair AHS Provincial Head and Neck Oncology Team.

Dr. E. Lange

- Site Lead, Department of Surgery SHC.

Dr. TW Matthews

- Chair, Royal College of Physicians and Surgeons Specialty Committee (Otolaryngology – Head and Neck Surgery).
- Member – Provincial Tumor Group for Head and Neck Cancer Alberta Health Services.

Dr. LR Rudmik

- Petro Canada Young Innovator Award in Community Health.
- Member UCMG eScripton Project Physician Advisory Group.
- Member Health Technology Assessment Committee.
- Member AHS UCMG non-GFT Executive Committee.
- Member Canadian National In-Training Exam Committee.
- Rhinology Chair Research Committee for American Rhinologic Society.
- Member Clinical Investigator Program. Department of Surgery Representative
- Department of Surgery Research - Committee Member.

Dr. W Yunker

- Alberta Children's Hospital Patient Flow Committee Member, 2015
- President Alberta Children's Hospital Medical Staff Association, 2015-2016.
- Early Hearing Detection and Intervention Program Initiative: High Level Care Pathway Working Group Member, 2015.

- Boardmember–Alberta Society of Otolaryngology, 2013 – present.
- Alberta Society of Otolaryngology Representative to the Alberta Medical Association, 2013 – present
- Family Medicine Resident Elective Coordinator, University of Calgary.
- Member Otolaryngology – Head and Neck Surgery Residency Training Committee.

Education**Residents**

- Dr. Jon Dautremont (PGY5) – graduated June 30, 2016
- Dr. Kristine Smith (PGY4)
- Dr. Carrie Liu (PGY3)
- Dr. Devon Livingstone (PGY3)
- Dr. Julie Luming (PGY2)
- Dr. Justin Lui (PGY2)
- Dr. Francisco Lee (PGY1)

Medical Students

The following medical students completed clinical electives in Otolaryngology – Head and Neck Surgery at the University of Calgary;

- Gabrielle French (University of Calgary)
- Matthew Palakkamanil (University of Calgary)
- Adam Yan (University of Manitoba)
- Jennifer Siu (Queens University)
- Connor Sommerfield (University of Manitoba)
- James Wang (University of Toronto)
- Babak Karamy ((University of Toronto)
- Shubhi Sing (Dalhousie University)
- Alexandra Quimby (University of Ottawa)
- Khrystayna Herasym (University of Ottawa)
- Ashley Hinthier (University of Calgary)
- Daniel Esau (University of British Columbia)
- Devin Piccott (Dalhousie University)\Courtney Bull (Dalhousie University)
- Gabriela Gilmour (University of Calgary)
- Jaysen Wesolosky (University of Calgary)
- Michelle Tsang (University of Calgary)
- Manmish Bawa (University of Calgary)
- Breanne Rees-Thomas (University of British Columbia)

Research

- The academic activity of the Section's faculty and residents is broadly based at all hospital sites and subspecialty areas. Research output continues to improve in quantity and quality due to the efforts of the established and newly recruited faculty.

Challenges

Response to Issues:

Ongoing Matters and Plan of Action

Population growth, population aging and other factors have resulted in a significant increase in demand for Otolaryngology – Head and Neck Surgery services. The number of inpatient and emergency department referrals to otolaryngology has doubled at every hospital site between 2010 and 2015, not including the additional consultations arising at the South Health Campus. The reasons for the increase need to be understood to allow an appropriate response. The current multi-site call coverage will eventually become unsustainable. Unfortunately there is not sufficient manpower at most of the hospitals to allow for single-site coverage at this time.

Access for clinic consultations and surgery remain issues in Otolaryngology. Rhinology, neurovestibular medicine and general otolaryngology are currently stressed practice areas. Future recruitment of new and replacement faculty over the next few years will address access issues. Clinic access is likely to remain a barrier to recruiting hospital-based surgeons.

Workforce Planning

Drs. Worth (Bud) Shandro and Dr. Robert Burke retired from clinical practice in 2016. The Section is very appreciative of the clinical and administrative services that both surgeons have provided over the last 38 and 36 years respectively. We wish them both the very best in their post-work lives.

Recruitment

SHC – Dr. Euna Hwang completed a 2-year research and clinical fellowship in neurotology at the University of Toronto and will begin practicing as a neurotologist at SHC in September 2016.

PLC – Dr. Derrick Randall completed a fellowship in laryngology (upper airway, voice and swallowing disorders) at UC Davis and will begin practicing at the PLC and the RRDT Voice Clinic in September 2016.

RGH – Dr. Jon Dautremont completed his residency in Otolaryngology – Head and Neck Surgery at the University of Calgary and will practice in the community and at RGH beginning in August 2016. He will pursue a master's degree in Health Quality at Queen's University during the next 2 years.

Future Needs

An Otolaryngology Section physician resource plan 2016 – 2020 has been submitted to the Department of Surgery. Replacement needs include:

- Recruitment of 2 additional otolaryngologists to the Calgary adult hospitals in 2017 - 2018.
- Recruitment of up to 5 otolaryngologists in 2019 – 2020.

Recruitment will be directed to the various hospital sites as outlined below:

- ACH – pediatric otolaryngology
- FMC – head and neck oncology and skull base surgery.
- PLC – laryngology, sleep medicine and surgery and facial plastic surgery.
- RGH – rhinology and endocrine and less complex head and neck surgery
- SHC – otology and neurotology
- General otolaryngology services will be provided at all sites.

Impact on other departments and regional resources:

- Future recruitment will proceed with input of related surgical and medical sections to promote clinical and academic collaboration.
- Quality improvement initiatives remain priorities for the Section. Current projects include appropriateness and cost effectiveness in the management of sinonasal disease (Dr. L Rudmik) oncologic and functional outcomes in head and neck oncology.

- Recruitment of new faculty to support the Neurovestibular Clinic at SHC will further improve access, diagnostic testing as well as research opportunities.

Quality Assurance, Quality Improvement, and Innovation

- Significant adverse events are reviewed quarterly at Morbidity and Mortality Rounds with the goal of minimizing repetition of similar occurrences in the future.
- Quality improvement initiatives remain priorities for the Section. Current projects include appropriateness and cost effectiveness in the management of sinonasal disease (Dr. L Rudmik) and post-operative in hospital and post-discharge clinical pathways in head and neck oncology.
- The establishment of the Neurovestibular Clinic at SHC (Drs. E. Lange and Wm. Fletcher) has improved access, diagnostic testing as well as research and recruitment opportunities.



Dr. Wayne Matthews
Section Chief, Otolaryngology - Head and Neck Surgery

Future Direction and Initiative

Ongoing focused recruitment and geographic concentration of subspecialty programs should allow for improvement in clinical care, medical education and research output at all sites.

Otolaryngology – Head and Neck Surgery is one of the first Royal College surgical specialties to transition to Competence By Design (competency-based medical education) with the first cohort of residents to enroll in July 2017. The new assessment regime is being field tested beginning in July 2016.

Section of Paediatric Surgery

Section Structure and Organization

Zone Clinical Section Chief and ACH Site Chief:
Dr. Frankie Fraulin.

Pediatric Surgery Site Leads

- Dentistry: Dr. Marie-Claude Cholette
- General Surgery: Dr. Steven Lopushinsky
- Gynecology: Dr. Philippa Brain
- Neurosurgery: Dr. Walter Hader
- Ophthalmology: Dr. Michael Ashenhurst
- Oral and Maxillofacial Surgery: Dr. Miller Smith
- Orthopedic Surgery: Dr. David Parsons
- Otolaryngology: Dr. Derek Drummond
- Plastic Surgery: Dr. Frankie Fraulin
- Urology: Dr. Anthony Cook

Membership

The Section of Pediatric Surgery includes 30 members who have offices onsite at Alberta Children's Hospital, where the majority of operations on children are performed in Calgary. Other members have offices off site and participate in caring for adults as well. Many of the members have a second designated surgical specialty in their "Adult" based specialty.

This past year has seen the addition of members in Pediatric Dentistry (Dr. Aimee Castro, community based practice, participating part time in the ACH Dentistry clinic and ACH OR), Pediatric Neurosurgery (Dr. Jay Riva-Cambrin, recruited from Salt Lake City, Utah with a significant research portfolio), Pediatric Ophthalmology (Dr. Stephanie Dotchin, assuming the Retinopathy of Prematurity leadership role), and in Pediatric Plastic Surgery (Dr. Kimberly Sass, a U of C graduate with fellowship training in Craniofacial surgery and Hand and Microsurgery).



*Dr. Frankie Fraulin, Paediatric Section Chief
Photo provided by Dr. Fraulin*

Dr. Mary Brindle (Pediatric General Surgery) was away on sabbatical in Boston this past year doing research with the Harvard Ariadne lab. Dr. Steve Lopushinsky stepped in as site lead in her absence. We have been fortunate to have outstanding locums this past year. Dr. Anna Shawyer completed a locum in Pediatric General Surgery and has accepted a full time GFT position in Winnipeg. Dr. Carlos Sanchez-Glanville is also completing his locum in Pediatric General Surgery. He did his Pediatric Surgery residency here in Calgary and he will be returning home to Puerto Rico where there is a great need for pediatric surgical care. Dr. Chukwudi Chukwunyerenna completed a locum in Pediatric Orthopedic Surgery in December 2015 and has moved to a full time position in Montreal. Dr. Carmen Brauer has moved her Orthopedic practice

to the South Health Campus Hospital. Dr. Carolina Fermin-Risso continues in her locum in Pediatric Urology.

Accomplishments and Highlights

Clinical Service:

The Pediatric Surgery specialists accomplish an enormous amount of clinical work at ACH. Many of the clinical programs have been in place for many years and function at a very high level, offering interdisciplinary care with pediatricians, allied health and nursing. The volume of clinical work has increased significantly. For example, in Pediatric ENT there has been a 300% increase in inpatient consults in the past 5 years. The numbers of patients in outpatient clinics has also increased substantially. The Cleft Palate clinic, for example, has seen a 100% increase in the number of babies born with cleft lip +/- palate in the past 3 years, necessitating the addition of several clinics to cover the workload. Pediatric Urology has tried to meet the demand for their services, by opening clinics at the South Health Campus Hospital.

The clinics are helping to deal with the wait times for patients to see a Pediatric Urologist. However, their waiting lists for the operating room are significant. We are using the Pediatric Canadian Access Target codes (PCAT codes) to monitor wait times. The PCAT codes were revised nation-wide and the new codes were implemented April 1, 2016. Dr. Frankie Fraulin provided physician oversight on behalf of the Pediatric Surgery Chiefs of Canada, for this project. Out of window percentages are being evaluated and will be used to assign OR blocks during periods of slow down, starting next Christmas season.

One of the highlights in the past year has been an improvement in the Retinopathy of Prematurity (ROP) program. ROP is an important condition which leads to blindness but is completely preventable through appropriate screening and treatment. The program has struggled in the past few years because of the significant population increase in Calgary and the addition of 2 NICUs in the city, increasing from 3 to 5. It has been difficult to cover the workload because the

NICUs are spread throughout the city. The addition of an ROP nurse coordinator in the past year, as well as the identification of a Physician lead, Dr. Stephanie Dotchin, is helping to improve the running of the program. Dr. William Astle and Dr. Linda Cooper have also stepped in to help with the ROP clinic when it was understaffed. Pediatric Ophthalmologists and Retina specialists share in the screening and treatment of these neonates.

Another highlight in the clinical programs has been the development of the first Pediatric Extracorporeal Life Support (ECLS) team in Southern Alberta, led by Drs. Steven Lopushinsky and Mary Brindle with participation from each of the Pediatric General Surgeons. It is unique in that it functions without onsite cardiac support. ECLS is often performed on a child who is rapidly deteriorating, occasionally in the midst of cardiopulmonary resuscitation. The team has had to anticipate and address issues with transferring these patients to Edmonton. They have also developed an innovative educational strategy to help with implementation and monitoring of the program. Their survival rate of 83% far exceeds the reported rates elsewhere of between 41 – 57%.

In the Operating Room, the Daily Task Force Team, which includes the charge nurse of the day, the anesthesiologist of the day, and an assigned Pediatric Surgeon, has been working well. The Team works together to organize emergency cases during the day. The number of “bumped” cases has not decreased, but the task force team helps to ensure a fair process. Together with Pediatric Anesthesia, the surgical executive have organized alternative ways to do smaller procedures without requiring the full main operating room facilities and staff. For example, the induction room process has become operational; inpatients needing a minor procedure that requires a general anesthetic to ensure patient cooperation, are done in the “induction rooms” – for example, burn dressing changes. The Pediatric Anesthesiologists now have two clinical ARPs to support the Acute Pain Service and Out of OR procedures. Recycling of paper, plastics and cardboard has started in the operating room, which will definitely help the environment!

The Section of Pediatric Surgery is very interested in Quality of Care and Safety in Surgery. Dr. Elaine Joughin is our representative on the Quality Assurance Committee and she has been involved in several safety reviews over the past year. Several issues pertinent to Pediatric Surgery included early recognition of sepsis and proper labelling of medications in the operating theatre.

One of the highest achievements for surgeons in our city was awarded to Dr. Gerry Kiefer (Pediatric Orthopedics) at the Surgeons' Day Gala. Dr. Kiefer received the Distinguished Service Award for the Department of Surgery for his many years of commitment to the pediatric patients, his dedication to advocacy on behalf of physicians, and his passion for teaching and research. Other accomplishments and still in the area of service to others, Dr. Warren Yunker (Pediatric ENT) and Dr. Sarah Hlland (Pediatric Dentistry) served as President and Vice-President, respectively, of the Medical Staff Association of the Alberta Children's Hospital this past year. Dr. Rob Harrop continues as Section Head of Plastic Surgery for the city. Dr. Simon Goldstein was named to the Clinical Knowledge Lead Position in the Surgery Strategic Clinical Network. Several members have been recognized in the media for their clinical work. Dr. Ryan Frank (Pediatric Plastic Surgery) did an interview with CTV in regards to microtia reconstruction. Dr. Jay Riva-Cambrin (Pediatric Neurosurgery) was featured on CTV for a technique he has introduced to Calgary – Endoscopic Third Ventriculostomy for Hydrocephalus.

In the area of community outreach, the first "Joggin for a Noggin" neurosurgical fundraiser was held in October 2015, led by our neurosurgical nurse practitioner Kelly Bullivant. The event was very successful in raising funds which will help to send 30 kids, who have had brain operations, to the Easter Seals summer camp this year. In the area of International Outreach, several members have volunteered in developing countries. Drs. Frankie Fraulin and Rob Harrop (Pediatric Plastic Surgery) were part of Project Outreach that went to Iquitos, Peru in September 2015 on a cleft lip and palate mission. Dr. James Harder and Elaine Joughin (Pediatric Orthopedic Surgery) were part of Project

Outreach that went to Ecuador in February 2016 on a pediatric orthopedic mission. Dr. Joughin also volunteered her time on trips to Thailand this past year. Dr. Ryan Frank went on a trip with Operation Smile to Honduras treating children with cleft lip and palate.

Education

The Section of Pediatric Surgery has one Royal College recognized training program: Pediatric Surgery (which we commonly refer to as Pediatric General Surgery). The 2 residents in the program in the past year included Dr. Sarah Lai (from the University of Alberta) and Dr. Carlos Alvarez (from Puerto Rico). Dr. Lai recently won an award for her Poster presentation at Surgeons' Day entitled "Medium Chain Triglycerides are More Potent than Long Chain Triglycerides in Inducing Jejunal Adaptation after Massive Ileocecal Resection in Rats". The program director is Dr. Andrew Wong who has done an impressive job developing the Competency by Design program for Pediatric Surgery, recognized nationally and internationally.

He currently sits on the national program director's executive committee for the Royal College of Physicians of Canada. Dr. Wong will be transitioning the Pediatric Surgery Residency Program Director role to Dr. Steven Lopushinsky in July 2016. We thank him for the many years of dedicated service and mentorship he has provided. Dr. Wong and Dr. Lopushinsky were recently promoted to Clinical Professor and Clinical Associate Professor, respectively.

The other surgical specialties have residents from their Adult based specialty and our members are very active in teaching at all levels: medical students, residents, and fellows. In fact, our members are often recognized for their teaching prowess. Dr. Robin Eccles (Pediatric General Surgery) completed the Teaching Scholars in Medicine Program (TSIMP) with her efforts quickly recognized, being awarded the 2015-2016 Sam Darwish Resident Teaching Award for subspecialty pediatrics.

All members are involved in medical student teaching including clinical rotations at ACH for both University of Calgary students and elective students from Universities across Canada, and lecturing and small group sessions at the Health Sciences Centre. Several members are Master Teachers: Dr. Donald McPhalen, Dr. Steven Lopushinsky and Dr. Stephanie Dotchin. They are often recognized with awards for the amount of time put into teaching and their excellence in teaching. Dr. Frankie Fraulin is the Plastic Surgery representative on the Surgical Undergraduate Education (SUGEC) committee. Dental students from the University of Alberta spend time with Drs. Cholette, Bell and Castro at the ACH dental clinic.

At the residency level, all specialties have residents rotating through the Alberta Children's Hospital. Dr. James Brooks (Pediatric ENT) is the current residency program director for ENT. I've never seen so many medical students rotating through Pediatric ENT! Pediatric Neurosurgeon, Dr. Jay Riva-Cambrin has taken over the leadership position of program director in Neurosurgery. Drs. Rob Harrop and Donald McPhalen sit on the Royal College Examination board for Plastic Surgery. Dr. Ryan Frank is involved in the national review course for senior residents in Plastic Surgery. Dr. David Parsons has also been a Royal College Examiner (in Orthopedics) for many years; he is also Co-Chair of the Written Test Committee. Drs. Marie-Claude Cholette, Robert Barsky and Warren Loeppky are examiners for the Royal College of Dentists of Canada.

Fellowship programs exist in Pediatric Spine Surgery (Dr. Fabio Ferri-de-Barros, Director), Pediatric Orthopedics (Dr. Simon Goldstein, Director), Pediatric Urology (Dr. Bryce Weber, Director) and Pediatric Neurosurgery (Dr. Walter Hader, Director). Dr. Arun Babu, formerly trained at the NIHMANS institute in Bangalore, India, recently completed a very successful term as the clinical fellow of pediatric neurosurgery. He will be followed by his colleague from the same institute, Dr. Abhijit Warade in July of 2016.

Also important to note, Dr. Fabio Ferri-de-Barros was promoted to Clinical Associate Professor and Dr. Stephanie Dotchin was promoted to Clinical Assistant Professor this past year.

Research

This past year was the first year the Brian and Brenda MacNeill Chair in Pediatric Surgery which funded the EQUiS (Efficiency, Quality and Innovation and Safety) research platform, led by Dr. Mary Brindle. She was away this past year and she took full advantage of her sabbatical working in the Ariadne lab at Harvard University. Working alongside Dr. Atul Gawande, she has taken a leadership role in pediatric surgery safety and quality improvement with a particular emphasis on the surgical safety checklist. Despite being in Boston, she continued to lead EQUiS and there are many members of Pediatric Surgery as part of this platform. Projects are underway in the areas of preventing neonatal infection, understanding urgent room access, identifying the current rates of infection in implanted devices at ACH, evaluating regional pain control for inguinal operations, systematic review on tranexamic acid use in children, and others.

In the area of Pediatric Spine, the team of Dr. David Parsons and Dr. Fabio Ferri-de-Barros continue their evaluation of their improved surgical technique in scoliosis surgery utilizing intraoperative skull femoral traction and navigated sequential drilling. This program has previously won a Department of Surgery Innovation award and they have successfully published several articles in this area. This past year they were also nominated for an Alberta Health Services President's Excellence Award. Dr. Ferri-de-Barros was successful in obtaining a significant (>\$244,000) grant from the Alberta Children's Hospital Foundation to study surgical simulation for scoliosis surgery training. Pediatric Orthopedic surgeons from other centres across the country are coming to observe their technique. For this same work, Dr. Fabio Ferri-de-Barros was made an Honorary Fellow of the Brazilian Pediatric Orthopaedics Society earlier this year.

In Pediatric Neurosurgery, Dr. Jay Riva-Cambrin has been able to establish Calgary as the newest member of the North American-wide Hydrocephalus Clinical Research Network (HCRN). He brings a wealth of clinical research expertise and has been a great addition to our section. A quality improvement project which began over 3 years ago with the institution of the HCRN Shunt protocol has been extremely successful in reducing the incidence of shunt infection at ACH. In fact, only a single infection has been reported in that time frame, which equates to an infection rate of less than 1%, down from a previous high of 13%.

In Pediatric Orthopedics, Dr. Elaine Joughin is the Physician lead for research and she is involved in a multicentre trial of Simple Bone Cysts in Kids (SBOCK) along with several other Pediatric Orthopedic Surgeons. She and Dr. Goldstein are part of the EQUIS platform.

In Pediatric Urology, Dr. Bryce Weber, Dr. Anthony Cook and Dr. Carolina Fermin-Risso are involved in research endeavours including two randomized controlled trials. One study recently received the Canadian Urology Association's resident research grant at a value of \$10,000. The second study is a multinational randomized surgical trial. From the outset of this study, ACH has been the global leader for recruitment of patients into the trial. A Surgery Strategic Clinical Network (SSCN) studentship in the amount of \$5,600 was also recently awarded to Pediatric Urology.

Dr. Marie-Claude Cholette is part of the Canadian Dental Sleep Apnea Network and is collaborating in a research project: "Incidence of Altered Craniofacial Morphology and Malocclusion in Children and Youth with Obstructive Sleep Apnea". [SickKids Foundation New Investigator Grant program (NI14-012)]. In 2015, the Pediatric Dentistry team was also awarded a grant for over \$50,000 from the Alberta Children's Hospital Foundation designated for innovation and improvements in the Dental clinic.

In Pediatric Plastic Surgery, Dr. Rob Harrop is a Co-lead in EQUiS. He is also a co-supervisor of a Masters of Science candidate in Edmonton – Kathleen O'Grady – who is comparing nerve grafting and triple nerve transfers for the reconstruction of upper trunk obstetrical brachial plexus injuries. Dr. Harrop and Dr. Donald McPhalen are co-supervisors of a PhD candidate in Calgary – Jacinda Larson – who is analyzing midfacial shape and craniofacial growth patterns following cleft lip and palate surgery.

Challenges

One of the ongoing challenges remains meeting the needs of the population. The number of referrals to outpatient clinics continues to increase, which results in increasing wait times. For example, the wait time to see a Pediatric ENT surgeon has increased to over 6 months. Also the complexity of the cases is increasing. For example, the outpatient pediatric dental clinic at ACH, in an attempt to address their waiting list, are limiting the referrals they accept to the most complex children with unique dental/oral challenges, behavioural issues and/or more complex special care needs. Another example of the issue of patients accessing care is the new and significant challenge for adolescent transgender patients to obtain an appointment with a Pediatric Plastic Surgeon.

In the Operating Room, we continue to struggle with lack of a daily urgent/emergency room. During seasonal slow-down periods we have been adding urgent rooms, either ½ day or a full day, which does help. The Alberta Children's Hospital tends to run over 100% capacity for the majority of the year, but fortunately we have not had to cancel elective operations due to bed shortages. We also continue to struggle with the inability to run two operating rooms after hours when needed.

Another challenge is manpower coverage. The last 10 years has seen a significant increase in the number of dedicated Pediatric Surgical Specialists which allows for on-site office presence and complete coverage of the workload at ACH: Pediatric General Surgery, Pediatric

Orthopedics, Pediatric Plastic Surgery, and Pediatric Urology. But this model of completely separate Pediatric coverage is not possible in all specialties. Some groups such as Pediatric ENT and Pediatric Ophthalmology are too small to support complete in hospital and call coverage. They rely on their adult counterparts to cover some of the workload. Some groups, such as Pediatric Neurosurgery, Pediatric Gynecology and Pediatric Oral and Maxillofacial surgery do not have the volume of work to support a full time pediatric practice.

An ongoing problem is recruitment. The lack of an Academic Alternate Relationship Plan (AARP) challenges recruitment. In the past year there has been resurgence of Alberta Government's interest in looking at AARPs. It will be interesting to see what the next year will hold. Also in the category of recruitment problems, an ongoing challenge is the inability to recruit a full time pediatric dentist for ACH Dental Clinic due to fiscal restraint. The onsite dentists are employees of Alberta Health Services. The ACH Dental Clinic is unable to maintain self-sufficiency caring for the most compromised, challenging and vulnerable children. There has unfortunately been no progress on this issue despite advocating for this position over the last five years.

A fifth problem is the expansion of programs or the addition of new programs. The repetitive message of funding restrictions limits the ability to expand programs to meet patient needs. Innovation often requires an initial outlay of increased resources. Over time the innovation can lead to decreased overall expenditure in addition to improved quality of care, but it is that first step that is so difficult to take, when the constant message is restriction.

Future Directions

This upcoming year will see the addition of several new members, already selected and planning to start. In Pediatric General Surgery, we are excited to welcome Dr. Natalie Yanchar. Recruited from Dalhousie University in Halifax, Dr. Yanchar is internationally recognized for her work in trauma systems and patient advocacy. Dr. Lisa Lagrou, a recent U of C graduate will be joining the Pediatric Ophthalmology group, having completed her Pediatric Ophthalmology and Adult Strabismus fellowship in Ann Arbor, Michigan. Dr. Lisa Phillips, also a U of C graduate will be joining the Pediatric Orthopedic group in January 2017 having completed two fellowships: Pediatric orthopedic fellowship in Vancouver and Orthopedic Sports Medicine and Pediatric Arthroscopy Fellowship.

This upcoming year will also see Search and Selections in Pediatric General Surgery, Pediatric Orthopedic Surgery, Pediatric Urology and Pediatric Ophthalmology. The Section of ENT also plans to hire two new community ENT surgeons this next year, and part of their practice is expected to be pediatric with OR time at ACH.

Section of Plastic Surgery

Section Structure and Organization

Current Committees

- Plastic Surgery Executive
- Section Head – Rob Harrop
- Resident Training Program Director – David McKenzie
- Research Director – Claire Temple-Oberle
- CME Director – Earl Campbell
- Undergraduate Medicine Director – Frankie Fraulin
- Rounds Coordinator – Christiaan Schrag
- FMC Site Chief – William de Haas
- RGH Site Chief – Mark Haugrud
- PLC Site Chief – Jonathan Lee
- ACH Site Chief – Don McPhalen
- SHC Site Chief – Fred Loiselle
- Burn Director – Duncan Nickerson

Plastic Surgery Resident Training Committee

- David McKenzie (Program Director)
- Duncan Nickerson
- Claire Temple-Oberle
- Rob Harrop
- Frankie Fraulin
- Christiaan Schrag
- Alan Lin
- Paul Whidden
- James Kennedy
- Resident Representatives

Membership:

FMC

- Vim de Haas (Head, FMC Division of Plastic Surgery)
- Dave McKenzie (Plastic Surgery Residency Program Director)
- Dale Birdsell



Dr. Rob Harrop, Plastic Surgery Section Chief

- Robert Lindsay
- Christiaan Schrag
- Claire Temple-Oberle
- Duncan Nickerson (Director, Department of Surgery Mentorship Office)
- Earl Campbell
- Jennifer Matthews
- Jevon Brown

PLC

- Jonathan Lee (Head, PLC Division of Plastic Surgery)
- George Hamilton
- Greg Waslen
- Wayne Perron
- Farrah Yau
- Alan Lin

- Ryan Frank
- Justin Yeung

Reconstruction fellowships at the University of Washington. He practices at the Foothills Medical Centre.

RGH

- Mark Haugrud (Head, RGH Division of Plastic Surgery)
- John Beveridge
- Frank Sutton
- Paul Whidden
- Doug Humphreys

ACH

- Don McPhalen (Head, Division of Pediatric Plastic Surgery)
- Frankie Fraulin (Head, Section of Pediatric Surgery)
- Rob Harrop (Head, Section of Plastic Surgery)
- Kim Sass
- Ryan Frank

SHC

- Fred Loiselle (Head, SHC Division of Plastic Surgery)
- James Kennedy
- Jeff Dawes

Banff/Canmore

- Elizabeth Hall-Findlay
- Tom Sinclair
- Susan MacLennan

Accomplishments and Highlights

Special Achievements

- Dr Temple-Oberle, promoted to Professor.
- Dr Nickerson, Awarded 2016 Department of Surgery Educator of the Year Award
- New additions to our faculty are Drs. Kim Sass and Jevon Brown.
- Dr Sass completed her residency at the University of Calgary. She then completed a fellowship in Craniofacial Surgery at the Australian Craniofacial Unit in Adelaide, Australia and a Hand Surgery fellowship at the University of British Columbia. She practices at the Alberta Children's Hospital.
- Dr Brown completed his plastic surgery residency at the University of Calgary and a Craniofacial

Clinical Service

- Dr. Schrag continues to work on the development of a Hand and Face Composite Tissue Transplantation Program; Institutional ethics approval has been obtained to begin to collect data on potential recipients for face and hand transplants; cadaver simulations for hand and face transplantation have been carried out.
- Dr. Temple-Oberle hosted the Alberta Breast Reconstruction Awareness Day on October 21, 2015. Over 300 patients and family members attended this event where they had the opportunity to hear formal presentations, and meet individually and in groups with others who had been through breast reconstruction, partners of reconstruction patients and surgeons performing reconstruction. A formal Quality Improvement session was held following the event to suggest improvements for future events.
- Drs. Schrag, Yeung and Harrop along with colleagues from neurosurgery, neurology, and physiatry continue to expand the Multidisciplinary Peripheral Nerve Clinic at the South Health Campus

Education

Residents

- Under the direction of Dr Dave McKenzie the University of Calgary Plastic Surgery Resident Training Program continues to accept 2 new residents each year to the 5 year plastic surgery training program.
- Drs. Brett Byers and Don Graham successfully completed their FRCSC specialty examinations in plastic surgery. Dr Byers is beginning a hand and upper extremity fellowship at the Western University in London, Ontario. Dr Graham is beginning a hand surgery fellowship in Louisville, Kentucky.

- Dr Schrag, with the assistance of other plastic surgery faculty again conducted the Microsurgical Skills Simulation Course in June, 2016 for the plastic surgery residents.
- Drs Schrag and Harrop (in collaboration with faculty from Clinical Neurosciences) served as faculty in the U of C Spine and Peripheral Nerve Course held on January 7, 2015.
- Plastic Surgery Resident Research Day held on December 11, 2015. Our visiting professor was Dr Oleh Antoyshyn, a craniofacial surgeon from the University of Toronto.

Fellows/Graduate Students

- Drs. McPhalen and Harrop continue to serve on the PhD Committee for Ms Jacinda Larsen whose research is entitled "Analysis of Midfacial Shape and Craniofacial Growth Patterns Following Cleft Lip and Palate Reparative Surgery"
- Dr. Temple-Oberle coordinates the oncologic reconstruction fellowship; the most recent fellow has been Dr Marcio Barreto
- Dr. Schrag coordinates the University of Calgary Microsurgery Fellowship; the current fellow is Dr Beatriz Lopez

Medical Students

Dr. McPhalen is an active member of the University of Calgary Master Teacher Program and serves as Co-Chair for the Physician Wellness Course in the Undergraduate Medical Education Office.

National and International Representation

- Dr. Campbell served on the Membership, Accreditation, International, and Public Education Committees for the American Society of Plastic Surgeons; Past-President of the Alberta Society of Plastic Surgeons; Treasurer of the Northwest Society of Plastic Surgeons; served on the Reporting and Oversight, Regional Advisory and Corporate Affairs Committees for the Royal College of Physicians and Surgeons of Canada.
- Dr. Lin serves presently as the Chairman of the Joint Alberta Medical Association/Workers

Compensation Board Advisory Committee and Contract Negotiation Team.

- Dr Fraulin serves on the Pediatric Surgical Chiefs of Canada Committee.
- Dr Haugrud serves as a member of the Non-Hospital Surgical Facilities Committee for the College of Physicians and Surgeons of Alberta.
- Dr Lee serves as Secretary-Treasurer for the Alberta Society of Plastic Surgeons.
- Drs. Harrop and McPhalen serve as Examiners on the Royal College of Physicians and Surgeons Plastic Surgery Exam Committee. Dr. D. McPhalen is Medical Director for the Kananaskis Public Safety and Mountain Rescue Program.
- Drs. Fraulin and Harrop participated in the "Project Outreach International Charity Program" surgical mission to Iquitos, Peru; this 5th plastic surgery mission to Peru provided surgical care to children with cleft lip and palate.
- Dr. Schrag participated in the Operation of Hope surgical mission to Buawayo, Zimbabwe.
- Dr. Harrop serves as Secretary-Treasurer for the Canadian Society of Plastic Surgeons Education Foundation and Head of the Membership Committee for the Canadian Society of Plastic Surgeons.

Challenges

- Increasing the number of academic plastic surgery faculty remains a priority for the Section of Plastic Surgery. This goal remains difficult due to lack of availability of new Geographic Full-Time faculty positions or Alternate Relationship Plans.
- Providing resident education in the area of aesthetic plastic surgery remains challenging for a variety of reasons. Drs M Haugrud, P Whidden, D. McKenzie, R Frank and R Harrop continue to explore the concept of developing a Resident Aesthetic Surgery Clinic whereby residents, under the supervision of a staff plastic surgeon, would assess potential patients, participate in their surgery and manage their postoperative care.

Workforce Planning

Future Needs

Plans for future plastic surgery recruitment will be based on retirement of existing staff, population growth and needs for specific expertise.

Goals and Strategies

- We continue to look at various means of increasing the number of academic plastic surgery faculty.
- We continue to monitor the retirement plans of our senior members and plan to recruit accordingly to replace these members.

Quality Assurance, Quality Improvement, and Innovation

- A variety of clinical databases have been established to review delivery of care to certain large subsets of patients. These include:
 - ACH Vascular Birthmark Clinic database
 - Head and Neck Cancer Database (in collaboration with ENT)
 - Burn Database
 - Breast Reconstruction Database
- In collaboration with our ENT colleagues, a standardized clinical care pathway is now well established for patients undergoing major head and neck cancer resection and immediate reconstruction; there is ongoing evaluation of outcomes and complications among patients going through the pathway.
- In collaboration with our plastic surgery colleagues in Edmonton and oncologic colleagues in Edmonton and Calgary, we have established a Provincial Breast Reconstruction Steering Committee; the task of this committee is to increase efficiency for referral and treatment of oncologic patients requiring immediate or delayed reconstruction following cancer resection.

Future Directions and Initiatives

The Section of Plastic Surgery provides excellence in clinical care across the entire spectrum of plastic surgery, excellence in resident education and exhibits excellent collegiality amongst our members and members of other surgical specialties. Faced with continually increasing volumes of complex patients, we aim to build on our past successes in developing novel approaches to providing efficient and high quality patient care. We recognize the need to increase our academic profile nationally and internationally and thus feel it is necessary to increase our complement of academic plastic surgery faculty through focused recruitment.

Section of Podiatry

Section Structure and Organization

There are currently 11 members in the Section of Podiatric Surgery. Six of those members are taking 1:6 calls for PLC, RGH, SHC, ACH and FMC. Calls from Urgent Care Centers and RAAPID in the region are also directed to the six podiatrists on calls. Currently the section chief is involved in the Department of Surgery, Executive Committee, SCN committee for NHSF and SCN committee for diabetic foot pathway. Our section currently meets every other month depending on the need. At our section meeting we hold a Journal Club/ article review and Case Discussion. Members are free to bring issues to the meeting to be discussed.

Accomplishment and Highlights

The Limb Preservation Clinic at PLC continues to grow exponentially. More care is being paid toward diabetic foot care and screening. This year we increased our presence at the clinic from two afternoons to three afternoons a week to meet the demand. Unfortunately even with this increase we are not able to meet the demand. The numbers of admissions due to diabetic foot infection have decreased and the length of stay has also decreased as patients can now be treated on an out-patient basis. We are starting to put together some studies that will help us understand how we can care for people with diabetic foot in our current environment. We hope that this concentrated patient population can help populating research and guidelines in the treatment of the diabetic foot.

Challenges

Challenges are numerous at this point. They remain virtually the same yearly. We know the reality of the current budget and expending without the financial support is currently the biggest challenge that we face. The diabetic foot preservation clinic at Peter

Lougheed Hospital is growing but is limited by the financial support and staff that is allocated to our clinic. We have only an aide part time and a clerk part time. We are at the point where we need a full time clinic with a LPN. This will help us unload the minor surgery clinic where a lot of these patients have found their way over the years.

Our section needs residents/fellow both for present and the future of our section and profession in this province. There is a lack of ability to be able to push this residency through different layers of committees and bureaucracy. There remains a lack of members within our section willing to take that project and make it happen. Our physicians are few and have private offices so no one seems to be able to really be involved to start this residency program. I have therefore decided this year that this will be the project I will tackle. I hope this can help us put research together for the limb preservation clinic.

The Limited OR time in hospital is a huge challenge that we face. NHSF provides the availability to do low risk cases and remain cost effective. The problem comes when someone has a complication or requires special plates or screws then these cases cannot effectively be done in the NHSF and need to be done in a hospital OR. Each member of our section gets 4 OR days PER YEAR. This places patient at risk of not being able to get appropriate care in a timely fashion for surgeries that require bone grafts, plates, screws or special instruments. This needs to be revised so that surgeons may have access to the OR to deal with complications and more involved surgeries. It also becomes a challenge trying to book diabetic patients as some end up being booked urgent 3 days and have to remain NPO for that long period of time and glucose stabilization often becomes an issue.

Workforce Planning

We are not planning on adding any surgeon to our section at this point.

Quality Assurance and Improvement

Our section these past 4 years are self reporting post-op complications and issues for NHSF. The cases that have complications can also be discussed at section meetings. This allows everyone to learn from each other and give ideas on how we can improve the system and set up pathways to prevent further complications.

Overall our section has become a leading institution in the diabetic foot in Western Canada. We hope that AHS can support us as we are ready to move in the new clinic with Vascular surgery, Internal medicine and Endocrinology in the new out patient clinic at Peter Lougheed.



*Dr. Francois Harton
Section Chief, Podiatric Surgery*

Section of Surgical Oncology

Section Head

J. Gregory McKinnon MD FRCSC
Professor of Surgery and Oncology

Section Structure and Organization

The Section of Surgical Oncology consists of a multidisciplinary group of surgeons dedicated to cancer care as their primary goal. Five members are located full-time in the Tom Baker Cancer Centre (TBCC)

and three of these are primary appointments to the Department of Oncology with cross-appointment to Surgery. All other members are primarily appointed to the Department of Surgery and are located at various sites and in other Sections including plastic surgery, general surgery, otolaryngology, thoracic surgery and urology.

Members:

Last name	First name + initial	Primary Department	Secondary Department	Section
Ball	Chad G.	Surgery	Oncology	General Surgery
Bathe	Oliver F.	Surgery	Oncology	General Surgery
Bouchard-Fortier	Antoine	Surgery	Oncology	General Surgery
Buie	W. Donald	Surgery	Oncology	General Surgery
Chandarana	Shamir	Surgery	Oncology	Otolaryngology
Datta	Neel	Surgery	Oncology	General Surgery
Dawes	Jeffrey C.	Surgery	Oncology	Plastic Surgery
deHaas	William G.	Surgery	Oncology	Plastic Surgery
Dixon	Elijah	Surgery	Oncology	General Surgery
Donnelly	Bryan J.	Surgery	Oncology	Urology
Dort	Joseph C.	Surgery	Clinical Neurosciences	Otolaryngology
Gelfand	Gary A.J.	Surgery	Oncology	Thoracic Surgery
Gotto	Geoffrey T.	Surgery	Oncology	Urology
Graham	Andrew J.	Surgery	Oncology	Thoracic Surgery
Grondin	Sean C.	Surgery	Oncology	Thoracic Surgery
Harvey	Adrian	Surgery	Oncology	General Surgery
Lafrenière	René	Surgery	Oncology	General Surgery
Matthews	T. Wayne	Surgery	Oncology	Otolaryngology
McFadden	Sean	Surgery	Oncology	Thoracic Surgery
McKinnon	J. Gregory	Surgery	Oncology	General Surgery
McWhae	John A.	Surgery	Oncology	Ophthalmology
Mew	Daphne J.Y.	Surgery	Oncology	General Surgery
Pasieka	Janice L.	Surgery	Oncology	General Surgery
Quan	May Lynn	Surgery	Oncology	General Surgery
Sutherland	Francis R.	Surgery	Oncology	General Surgery
Mack	Lloyd	Oncology	Surgery	General Surgery
Temple	Walley	Oncology	Surgery	General Surgery
Temple-Oberle	Claire	Oncology	Surgery	Plastic Surgery

Programs

The development of plans for a new cancer center are proceeding and will hopefully lead to a new facility in the next five to seven years. In the meantime, the Section continues to lead in the surgical treatment of sarcoma, melanoma, HPB, advanced gastrointestinal (GI) and breast cancer. It also leads in major provincial projects in head and neck and rectal cancer.

Cancer Surgery Alberta and the synoptic operative report was created by Dr. Walley Temple and is now led by Dr. Lloyd Mack. Although it has expanded to a national program, its centre will remain at the TBCC. There are now over 40,000 patients in the database.

Members of the Section have assumed many major leadership positions: Dr. Bathe continues as Provincial Tumor Group Leader for GI; Dr. Mack Head of the Provincial Sarcoma Tumor Group, Deputy Head Department of Oncology, and Acting Head Cancer Surgery Alberta; Dr. Temple-Oberle Head of the TBCC Cutaneous Tumor Group; and Dr. Dort Head of the provincial Strategic Clinical Network for Cancer. Dr. Dixon assumed the position of Section Head General Surgery, and Dr. Datta the Program Director for General Surgery.

Accomplishments and Highlights

Dr. Antoine Bouchard-Fortier began working on faculty as Clinical Lecturer in October 2015. His role will be clinical and academic with an emphasis on breast and advanced gastrointestinal cancer. Three other members of the Department of Surgery, who have a strong role in cancer treatment, were cross-appointed to the Department of Oncology (Drs. Grondin, Gotto and Datta). Dr. Lloyd Mack was appointed as Acting Deputy Head for the Department of Oncology. Drs. Quan, Temple-Oberle and Temple all had sabbaticals approved to begin in mid 2016.

Training Programs

The General Surgical Oncology program was successfully certified by the Royal College in 2015 with reciprocal recognition by the American Board

of Surgery and the ACGME. One Fellow graduated in 2015, Dr Bouchard-Fortier, and he has taken a position here at the University of Calgary. The program remains in the international match for approved programs and continues to receive large numbers of Canadian and international applicants. In January 2016, Dr. Lloyd Mack assumed the role of Program Director for the Section of Surgical Oncology.

Section members supervised postgraduate fellows in oncologic reconstruction, colorectal surgery, endocrine surgery and hepatobiliary surgery.

Research

Highlights of the research year include the opening of the "Ruby Project"; Dr. Quan's CIHR funded study of breast cancer in young women. Dr. Quan also received a significant philanthropic donation that will, over the course of ten years, allow the study and development of a provincial breast cancer program. Dr. Temple-Oberle was awarded a major grant from CIHI to study breast reconstruction and also assumed the world-wide leadership of the ERAS program for breast reconstruction. Dr. Bathe continued to be extremely active in a number of areas including metabolomics, cachexia and hepatobiliary surgery. His tissue bank is also extremely successful with over 22,000 specimens leading to many international collaborations. Members of the Section continue to be highly active and have published over sixty peer-reviewed manuscripts in 2015 and 2016.

Challenges

Given the distributed nature of the Section, members have struggled with ensuring that surgical participation in Cancer Control initiatives is effective. The Section continues to participate in planning for the new Calgary Cancer Center. Confirmation of funding for this project ensures that it should be opening by 2024.

Workforce Planning

A workforce plan includes new recruitment in colorectal oncologic surgery, endocrine and plastics. Constraints in OR resources has made this difficult but we hope to recruit a new surgical oncology/endocrine surgeon in the next academic year.

Quality Assurance, Quality Improvement, and Innovation

Cancer Surgery Alberta continues to provide high quality analysable data in several areas of cancer surgery. aCATS data on wait times for cancer surgery has proven to be a valuable tool in monitoring cancer surgery access in Calgary. Members are also active in the ERAS project.

Future Directions and Initiatives

The Section plans to move forward with the development of multidisciplinary pathway-driven clinical and research initiatives. Some of these will be based in the cancer center infrastructure, others not. This will require further recruitment of academic surgeons and more engagement in both provincial and zonal organization and planning.



Dr. Gregory McKinnon, Surgical Oncology Section Chief
Photo provided by Dr. Gregory McKinnon

Section of Thoracic Surgery

Section Structure and Organization

Current Committees:

- The Section continues an active monthly sectional meeting to address all things thoracic. Dr S McFadden Chair
- The section does monthly morbidity and mortality rounds to maintain quality assurance. Dr G Gelfand Director.
- In conjunction with our nursing and allied health colleagues the section maintains a Unit 61 quality council. Dr G Gelfand Chair.
- We are very excited to have Dr. Tom Waddell, thoracic surgery in Toronto, chosen as our visiting professor along side our own Dr Grondin as adjudicators for Surgeons Day 2016.
- The diaphragm pacing program performed its second successful procedure in October of 2015. There will be more to come with the multidisciplinary team who strive to help these unfortunate patients
- The clinical service continues to grow with the section diligently working to fill the cancer surgery uplift time allocated.

Programs:

- The section continues to participate fully with the Alberta Thoracic Oncology Program a provincial program to aid patient access for lung cancer treatment. Dr S McFadden provincial representative
- The section maintains an active Thoracic Surgery Residency program. Dr S Grondin Program Director.

Membership:

- The Section members all maintain Royal College and Alberta Medical Association Status. All members actively participate with the Lung Cancer Tumour Group at the Tom Baker Cancer Centre.

Accomplishments and Highlights

Clinical Service:

- The Section is very pleased to support its first full Clinical Professor Dr S Grondin with his application to become Department Chair.
- The Section was delighted to have Dr John Mitchell as our visiting professor last fall. It was a wonderful 3 days of learning and fellowship.

Education:

- The Section was pleased to receive a full accreditation for our Thoracic Surgery Residency from the Royal College after the most recent external review.
- The Section has been fortunate to have Dr S Grondin as our education director spending countless hours directing, focusing and educating all the learners who come to our service. We will be sad to have him step away from the position but hope one of our new recruits will ably fill his role

Residents:

- Thoracic Surgery is pleased to have had numerous wonderful residents from different specialties to enhance and improve our service. Thank-you all for your hard work and dedication.

Fellows:

- We said good-bye to Dr Wiley Chung who completed his 2 years of training. He was successfully chosen for a job in Kingston at Queens University, best of luck in your new career from all of us.

- Dr. Victoria Cheung will be joining us from UBC for an exciting 2 years of training.
- We have been please to receive our colleagues from the Pulmonary Medicine Fellowship, their experience and expertise while on the service helps us all.

Medical Students:

The Thoracic Surgery selective continues to be a rewarding experience for the many students who we have met over the last year. We hope a little of what we taught will follow through to their many different areas of specialization

Challenges

Future Risks:

- Recruitment is dependent on acceptance of an ARP application which is presently passing through the appropriate people and processes.

Workforce Planning

Future Needs:

- Two Thoracic Surgeons have been interviewed, winned and dined before choosing to join our group; we hope both will make a successful move to Calgary in the summer of 2016.

Goals and Strategies:

- Further develop and enhance our administrative and academic commitments to the University of Calgary and Alberta Health services

Impact on other departments and zonal resources:

- Two new surgeons we feel will only enhance our relationships with our many and varied other medicine and surgical colleagues allowing for more multidisciplinary patient care.

Quality Assurance, Quality Improvement, and Innovation

General

- Dr. A Graham has implemented a real time discharge summary based tracking system for monitoring and hopefully modifying patient morbidities. Presentations at CATS were well received and the system is used presently to track outcomes. An ongoing assessment of the system is planned.

Future Directions and Initiatives

The section continues with our Pulmonary, Cystic Fibrosis, Nursing, Allied Health Colleagues in planning and developing a Chest Focused service with Unit 61 as the hub.

Dr. Sean McFadden
Section Chief
Section of Thoracic Surgery



Section of Transplant Surgery

Section Structure and Organization

Current Committees

- Policy and Procedure
- Multidisciplinary Transplant Allocation
- Transplant Research Rounds
- Multidisciplinary Living Donor
- Operating Room

Programs

- Live Donor
- Fellowship

Accomplishments and Highlights

Clinical Services

- Increase in Kidney transplant activity for the 5th year.
- Initiation of Non-heart beating program with 3 cases.
- Continuation of the ABO incompatible kidney transplants with 3 cases.
- The Section has obtained a Physical facility exclusively for the Section of Transplant Surgery.
- Reorganized the Non-transplant surgery booking process with success, increasing the efficiency of OR time with more surgeries done per unit of OR time and less cancellations.
- Referrals are being received again from outside Calgary including the interior of British Columbia for Vascular access surgery.
- Additional Clinic space was recently obtained from the Department of Surgery which will increase our ability to deliver more services to patients in a less crowded and more appropriate environment, for both our staff and our patients. This also decreased the pressure for space for the transplant clinics which also needs more clinic space. We thank the Department of Surgery Leadership for understanding and providing us with this extra clinic space.

Education

We continue to train General Surgery Residents in Transplant as well as Vascular access and peritoneal catheter surgeries, immunology and management of immunosuppression and immunosuppressed patients.

Fellows

We received a 1 year rotation Fellow from Hepatobiliary Surgery, for which we are in debt to Drs. Elijah Dixon and Chad Ball who have made this possible.

Medical Students

We continue to provide rotation in a non-regular basis for Medical Students Elective rotations with the staff of the section.

Research

Clinical trials as well as theoretical and research continue to be ongoing by members of the section.

Challenges

- Clinical workload is steadily increasing and there has been no increase in resources or manpower with no new recruits in the last 15 years despite the increase in activity in transplant surgeries, clinics and non-transplant surgery for renal patients. This has impaired the ability of the Section of Transplant Surgery to be more active in research and education and has imposed a physical stress on its members.
- More resources must be allocated to prevent the collapse of the clinical work in the section and to permit more non-clinical work. For this problem, a contingency plan has been implemented by reducing work that does not relate directly to Clinical duties and a restructuring of the section is under way in collaboration with the Department of Surgery.

Workforce Planning

An ideal of 6 transplant surgeons are needed to meet current and 10 year future needs for transplant surgery in southern Alberta, predicting the current rate of increase in activity. A 4th surgeon is needed with urgency to decrease the pressure on the 3 surgeons of the section which takes 2 in 3 calls 24/7. The addition of the 4th Surgeon will create 2 in 4 call situations which will be more manageable.

Goals and Strategies

Our Goal is to increase the transplant activity in Southern Alberta without decreasing the quality and safety we have so far provided until today. For this we need increased resources which will match the increase in needs, particularly in respect of human resources. We also are restructuring the Section to increase efficiency, best utilization of resources and increase accountability for the members of the section, and increase safety for our surgical patients.

Impact on other departments and zonal resources

Increase efficiency means increase resources for other sections, for this, allocation of specific resources are urgently needed to match the clinical needs.

Quality Assurance, Quality Improvements and Innovation

We have recently incorporated the Section to the General Surgery's Morbidity and Mortality Rounds – which have not been performed in the section in the past. This will enable the Section to be a part of an academic, professional and formal forum where surgical complications, mortality and morbidity can be discussed, with the benefit to increase the quality of the Section work and to receive feedback from Colleagues. This will also enable the Section to participate in the education of residents and fellows, and contribute to discussion where transplant patients are presented.

Future Directions and Initiatives

The Section of Transplant Surgery has been working towards an initiative where a full formal, professional and accountable model of patient care will be in accordance with CPSA guidelines and regulations, Alberta Health Services policies and procedures, and the University of Calgary. This will create a respectful professional and ethical environment for the members of the section and a safety model for patient care.



Dr. Anastasio Salazar, Transplant Surgery Section Chief

Section of Urology

Section Structure and Organization

Our programs

The Section of Urology is pleased to offer programs at multiple sites in Calgary, providing patient care to individuals with urological conditions and education for the public.

Vesia [Alberta Bladder Centre] provides care for patients with lower urinary tract disorders. Diagnostic testing and medical and surgical management are provided by a team of surgeons, general practitioners, nurses and physiotherapists within a collaborative care model.

In partnership with the Prostate Cancer Centre, the Section of Urology runs six prostate cancer rapid access clinics. Each clinic provides specific care to help patients along their journey, including screening and

diagnosis, education, treatment and post-treatment support.

Within adult and pediatric urology clinics, the urology team provides consultations and follow-up services for patients receiving care at the South Health Campus.

The Men's Health Program, our newest endeavor, provides valuable information and education about urological disorders and health risks to men presenting with urological concerns.

Our team

Dr. Kevin Carlson, urology section chief, leads a team of fifteen urologists: thirteen serving adult patients and three serving pediatric patients. Within our team, one member is on partial leave, one member is an adult urology locum, and one is a pediatric urology locum.

Urologist	Specialty	Highlights
Barr, Richard	Stones	Member of the Preoperative Assessment Clinic Committee
Baverstock, Richard	Reconstructive and functional urology	Clinical researcher; co-founder vesia [Alberta Bladder Centre]; fellowship director, functional and reconstructive urology; site lead for quality improvement initiative on urinary tract infection reduction; SCN seed grant recipient, CUA CPD Committee, November Discovery Grant
Carlson, Kevin	Reconstructive and functional urology	Zone Section Chief ; clinical researcher; co-founder vesia [Alberta Bladder Centre]; fellowship director, functional and reconstructive urology; founder Canadian Functional Urology Network; AIHS Grant Recipient; CMO Quality Improvements Grant Recipient; Committee/Board membership: RGH OR committee, Surgical Executive committee, provincial aCATS working group, RGH Site Leadership Council, Kidney Stone Working Group, International Continence Society; Prostate Cancer Foundation Board
Cook, Anthony	Peds	Site representative, ACH OR Committee
Donnelly, Bryan	Cancer	Clinical and basic science researcher; founder and chair and Byron Seaman Chair of Clinical Research , Prostate Cancer Centre; Cumming School of Medicine Distinguished Service Award for Clinical Research; Alberta Prostate Cancer Research Initiative (co-chair)

Duffy, Martin	Cancer	Past president, Prairie Urological Association; Section Lead CME
Dushinski, John	Endo	Section Lead Patient Information; Zone Laser Safety Committee; medical community outreach work in Palestine
Gotto, Geoffrey	Cancer	Masters of Public Health with focus on outcomes research; cross appointment O'Brien Institute of Public Health; Section Lead Quality Assurance; Committee/working group membership: Alberta provincial GU tumour team executive, Alberta provincial GU guidelines committee, Canadian Urologic Oncology Group, Canadian Urology Research Consortium; Cancer Surgery Alberta GU tumour site lead
Hyndman, Eric	Cancer/ Robotics	PhD with basic science research focus on metabolomics; cross appointment, Alberta Cancer Institute; CRIO grant recipient; fellowship director, urologic oncology; Committee/board membership: Surgery Strategic Clinical Network, BCG oncology regulation committee, Bladder Cancer Canada, JLA kidney cancer steering committee, Alberta Prostate Cancer Research Initiative; president, Prairie Urological Association
Kawakami, Jun	Cancer/ Robotics	Masters of Community Health and Epidemiology; kidney cancer research; Canadian Kidney Cancer Information System member
Kozak, Gregory	Robotics	Deputy section chief; section lead HTA
Lee, Jay	Men's Health	Section lead undergraduate education; Committee membership: Canadian Male Sexual Health Council, CUA patient information committee, Southern Alberta Sexual Health Association, surgical undergraduate education committee, Cumming School of Medicine Urology course committee, chair
Metcalfe, Charles	Endo/ Robotics	
Metcalfe, Donald	Cancer/ Robotics	
Weber, Bryce	Peds	Masters of Education (Simulation); Section lead post-graduate education

Accomplishments and Highlights

Clinical Service

Urology is a small section, serving a high volume of patients. Our team of urologists and staff are dedicated to patient care. Some of our clinical accomplishments include the following:

- Adding physician assistants and nurse practitioners into our clinical service, thereby improving patient access and quality and continuity of care.
- Refining operating room and resource allocation to optimize the use of surgical robotic technology.
- Linking clinical care to current urological research, through partnership with the Alberta Prostate Cancer Research Initiative (APCARI).
- Providing programs that use innovative care models, which improve quality of care and access to care, such as vesia [Alberta Bladder Centre] and rapid access clinics.
- Performing the highest volume of cystoscopy procedures at a single site in the country (over 11,000 procedures per year at RVH).

Education

Postgraduate Education

Over the past year, we had the opportunity to train and work alongside several residents, including urology residents from London (Ontario), Winnipeg and Hamilton; many off-service residents; and a fourth-year resident from Jamaica (full year of training). In addition, a urologist from Turkey spent two months with us observing Calgary's urology program.

Fellowships

Two fellows, Dr. Ian Wright and Dr. Matthew Andrews, joined our team over the past year to complete fellowships in reconstructive and functional urology at vesia [Alberta Bladder Centre].

Both fellows were actively involved in research and presented at numerous meetings. Dr. Andrews took 1st Prize at the Fellow's Research Symposium for his project entitled Evaluation, management, and outcomes of female periurethral masses: A large Canadian series. In addition, Dr. Andrews won the

2015-2016 CUA-Pfizer Incontinence Fellowship for his project: "Measuring the impact of early bladder management on chronic kidney disease patients with diabetic cystopathy." This work creates a research link to the Division of Nephrology, University of Calgary.

Dr. Stefan Van Zyl completed his first year of fellowship training in urologic oncology, and has also been active in clinical research.

Research

Members of the urology section are actively involved in research in the areas of prostate, bladder and kidney cancers and urinary incontinence. Our work includes basic science research, translational work and pharmaceutical studies.

Prostate Cancer Centre

Our Urologists are actively collaborating with a number of basic science laboratories at the University of Calgary, University of Alberta and Vanderbilt. The extensive collaborative research group is primarily investigating the checkpoints in metastasis, predicting aggressive from non-aggressive disease and immune regulation of tumors in patients with bladder, kidney and prostate cancer.

Bladder Cancer: Currently we are creating a comprehensive database linked to surgical tissue, patient bio-fluids and outcomes. This project is funded through a number of grants and is mirrored by a similar cohort of samples from Vanderbilt. We are specifically investigating how tumor cells migrate out of their primary site of origin and metastasise to other locations in the body.

Interestingly, host immune regulation is an important regulator of this process and these tissues and bio-fluids are being used to delineate the roles of immune suppressor cells in this process. Further, global metabolomics seems to be able to predict tumor burden and cancer histology. This may have important implications facilitating non-invasive early detection of bladder cancer.

Recently, this project has been linked to surgical pathways and outcomes. The goal over the next few years will be to link the basic science projects to clinical variables within Alberta Health Services. We aim to have a comprehensive database that covers the whole spectrum of a patient's progress with bladder cancer allowing clinical outcomes to be better linked to biological samples. This is an essential step to progressing toward personalized medicine.

Prostate Cancer

We have been involved in creating The Alberta Prostate Cancer Research Initiative (APCaRI), which is a province-wide collaboration focused on developing new diagnostic tests for prostate cancer. Currently, over 1900 patients are enrolled in these studies. This represents a comprehensive database and biobank which is being actively used by Urologists across the province to improve the diagnosis and prognosis of Albertans with prostate cancer. This is a world-class research collaboration encompassing numerous laboratories and clinical scientists focused on improving the outcomes of patients with prostate cancer. We are also collaborating with a number of UofC/Vanderbilt laboratories (Dr. Morris, Dr. Hollenberg, Dr. Vogel, Dr. A. Zijlstra) investigating the tumor micro-environment, immune regulation of tumors, and metabolism of cancer in these banked samples.

The PCC also is involved in investigating a novel high-resolution ultrasound device. Traditionally prostate cancer is diagnosed with random ultrasound guided biopsies. A Canadian based company has recently developed a micro-ultrasound device that may have the ability to visualise prostate cancer by ultrasound. This would allow targeted biopsies and potentially tumor surveillance without the need for biopsies. We are a lead site in this randomised trial. The next generation micro-ultrasound device will also be compared to MRI and ultimately final pathology to determine the micro-ultrasound's ability to identify cancers with and without contrast enhancement. While in the early stage the preliminary results are promising and the technology does have the potential to fundamentally shift the way we diagnose and follow prostate cancer.

Renal cell carcinoma

Kidney Cancer is often a surgical disease as chemotherapeutic treatments, while effective, are not curative. One unresolved surgical issue is that tissue can only be obtained invasively through a biopsy or surgical removal of the tumor. This, unfortunately, means that a number of patients undergo invasive procedures with benign lesions. We are actively researching a non-invasive metabolomics/metallomic biopsy to distinguish malignant from benign lesions.

Our research group is also part a Canadian wide collaborative database and bio-bank. We are leveraging our investigations outlined above in bladder cancer and determining if they are able to improve outcomes in patients with renal cell carcinoma.

Vesia [Alberta Bladder Centre]

With the collaboration of health outcomes researcher Dr. Trafford Crump (PhD), Dr. Carlson and Baverstock have been successful in securing a number of grants and awards to support their research. At vesia [Alberta Bladder Centre], the focus of research is on lower urinary tract care, access to care and patient reported outcomes.

With the recent receipt of a Movember Discovery Grant, the team will be measuring the relationship between overactive bladder symptoms and prostate cancer treatment. Additionally, the team which includes two fellows and 2 research staff, will continue to be leaders in the treatment of overactive bladder with their recent Investigator Initiated Grant titled: "Valuing health through patient reported outcomes: Developing a value set for the OAB-V8". For the 4th year in a row, their clinical fellowship has been awarded the CUA-Pfizer Incontinence Fellowship and the focus will be to create a clinical registry to measure the efficacy of botulinum toxin injection in elderly patients with overactive bladder.

To build on the unique delivery of care and to improve access to specialty care at vesia, Dr. Carlson and Baverstock were awarded a Calgary Zone Medical Affairs Quality Improvement Initiative to develop a patient-centered discharge approach for overactive

bladder. The goal of this work is to enable the successful discharge and follow up care for patients who no longer require specialist care but to ensure continued successful care with their primary team of their overactive bladder. In addition, the team at vesia has just completed recruitment for a 300 patient registry for overactive bladder. This grant winning project was initiated in 2014 and with enrollment and follow up data maturing, referral patterns, patient knowledge, validated questionnaires and outcomes of care will all be reported.

The collaborative team of Crump, Carlson and Baverstock are also reaching outside of Calgary and Alberta and have developed the CFUN (Canadian Functional Urology Network). This network will engage leaders in functional urology from across Canada on research initiatives and patient care improvements. The inaugural meeting in Vancouver was sponsored by an Alberta Innovates Health Solutions grant as well as a CUA CPD award. CFUN's first collaborative project is the publication of a position paper on pelvic floor mesh for the Canadian Urology Association. Further projects are planned in the areas of lower urinary tract care including some of the orphaned topics in urology such as recurrent urinary tract infections and neurogenic bladder.

Challenges

Our ongoing challenge in urology is manpower. Currently, we work with a population to urologist ratio of greater than 100,000:1, compared to the national average of 56,000:1. The high volume of patients requiring care paired with our small number of urologists and limited operating room space is causing wait times to increase. We have addressed this challenge in a variety of ways, including the following:

- Recruitment - We are in the process of recruiting an additional functional and reconstructive urologist, and we hope to recruit additional urologists in the coming year.
- Physician extenders – We have hired locum urologists to cover gaps in service.

- Multidisciplinary teams – We employ nurse practitioners and physician assistants to help with patient care. In addition, multidisciplinary models of care, as employed by the vesia [Alberta Bladder Centre], enhance our ability to serve more patients. Vesia provides over 10,000 additional patient visits per year, a volume that could not otherwise be met by urologists.
- Collaboration – The urology section holds an annual retreat, at which challenges and solutions are discussed. We also monitor aCATS and NSQIP data to monitor access times and areas in need of improvement.
- Dedicated work – Our team of urologists work diligently to provide timely and high quality care to patients.

Having said this, we are over-capacity and cannot meet demands for care. Significant investments in operating room access and capital expenditures to support recruitment are required to mitigate risk of safety events, patient and public concerns and service migration.

Workforce Planning

A workforce plan has been developed and submitted to the Department. Our goal for the 2016/2017 academic year is to hire a reconstructive and functional urologist and a pediatric urologist, to fill retirement openings. In addition, we plan to hire an additional endo-urologist, in response to patient volume. Site-based urology services at the South Campus would be an asset to the Zone and allow us to expand recruitment.

Quality Assurance, Quality Improvement and Innovation

The section of urology holds regular business meetings and a journal club, as well as continuing medical education, quality assurance, and multidisciplinary genito-urinary radiology and cancer rounds. ACATS waitlists and codes are reviewed and discussed and we are now able to review NSQIP data from the

Rockyview General Hospital. Based on review of early NSQIP data, we will be working on improved patient care protocols aimed at decreasing urinary tract infections.

Within the section, we have physician leads dedicated to improving quality and innovation, including:

- Quality assurance lead: Dr. Geoffrey Gotto
- Physician lead for HTA: Dr. Greg Kozak
- Physician lead, Surgical Strategic Clinical Network: Dr. Eric Hyndman
- Site lead, QI initiative to reduce UTI rates: Dr. Richard Baverstock

The section is also represented on the provincial working group to assess robotic technology.

Patient flow through emergency department.

The Section has engaged with a multidisciplinary working group to optimize referrals for renal colic through the Emergency Department. It is hoped that a new clinical algorithm will allow for successful medical management of certain renal colic presentations, thus improving access to diagnostic imaging (CT) and the operating room. This algorithm-based approach is being piloted in the ED's of select sites.

Future Directions and Initiatives

The section of urology will continue to find innovative and creative solutions to meeting the needs of our growing volume of patients. Most importantly, however, we need to recruit additional urologists.

To strengthen our research program, we have begun the process of recruiting a PhD health services researcher. The successful candidate will have a cross appointment at the O'Brien Institute of Public Health, and will have an independent research portfolio along with supporting Section members who are actively engaged in research.

Our next recruit will protect 0.2 FTE for educational activities and will be encouraged to complete the Master Teacher program.



Dr. Kevin Carlson, Urology Section Chief
Photo provided by: Dr. Carlson

Section of Vascular Surgery

During the past year, Vascular Surgery celebrated the completion of its 10-year long infrastructure and service redevelopment process. November 2015 marked the opening of our new Inpatient and Special Care (step-down) Units, in the PLC East Wing (Units 58 and 59). In January 2016, two new Hybrid ORs opened in a new area of the East Wing near the ICU, located separate from the PLC Main OR.

In July 2016, a new Ambulatory Care Centre opened, co-located with the inpatient and Special Care units, on the East Wing 5th floor. The vascular surgeons are extremely grateful to Dr. Kortbeek, Calgary Zone Executive leadership, the Ministry of Health, Alberta Infrastructure, PCL Construction and the Calgary Health Trust for their dedication to completing this very large project. Equally as important, we are grateful to PLC nursing, PLC Anesthesiologists and Respiratory Therapy and Diagnostic Imaging staff, who have worked very hard to train for the new facility and learn its complex equipment, resulting in a seamless transition from old to new.

The new vascular facility at PLC is an enormous step forward for Albertans with vascular disease. The patient care areas are designed and staffed to permit tremendous improvements to our processes of care. Patients are co-managed with advanced practice nurses, Internal Medicine (for vascular risk reduction) and the Section of Podiatric Surgery.

All of these disciplines are now co-located in the Vascular Ambulatory Centre, which is co-located (across a corridor) with the inpatient units. Patients are managed by care pathways that aim to deliver faster access, fewer trips to the hospital before and after an operation and much more comprehensive pre-surgical and surgical aftercare than vascular surgeons could ever deliver in isolation.

The Hybrid OR is a surgical suite equipped with high power, high resolution fluoroscopy and ultrasound that permit us to treat almost all aneurysmal and occlusive disease from inside a blood vessel, rather than by traditional “open” surgery.

The improved fluoroscopy permits more extensive and complex aortic reconstructions, using branched and fenestrated grafts, and more complete percutaneous peripheral interventions, from head to toe. For patients, the difference that endovascular technology makes is huge; our percentage of totally percutaneous aortic surgery now surpasses 70%, including emergency surgery for abdominal and thoracic aortic ruptures. This is a figure that we would have believed impossible a few years ago. It means that we can offer care to a population that is older and more frail than a generation ago, while preserving their independence and quality of life.

Coincident with renaissance of our facility is the addition of our newest vascular surgeon, Dr. Paul Cattle, who will bring unique talent to our Section when he joins us, later this year. Dr. Cattle is a University of Calgary Medical School alumnus, who completed his General Surgery residency in Calgary and then pursued dual-subspecialty training in Vascular Surgery at the University of Ottawa and Trauma Surgery at the University of Texas, Texas Medical Centre. He will practice combined vascular and trauma surgery, unique in being Canada’s first dually qualified surgeon in these complimentary specialties. We are pleased and excited to have him join our group!

The Section of Vascular Surgery looks forward to the coming year with enthusiasm. By 2017, we will have a group of eight surgeons trained to deliver any type of vascular surgery in a new, state-of-the-art facility. We are proud of what has been built in the nearly 20-year history of our specialty in Calgary and we feel well positioned to deliver world-class care for years to come!



Dr. Paul Petrsek, Section Chief, Vascular Surgery



Appendices

1.0 Department Structure and Organization

- 1.1 Structure and Organization
- 1.2 Department Members

2.0 Activity Reports

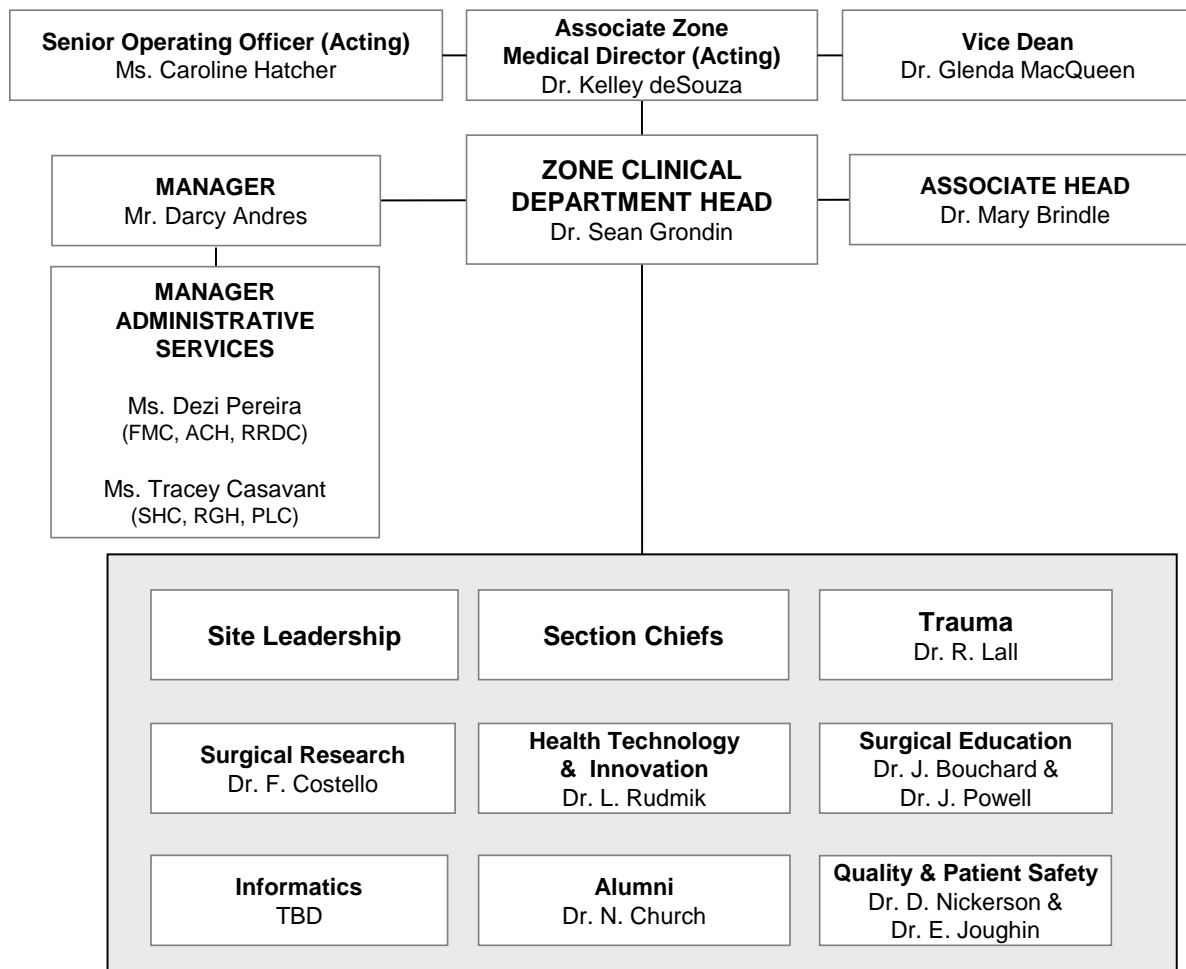
- 2.1 Surgical Activity Report
- 2.2 NHSF Surgical Indicator Report
- 2.3 Wait Time Reports by Procedure Group
- 2.4 Safety Checklist and Compliance

3.0 General Information

- 3.1 Peer-Reviewed Journal Articles
- 3.2 Research Grants

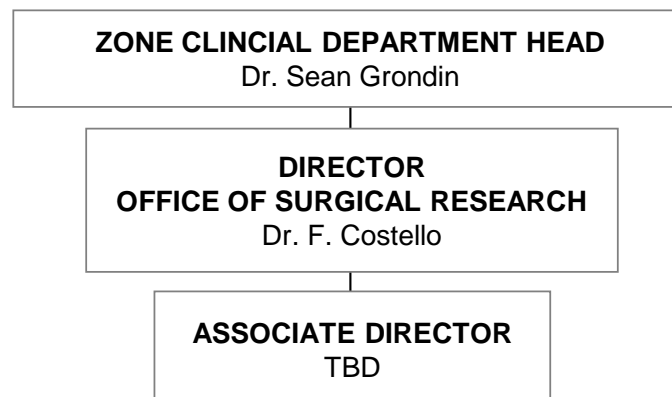
1.1 Structure and Organization

Leadership - Department of Surgery

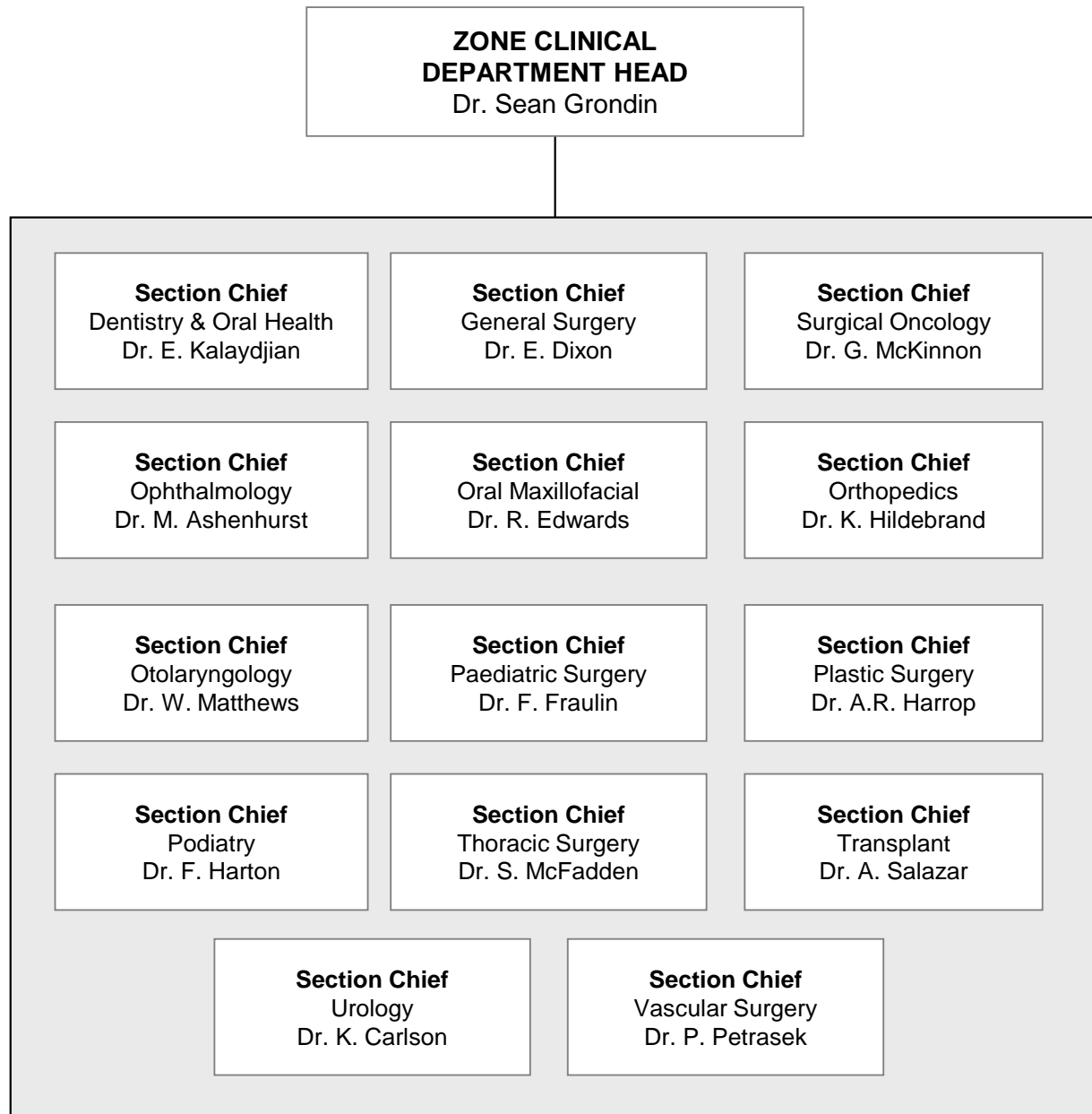


Surgical Research Department of Surgery

Surgical Research – Department of Surgery

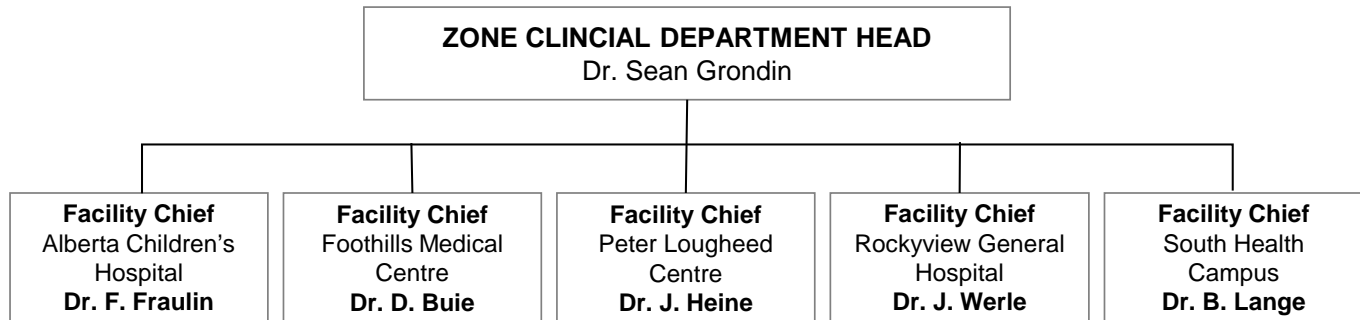


Section Chiefs Department of Surgery



Site Leadership

Department of Surgery



Alberta Children's Hospital <ul style="list-style-type: none"> • Dr. Frankie Fraulin, Facility Chief and Chair OR Committee • Dr. Kerry Carter, Chief, Anesthesia • Ms. Laura Slipp, OR Manager • Ms. Jill Woodward, Director 	Foothills Medical Centre <ul style="list-style-type: none"> • Dr. Donald Buie, Facility Chief and Chair OR Committee • Dr. Duc Ha, Chief, Anesthesia • Ms. Myrna Trotchie, OR Manager • Ms. Holly Mackin, Director
Peter Lougheed Centre <ul style="list-style-type: none"> • Dr. John Heine Facility Chief and Chair OR Committee • Dr. Bronwyn Parkinson, Chief, Anesthesia • Ms. Danielle Assad, OR Manager • Ms. Val Marsten, Director 	
Rockyview General Hospital <ul style="list-style-type: none"> • Dr. Jason Werle, Facility Chief and Chair OR Committee • Dr. Chris Sims, Chief, Anesthesia • Ms. Susan Rawding, OR Manager • Ms. Susan Reader, Director 	South Health Campus <ul style="list-style-type: none"> • Dr. Beth Lange, Facility Chief and Chair OR Committee • Dr. Farrah Morrow, Chief, Anesthesia • Ms. Lori Gervais, OR Manager • Ms. Joanne Cabrera, Director

Surgical Education Department of Surgery

Surgical Education – Department of Surgery

ZONE CLINICAL DEPARTMENT HEAD
Dr. Sean Grondin

Director
Office of Surgical Education
Dr. Jacques Bouchard

Fellowship Director
Office of Surgical Education
Dr. James Powell

Chair
Surgical Skills Foundations
Dr. J. LeBlanc

Chair
**Post Graduate Surgical
Training Committee**
Dr. Lloyd Mack

Surgical Skill Courses

**Advanced Trauma
Life Support**
Dr. M. Dunham

**Advanced Trauma
Operative Management**
Dr. R. Lall

Core Surgical Skills
Dr. A. Harvey
Dr. A. Ponton-Carss

**Advanced
Laparoscopic Skills**
Dr. T. MacLean

Microvascular Surgery
Dr. C. Schrag

Temporal Bone Lab
Dr. J. Brookes

Peripheral Nerve Course
Dr. J. Wong

Spine Course
Dr. B. Jacobs

**Orthopaedic
Trauma/Fracture Course**
TBD

Ocular Surgery Simulation
Dr. J. Bhamra and
Dr. A. Al-Ghoul

Residency Program	Program Director	Administrative Support
Colorectal Surgery	Dr. W. Donald Buie	Sabine MacKinnon
General Surgery	Dr. Indraneel Datta Dr. Artan Reso	Shannon Scherger Erin Layton
Ophthalmology	Dr. Chris Hanson	Heather Summersgill
Orthopedic Surgery	Dr. Jason Werle	Charmaine Martens Sue Miller
Otolaryngology	Dr. James Brooks	Kathleen Smith
Pediatric General Surgery	Dr. Steve Lopushinsky	Suzanne Laurin
Plastic Surgery	Dr. David McKenzie	Jessica Bartalome
General Surgical Oncology	Dr. Lloyd Mack	Judy McFadzen
Thoracic Surgery	Dr. Colin Schieman	Sabine MacKinnon
Vascular Surgery	Dr. Joyce Wong Dr. Jeff Clark	Michelle Mills

Undergraduate Medical Education

**Clerkship Evaluation
Coordinator**
Dr. A. Harvey

Education Coordinator
Ms. D. Glaser-Watson

1.2 Structure and Organization

Department Members 2015/2016

Name	Section of Dentistry and Oral Health Title/Rank	Primary Appointment
Kalaydjian, Eduardo	Section Chief & Clinical Associate Professor	
Abougoush, Joel		
Badwi (Stein), Kari		Pediatric Surgery
Barsky, Robert		Pediatric Surgery
Bell, Christine		Pediatric Surgery
Bindman, Michael		Pediatric Surgery
Brown, Duncan		
Castro, Aimee		Pediatric Surgery
Cholette, Marie-Claude		Pediatric Surgery
Chow, Kuen A.		
Dalla Lana, Eugene		
David, Dionysius		
Dyck, Willy		
Houghton, Alan		
Hulland, Sarah		Pediatric Surgery
Kemp, Darrel		
Kopec, Perry		
Krusky, J. Bradley		
Kua, Choo-Kar		Pediatric Surgery
Lakhani, Moez		
Lee, Morley		
Loeppky, Warren		Pediatric Surgery
Lovick, David		Pediatric Surgery
Lu, Ta Sen		Pediatric Surgery
Mehra, Tarun		Pediatric Surgery
Olowe, Adebayo		
Paladino, Antonietta	Clinical Lecturer	
Pilipowicz, Orest		Pediatric Surgery
Rabie, Heidi		
Saher, Farida	Clinical Lecturer	Pediatric Surgery
Schwann, Sandra		
Seto, Timothy		
Shariff, Galib		
Sheiny, Shirin		
Skaria, Sylla		
Smith, Leonard		Pediatric Surgery
Suri, Amreek (Ricky)	Clinical Lecturer	
Switzer, Samuel	Clinical Lecturer	
Tamminen, John		
Tetteh-Wayoe, Mercy		
Thal, Michelle		
Tung, Albert		
Varshney, Sheila		
Vinsky, Rory		
Wierzbicki, Tom	Clinical Lecturer	
Yates, Gregory		
Yu, Thomas	Clinical Lecturer	

Name	Section of General Surgery Title/Rank	Primary Appointment
Dixon, Elijah	Section Chief and Professor	
Anderson, Ian B.	Clinical Assistant Professor	
Armstrong, Christopher S.	Clinical Lecturer	
Armstrong, C. Paul	Clinical Lecturer	
Austen, Lea	Clinical Assistant Professor	
Ball, Chad	Clinical Assistant Professor	
Bathe, Oliver F.	Professor	
Bouchard-Fortier, Antoine	Clinical Lecturer	
Brzezinski, Wojciech	Clinical Lecturer (Medicine Hat)	
Buie, W. Donald	Professor	
Buie, William	Honorary Clinical Associate Professor	
Church, Neal G.	Clinical Assistant Professor	
Daigle, Renelle	Clinical Lecturer	
Datta, Indraneel	Clinical Assistant Professor	
Debru, Estifanos	Clinical Assistant Professor	
Dunham, Michael B.	Clinical Assistant Professor	
Gill, Richdeep	Clinical Lecturer	
Graham, John S.	Clinical Assistant Professor	
Hagerman, Neil		
Harvey, Adrian	Clinical Associate Professor	
Heine, John A.	Clinical Assistant Professor	
Hollaar, Gwendolyn	Associate Professor	
Ibbottson, Geoff	Clinical Lecturer (Grande Prairie)	
Jenken, Daryl		
Johnson, Douglas R.E.	Clinical Assistant Professor	
Kanashiro, Jeanie	Clinical Assistant Professor	
Kirkpatrick, Andrew W.	Professor	
Kortbeek, John B.	Professor	
Kwan, Michael	Clinical Lecturer	
Lafreniere, Rene	Professor	
Lall, Rohan N.	Clinical Assistant Professor	
Lopushinsky, Steven	Clinical Assistant Professor	Pediatric Surgery
Lui, Robert C.K.	Clinical Assistant Professor	
Mack, Lloyd	Assistant Professor	
MacLean, Anthony R.	Clinical Associate Professor	
Martin, Steven		
McKinnon, J. Gregory	Professor	
McBeth, Paul	Clinical Assistant Professor	
Mew, Daphne J.Y.	Clinical Assistant Professor	
Mitchell, Philip C.	Clinical Assistant Professor	
Mulloy, Robert H.	Clinical Associate Professor	
Nixon, James A.	Clinical Assistant Professor	
Pasieka, Janice	Clinical Professor	
Quan, May Lynn	Associate Professor	
Reso, Artan	Clinical Lecturer	
Rosen, Wayne S.	Clinical Assistant Professor	
Rothwell, Bruce C.	Clinical Assistant Professor	
Selman, William		
Sutherland, Francis R.	Professor	
Temple, Walley J.	Professor	
Way, Jeffrey C.E.	Clinical Assistant Professor	
Wong, Andrew L.	Clinical Associate Professor	Pediatric Surgery
Yanchar, Natalie	Clinical Associate Professor (October 2016 Start)	Pediatric Surgery

Name	Section of Ophthalmology Title/Rank	Primary Appointment
Ashenhurst, Michael E.	Section Chief & Clinical Associate Professor	
Adata, Feisal	Clinical Assistant Professor	
Al-Ghoul, Ahmed R.	Clinical Lecturer	
Anand, Jag	Clinical Lecturer	
Astle, William F.	Professor	Pediatric Surgery
Ball, Arlene E.	Clinical Lecturer	
Bhamra, Jamie	Clinical Lecturer	
Chow, Bill	Clinical Assistant Professor	
Cooper, Linda	Associate Professor	Pediatric Surgery
Crichton, Andrew C.S.	Clinical Professor	
Culver, Ronald L.	Clinical Assistant Professor	
Demong, Thaddeus T.	Clinical Lecturer	
Dotchin, Stephanie	Clinical Lecturer	Pediatric Surgery
Douglas, Gordon	Clinical Assistant Professor	
Ells, Anna	Clinical Professor	
Fielden, Michael	Clinical Assistant Professor	
Ford, Bryce	Clinical Assistant Professor	
Gibson, Peter F.	Clinical Assistant Professor	
Gimbel, Howard V.	Clinical Professor	
Goel, Nand K.	Clinical Assistant Professor	
Gohill, Jitendra	Clinical Assistant Professor	
Gooi, Patrick	Clinical Lecturer	
Gordon, Robert	Clinical Assistant Professor	
Hanson, Christopher	Clinical Lecturer	
Hill, Vivian E.	Clinical Assistant Professor	
Huang, John T.	Clinical Associate Professor	
Huang, Peter T.	Clinical Professor	
Kassab, Jacinthe	Clinical Lecturer	
Kherani, Amin	Clinical Associate Professor	
Kherani, Femida	Clinical Assistant Professor	
Kirk, Angus		
Kirker, G.E. Mervyn	Clinical Associate Professor	
Lang, Robert M.	Clinical Assistant Professor	
McWhae, John A.	Clinical Associate Professor	
Mitchell, Patrick	Clinical Assistant Professor	
Mitchell, Robert J.	Clinical Assistant Professor	
Punja, Karim	Clinical Assistant Professor	
Romanchuk, Kenneth G.	Clinical Professor	Pediatric Surgery
Savage, Paul R.G.	Clinical Assistant Professor	
Shah, Chirag	Clinical Lecturer	
Skov, Carolyn M.B.	Clinical Lecturer	Pediatric Surgery
Smith, Stanley S.	Clinical Assistant Professor	
Van Westenbrugge, John A.	Clinical Lecturer	
Verstraten, Karin L.	Clinical Assistant Professor	
Weis, Ezekiel	Clinical Assistant Professor	
Williams, R. Geoff	Clinical Associate Professor	
Wong, Jonathan	Clinical Lecturer	
Wyse, J. Patrick	Clinical Associate Professor	
Yau, Ryan	Clinical Assistant Professor	

Section of Oral & Maxillofacial Surgery		
Name	Title/Rank	Primary Appointment
Edwards, Richard	Section Chief & Clinical Assistant Professor	
Bureau, Stephen		
Cobb, Graham	Clinical Assistant Professor	
Goos, Ryan		
Habijanac, Brett		
Higashi, Shawn	Clinical Lecturer	
Kroetsch, Lorne		
Smith, Miller	Clinical Assistant Professor	
Touchan, Simon	Clinical Lecturer	
Vincelli, Douglas J.	Clinical Assistant Professor	
Young, Carl Wayne		

Section of Otolaryngology – Head and Neck Surgery		
Name	Title/Rank	Primary Appointment
Matthews, T. Wayne	Section Chief & Associate Professor	
Bosch, J. Douglas	Clinical Assistant Professor	
Brookes, James	Clinical Assistant Professor	Pediatric Surgery
Burke, Robert	Clinical Associate Professor	
Chau, Jason K.	Clinical Assistant Professor	
Chau, Justin K.	Clinical Assistant Professor	
Chandarana, Shamir	Clinical Assistant Professor	
Dautremont, Jonathan	Clinical Lecturer (August 2016 Start)	
Dort, Joseph C.	Professor	
Drummond, Derek S.	Clinical Assistant Professor	Pediatric Surgery
Gillis, Thomas M.	Clinical Assistant Professor	
Hoshowsky, Borys O.	Clinical Lecturer	
Hoy, Monica	Clinical Lecturer	
Huang, Ian T.		
Hui, Anita	Clinical Assistant Professor	
Hwang, Euna	Clinical Lecturer (August 2016 Start)	
Lange, Elizabeth J.	Clinical Associate Professor	
Marck, Paul A.	Clinical Associate Professor	
Mechor, Brad	Clinical Assistant Professor	
Park, Phillip S.	Clinical Assistant Professor	
Randall, Derrick	Clinical Lecturer (July 2016 Start)	
Rudmik, Luke	Clinical Associate Professor	
Wagner, Garth A.L.	Clinical Associate Professor	
Warshawski, S. Joseph	Clinical Assistant Professor	
Yunker, Warren	Clinical Assistant Professor	Pediatric Surgery
Zakhary, Kristina	Clinical Assistant Professor	

Name	Section of Orthopaedic Surgery Title/Rank	Primary Appointment
Hildebrand, Kevin A.	Section Chief & Professor	
Abelseth, Gregory A.	Clinical Assistant Professor	
Batuyong, Eldridge	Clinical Lecturer	
Bauman, John	Clinical Assistant Professor	
Bazant, Francis J.	Clinical Assistant Professor	
Bell, Douglas	Clinical Associate Professor	
Bering, Michael P.	Clinical Lecturer	Medicine Hat
Bois, Aaron	Clinical Lecturer	
Boorman, Richard S.	Assistant Professor	
Bouchard, Jacques A.	Clinical Professor	
Bowen, Vaughan	Clinical Professor	
Brauer, Carmen	Assistant Professor	Pediatric Surgery
Bray, Robert C.	Professor	
Buchko, Gregory		Rural Medicine
Buckley, Richard E.	Clinical Professor	
Burkart, Brian C.	Clinical Assistant Professor	
Cho, Roger K.N.	Clinical Assistant Professor	
Clark, Marcia	Clinical Associate Professor	
Cundal, Cory S.	Clinical Lecturer	
Dhaliwal, Gurpreet Singh	Clinical Lecturer	
de Souza, F. Kelley	Clinical Assistant Professor	
Dodd, Andrew	Clinical Lecturer (July 2016 Start)	
Donaghy, John J.	Clinical Assistant Professor	
Dougall, Hugh R.	Clinical Associate Professor	
Duffy, Paul J.	Clinical Assistant Professor	
Edwards, Glen E.	Clinical Professor	
Ferri de Barros, Fabio	Clinical Assistant Professor	Pediatric Surgery
French, Stephen	Clinical Assistant Professor	
Goldstein, Simon G.	Clinical Assistant Professor	Pediatric Surgery
Harder, James A.	Clinical Associate Professor	Pediatric Surgery
Hart, David A.	Professor	
Heard, S. Mark	Clinical Lecturer	Rural Medicine
Hiemstra, Laurie A.		Rural Medicine
Hiscox, Christina	Clinical Lecturer	
Hollinshead, Robert M.	Clinical Professor	
Hu, Richard W-C	Clinical Professor	
Hunt, Stephen	Clinical Lecturer	
Hutchison, Carolyn R.	Associate Professor	
Johnston, Kelly D.	Clinical Lecturer	
Joughin, V. Elaine	Clinical Assistant Professor	Pediatric Surgery
Kiefer, Gerhard N.	Clinical Associate Professor	Pediatric Surgery
Korley, Robert	Clinical Lecturer	
Kuchinad, Raul	Clinical Lecturer	
Lagrou, Lisa	Clinical Lecturer	Pediatric Surgery
Lamothe, Jeremy	Clinical Lecturer	
Le, Ian	Clinical Assistant Professor	
Leblanc, Justin	Clinical Lecturer	
Lewkonja, Peter	Clinical Assistant Professor	
Lo, Ian K.Y.	Assistant Professor	
Longino, David	Clinical Assistant Professor	
Mackenzie, James R.	Clinical Lecturer	
Martin, Ryan	Clinical Lecturer	
Miller, Stephen D.	Clinical Associate Professor	
Mohtadi, Nicholas G.H.	Clinical Professor	
Monument, Michael	Assistant Professor	
Mrkonjic, Linda A.	Clinical Assistant Professor	

Section of Orthopaedic Surgery (continued)		
Name	Title/Rank	Primary Appointment
O'Brien, Maureen	Clinical Lecturer	
Parsons, David L.	Clinical Associate Professor	Pediatric Surgery
Penner, Darrell A.	Clinical Lecturer	
Phillips, Lisa	Clinical Lecturer (January 2017 Start)	Pediatric Surgery
Powell, James N.	Clinical Professor	
Puloski, Shannon K.T.	Clinical Lecturer	
Rendall, Edward	Clinical Lecturer	
Rezansoff, Alexander	Clinical Lecturer	
Russell, Iain S.	Clinical Assistant Professor	
Sabo, Marlis	Clinical Assistant Professor	
Salo, Paul T.	Professor	
Sharma, Rajrishi	Clinical Assistant Professor	
Schachar, Norman S.	Clinical Professor	
Schneider, Prism	Clinical Assistant Professor	
Soroceanu, Alex	Clinical Assistant Professor	
Stewart, James I.	Clinical Lecturer	
Swamy, Ganesh	Clinical Assistant Professor	
Thomas, Kenneth C.	Clinical Associate Professor	
Timmermann, Scott	Clinical Assistant Professor	
Van Zuiden, Lowell J.	Clinical Assistant Professor	
Werle, Jason R.	Clinical Associate Professor	
White, Neil	Clinical Lecturer	

Name	Section of Pediatric Surgery Title/Rank	Primary Appointment
Fraulín, Frankie	Section Chief & Clinical Associate Professor	
Ashenhurst, Michael E.	Clinical Associate Professor	Ophthalmology
Astle, William F.	Professor	
Badwi (Stein), Kari		
Barr, Richard		Urology
Baverstock, Richard	Clinical Associate Professor	Urology
Beaudry, Paul	Clinical Assistant Professor	
Bell, Christine		
Bosch, J. Douglas	Clinical Assistant Professor	Otolaryngology
Brauer, Carmen	Assistant Professor	
Brindle, Mary E.	Associate Head, Surgery & Associate Professor	
Brookes, James	Clinical Assistant Professor	
Brown, Jevon	Clinical Lecturer (July 2016 Start)	Plastic Surgery
Burke, Robert	Clinical Associate Professor	Otolaryngology
Campbell, Earl A.D.	Clinical Assistant Professor	Plastic Surgery
Chahal, Vick	Clinical Lecturer	Plastic Surgery
Cholette, Marie-Claude	Clinical Assistant Professor	
Cook, Anthony J.	Clinical Assistant Professor	
Cooper, Linda	Associate Professor	
Dilay, Jocelyn E.		
Donnelly, Bryan J.	Clinical Assistant Professor	Urology
Dotchin, Stephanie	Clinical Lecturer	Ophthalmology
Drummond, Derek S.	Clinical Assistant Professor	
Dushinski, John W.	Clinical Assistant Professor	Urology
Duffy, Martin	Clinical Lecturer	Urology
Eccles, Robin C.	Clinical Assistant Professor	
Ferri de Barros, Fabio	Clinical Assistant Professor	
Frank, Ryan	Clinical Lecturer	
Ford, Bryce	Clinical Assistant Professor	Ophthalmology
Gelfand, Gary A.J.	Clinical Assistant Professor	Thoracic Surgery
Gillis, Thomas M.	Clinical Assistant Professor	Otolaryngology
Goldstein, Simon G.	Clinical Assistant Professor	
Harder, James A.	Clinical Associate Professor	
Hoshowsky, Borys O.	Clinical Lecturer	Otolaryngology
Huang, Ian T.		Otolaryngology
Hui, Anita	Clinical Assistant Professor	Otolaryngology
Harrop, A. Robertson	Clinical Associate Professor	
Hulland, Sarah		
Humphreys, Douglas		Plastic Surgery
Joughin, V. Elaine	Clinical Assistant Professor	
Kiefer, Gerhard N.	Clinical Associate Professor	
Kherani, Femida	Clinical Assistant Professor	Ophthalmology
Kirk, Angus	Clinical Associate Professor	Ophthalmology
Kirker, G.E. Mervyn	Clinical Associate Professor	Ophthalmology
Kozak, Gregory N.	Clinical Assistant Professor	Urology
Lagrou, Lisa	Clinical Lecturer (September 2016 Start)	
Lange, Elizabeth J.	Clinical Associate Professor	Otolaryngology
Lau, Henry	Clinical Lecturer	
Lee, Jay	Clinical Assistant Professor	Urology
Leong, James		Urology
Loepky, Warren		
Lopushinsky, Steven	Clinical Assistant Professor	
McKenzie, C. David	Clinical Assistant Professor	Plastic Surgery
McPhalen, Donald F.	Clinical Assistant Professor	
Mehra, Tarun		
Metcalf, Donald G.	Clinical Assistant Professor	Urology

Section of Pediatric Surgery (continued)		
Name	Title/Rank	Primary Appointment
Park, Phillip S.	Clinical Assistant Professor	Otolaryngology
Parsons, David L.	Clinical Associate Professor	
Phillips, Lisa	Clinical Lecturer (January 2017 Start)	
Pilipowicz, Orest		
Romanchuk, Kenneth G.	Clinical Professor	
Sass, Kimberly	Clinical Lecturer	
Savage, Paul R.G.	Clinical Assistant Professor	Ophthalmology
Schwann, Sandra		
Skov, Carolyn M.B.	Clinical Lecturer	
Shandro, W.G. (Bud)		Otolaryngology
Smith, Leonard		
Vinsky, Rory		
Wagner, Garth A.L.	Clinical Associate Professor	Otolaryngology
Warshawski, S. Joseph	Clinical Assistant Professor	Otolaryngology
Weber, Bryce	Clinical Assistant Professor	
Wong, Andrew L.	Clinical Associate Professor	
Yanchar, Natalie	Clinical Associate Professor (October 2016 Start)	
Yunker, Warren	Clinical Assistant Professor	

Section of Plastic Surgery		
Name	Title/Rank	Primary Appointment
Harrop, A. Robertson	Section Chief & Clinical Associate Professor	Pediatric Surgery
Beveridge, John A.	Clinical Lecturer	
Birdsell, Dale C.	Clinical Professor	
Brown, Jevon	Clinical Lecturer (July 2016 Start)	
Campbell, Earl A.D.	Clinical Assistant Professor	
Chahal, Vick	Clinical Lecturer (September 2016 Start)	
Dawes, Jeffrey	Clinical Lecturer	
De Haas, William G.	Clinical Assistant Professor	
Dilay, Jocelyn		Pediatric Surgery
Frank, Ryan	Clinical Lecturer	Pediatric Surgery
Fraulin, Frankie	Clinical Associate Professor	Pediatric Surgery
Hall-Findlay, Elizabeth		Rural Medicine
Hamilton, George D.	Clinical Assistant Professor	
Haugrud, Mark J.	Clinical Assistant Professor	
Humphreys, Douglas		
Kennedy, James	Clinical Lecturer	
Lee, Jonathan	Clinical Lecturer	
Lin, Alan	Clinical Assistant Professor	
Lindsay, Robert L.	Clinical Associate Professor	
Loiselle, Frederick	Clinical Lecturer	
Magi, Enzo	Clinical Associate Professor	
Matthews, Jennifer	Clinical Lecturer	
McKenzie, C. David	Clinical Assistant Professor	
McPhalen, Donald F.	Clinical Assistant Professor	Pediatric Surgery
Nickerson, Duncan A.	Clinical Assistant Professor	
Perron, Wayne		
Sass, Kimberly	Clinical Lecturer	Pediatric Surgery
Schrag, Christiaan	Clinical Assistant Professor	
Sinclair, Thomas M.		Rural Medicine
Sutton, Frank		
Waslen, Gregory D.	Clinical Assistant Professor	
Whidden, Paul G.R.	Clinical Lecturer	
Yau, Farrah	Clinical Lecturer	
Yeung, Justin	Clinical Lecturer	

Section of Podiatric Surgery		
Name	Title/Rank	Primary Appointment
Harton, Francois	Section Chief & Clinical Lecturer	
Bulanda, Catherine S.	Clinical Lecturer	
Feldman, Ziv S.	Clinical Lecturer	
Gurevitch, Darryl	Clinical Lecturer	
Gurevitch, Jason	Clinical Lecturer	
Haverstock, Brent D.	Clinical Assistant Professor	
Humble, R. Neal	Clinical Assistant Professor	
Lelievre, Phillip M.	Clinical Lecturer	
Manji, Karim	Clinical Lecturer	
Newsom, Russell		
Paul, Darrell		
Somer, Gregory		
Unger, Kenneth		
Zivot, Mark L.	Clinical Assistant Professor	

Section of Surgical Oncology		
Name	Title/Rank	Primary Appointment
J. Gregory McKinnon	Section Chief & Professor	
Arlette, John	Clinical Professor	
Ball, Chad	Clinical Associate Professor	General Surgery
Bathe, Oliver F.	Professor	General Surgery
Buie, W. Donald	Professor	General Surgery
Bosch, J. Douglas	Clinical Assistant Professor	Otolaryngology
Chandarana, Shamir	Clinical Assistant Professor	Otolaryngology
Datta, Indraneel	Clinical Assistant Professor	General Surgery
Dawes, Jeffrey	Clinical Lecturer	Plastic Surgery
Dort, Joseph C.	Professor	Otolaryngology
Gelfand, Gary A.J.	Clinical Assistant Professor	Thoracic Surgery
Gotto, Geoffrey	Clinical Assistant Professor	Urology
Graham, Andrew J.	Clinical Associate Professor	Thoracic Surgery
Grondin, Sean C.	Professor	Thoracic Surgery
Lafreniere, Rene	Professor	General Surgery
Lindsay, Robert L.	Clinical Associate Professor	Plastic Surgery
Mack, Lloyd	Professor	General Surgery
MacLean, Anthony R.	Clinical Associate Professor	General Surgery
Magi, Enzo	Clinical Associate Professor	Plastic Surgery
Matthews, T. Wayne	Associate Professor	Otolaryngology
McFadden, Sean	Clinical Assistant Professor	Thoracic Surgery
Mew, Daphne J.Y.	Clinical Assistant Professor	General Surgery
Pasieka, Janice	Clinical Professor	General Surgery
Quan, May Lynn	Associate Professor	General Surgery
Schachar, Norman S.	Clinical Professor	Orthopedics
Sutherland, Francis R.	Professor	General Surgery
Temple, Walley	Professor	General Surgery
Temple-Oberle, Claire	Professor	Oncology

Section of Thoracic Surgery		
Name	Title/Rank	Primary Appointment
McFadden, Sean	Section Chief & Clinical Assistant Professor	
Edwards, Janet	Clinical Assistant (July 2016 Start)	
Gelfand, Gary A.J.	Clinical Assistant Professor	
Graham, Andrew J.	Clinical Associate Professor	
Grondin, Sean C.	Professor and Department Head, Surgery	
Schieman, Colin	Clinical Associate Professor (September 2016 Start)	

Section of Transplant Surgery		
Name	Title/Rank	Primary Appointment
Salazar, Anastasio	Section Chief & Associate Professor	
Monroy, F. Mauricio	Associate Professor	
Yilmaz, Serdar	Associate Professor	

Section of Urology		
Name	Title/Rank	Primary Appointment
Carlson, Kevin	Section Chief & Clinical Associate Professor	
Barr, Richard		
Baverstock, Richard	Clinical Associate Professor	
Cook, Anthony J.	Clinical Assistant Professor	Pediatric Surgery
Crump, Trafford	Assistant Professor	
Desantis, Darren	Clinical Lecturer	
Donnelly, Bryan J.	Clinical Assistant Professor	
Duffy, Martin	Clinical Lecturer	
Dushinski, John W.	Clinical Assistant Professor	
Gotto, Geoffrey	Clinical Assistant Professor	
Hyndman, C. William	Clinical Assistant Professor	Pediatric Surgery
Hyndman, Matthew Eric	Clinical Assistant Professor	
Kawakami, Jun	Clinical Assistant Professor	
Kozak, Gregory N.	Clinical Assistant Professor	
Lee, Jay	Clinical Assistant Professor	
Leong, James		
Metcalfe, Charles	Clinical Lecturer	
Metcalfe, Donald G.	Clinical Assistant Professor	
Shields, William R.		
Weber, Bryce	Clinical Assistant Professor	Pediatric Surgery
Wilkin, R. Peter	Clinical Assistant Professor	

Section of Vascular Surgery		
Name	Title/Rank	Primary Appointment
Petrasek, Paul F.	Section Chief & Associate Professor	
Clark, Jeffrey	Clinical Lecturer	
Guimond, Marie-France	Assistant Professor	
Moore, Randy D.	Associate Professor	
Nutley, Mark	Assistant Professor	
Samis, Gregory A.	Assistant Professor	
Wong, Joyce	Clinical Assistant Professor	

Name	Non Clinical Title/Rank	Non Clinical
Krawetz, Roman	Assistant Professor	Surgery and Cell Biology & Anatomy
Thornton, Gail M.	Associate Professor	Civil Engineering

Name	Joint Appointments Title/Rank	Joint Appointments
Appoo, Jehangir	Clinical Assistant Professor	Cardiac Sciences
Bayes, Alexander J.	Clinical Associate Professor	Cardiac Sciences
Biernaskie, Jeffrey A.	Assistant Professor	Veterinary Medicine
Bech-Hansen, N. Torben	Professor	Medical Genetics
Burgess, John J.	Clinical Associate Professor	Cardiac Sciences
Casha, Steven	Assistant Professor	Clinical Neurosciences
Clark, Andrea	Assistant Professor	Kinesiology
Costello, Fiona	Clinical Assistant Professor	Clinical Neurosciences
Dobson, Gary M.	Associate Professor	Anaesthesia
Duplessis, Stephan J.	Clinical Assistant Professor	Clinical Neurosciences
Fedak, Paul W. M.	Assistant Professor	Cardiac Sciences
Fletcher, William A.	Professor	Clinical Neurosciences
Gabriel, Vincent	Clinical Assistant Professor	Clinical Neurosciences
Gregg, Sean	Clinical Lecturer (Red Deer)	General Surgery
Hamilton, Mark	Associate Professor	Clinical Neurosciences
Hayry, Pekka	Clinical Professor	Pathology and Laboratory Medicine
Hurlbert, R. John	Associate Professor	Clinical Neurosciences
Kidd, William T.	Clinical Assistant Professor	Cardiac Sciences
Jena, Debakanta	Clinical Assistant Professor	Family Medicine
Kurwa, Habib	Clinical Associate Professor	Medicine/Oncology
Lysack, John	Clinical Associate Professor	Radiology/Clinical Neurosciences
MacEachern, Paul R.	Clinical Assistant Professor	Medicine/Oncology
McColl, Ryan	Clinical Lecturer (Lethbridge)	General Surgery
Maitland, Andrew	Associate Professor	Cardiac Sciences
Muldrew, Kenneth B.	Assistant Professor	Cell Biology & Anatomy
Oddone Paolucci, Elizabeth	Associate Professor	Department of Surgery
Prieur (Kieser), Teresa M.	Associate Professor	Cardiac Sciences
Rothschild, John	Clinical Associate Professor	Cardiac Sciences
Stell, William K.	Professor	Cell Biology & Anatomy
Subramaniam, Suresh	Clinical Assistant Professor	Clinical Neurosciences

Name	Adjunct Appointments Title/Rank	
Bultz, Barry D.	Adjunct Professor	Surgery, Oncology & Psychiatry
Duncan, Neil A.	Adjunct Associate Professor	Department of Surgery
Herzog, Walter	Adjunct Associate Professor	Department of Surgery
McGann, Locksley E.	Adjunct Professor	Department of Surgery
Nigg, Benno M.	Adjunct Professor	Department of Surgery
Plaas, Anna H.K.	Adjunct Associate Professor	Department of Surgery
Ponton-Carss, Alicia	Adjunct Assistant Professor	Department of Surgery
Poulin, Paule	Adjunct Assistant Professor	Cell Biology & Anatomy and Surgery
Rangayyan, Rangaraj M.	Adjunct Professor	Radiology and Surgery
Shrive, Nigel G.	Adjunct Professor	Department of Surgery
Sigalet, David L.	Adjunct Professor	Department of Surgery
Wishart, Paul M.	Adjunct Assistant Professor	Department of Surgery
Zernicke, Ronald F.	Adjunct Professor	Surgery/Physiology & Pharmacology

2.1 Surgical Activity Reports

Surgical Statistical Activity by Service

All Hospitals (FMC, RGH, PLC, ACH, SHC)

Total Activity Cases



Calgary Zone
Surgical Statistical Activity by Service
Zone/Site: Calgary

as of: Mar 2016

Current Year Activity 2015-2016																						
																					%	
Service	12/13	13/14	14/15	Apr	May	Jun	Q1	Jul	Aug	Sep	Q2	Oct	Nov	Dec	Q3	Jan	Feb	Mar	Q4	YTD	change	Variance
*	305	152	152	2	12	13	27	13	17	6	36	2	2	2	6	13	0	1	14	83	-0.45	-69
ANA	27	48	40	4	1	8	13	2	0	1	3	4	0	0	4	1	1	3	5	25	-0.38	-15
CAR	1360	1336	1228	103	114	102	319	107	91	108	306	138	110	108	356	99	77	92	268	1249	0.02	21
COH	1086	1158	1303	119	117	131	367	90	72	120	282	123	123	119	365	127	160	157	444	1458	0.12	155
DEN	794	731	727	47	60	69	176	36	32	51	119	69	61	51	181	49	58	52	159	635	-0.13	-92
ENT	6094	6222	6475	617	584	656	1857	381	354	578	1313	586	555	388	1529	573	530	577	1680	6464	0.00	-11
GEN	13723	14914	15062	1343	1290	1372	4005	1128	1127	1271	3526	1387	1371	1005	3763	1330	1288	1392	4010	15555	0.03	493
GI	607	611	662	67	68	78	213	51	51	72	174	76	63	54	193	77	68	86	231	811	0.23	149
GYN	9181	10032	10979	949	984	1005	2938	765	761	1004	2530	967	934	714	2615	936	933	934	2803	11009	0.00	30
MED	59	57	43	1	7	3	11	1	2	4	7	1	5	5	11	2	3	4	9	38	-0.12	-5
NEU	1919	1979	2106	182	170	185	537	150	132	178	460	191	180	158	529	162	174	197	533	2062	-0.02	-44
OPH	2490	2746	2877	268	238	254	760	212	176	295	683	296	256	236	788	263	261	279	803	3034	0.05	157
ORA	411	432	486	58	49	51	158	45	35	53	133	46	37	31	114	44	38	39	121	527	0.08	41
ORT	13741	15036	16114	1415	1426	1470	4311	1240	1111	1442	3793	1450	1400	976	3826	1454	1432	1549	4435	16698	0.04	584
PLS	3223	3638	3821	321	313	326	960	259	266	335	860	339	288	230	857	287	289	328	904	3617	-0.05	-204
POD	276	267	229	9	14	16	39	15	15	10	40	26	17	12	55	15	23	15	53	187	-0.18	-42
PSY	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	-13
RAD	549	550	574	44	59	38	141	73	62	56	191	57	45	40	142	68	52	61	181	655	0.14	81
RES	97	104	84	10	8	12	30	7	11	5	23	6	6	8	20	8	5	3	16	89	0.06	5
THO	552	536	548	47	32	51	130	46	33	45	124	41	52	35	128	47	42	53	142	524	-0.04	-24
TRN	492	525	524	37	40	47	124	45	31	36	112	24	44	27	95	30	35	40	105	436	-0.17	-88
URO	7455	8022	8173	758	724	750	2232	606	585	775	1966	812	755	729	2296	694	756	774	2224	8718	0.07	545
VAS	951	907	929	76	87	83	246	69	50	72	191	75	65	70	210	80	79	87	246	893	-0.04	-36
Total	65392	70003	73149	6477	6397	6720	19594	5341	5014	6517	16872	6716	6369	4998	18083	6359	6304	6723	19386	74767		

2.1 Surgical Activity Reports

Surgical Statistical Activity by Service

All Hospitals (FMC, RGH, PLC, ACH, SHC)

Total Activity Cases by Hours



Calgary Zone
Surgical Statistical Activity by Service
Zone/Site: Calgary

as of: Mar 2016

Current Year Hours 2015-2016																						
Service	12/13	13/14	14/15	Apr	May	Jun	Q1	Jul	Aug	Sep	Q2	Oct	Nov	Dec	Q3	Jan	Feb	Mar	Q4	YTD	change	Var
*	289	124	123	0	9	8	18	10	16	8	34	0	0	0	0	9	0	0	9	62	-0.49	-60.80
ANA	29	56	40	3	1	8	12	2	0	1	3	2	0	0	2	1	1	1	4	23	-0.41	-16.38
CAR	2380	2312	2019	206	199	197	602	203	160	182	545	241	199	201	641	204	162	192	559	2350	0.16	330.78
COH	5266	5594	6066	538	528	575	1642	425	354	541	1321	529	577	513	1620	582	608	659	1850	6436	0.06	369.94
DEN	1161	1191	1217	71	95	116	282	59	45	88	192	112	106	93	311	82	88	90	261	1049	-0.14	-168.56
ENT	6586	6925	7010	661	607	690	1957	437	447	636	1521	545	612	518	1676	603	620	639	1862	7018	0.00	8.09
GEN	24285	25478	26063	2295	2226	2262	6784	2062	2049	2257	6368	2451	2441	2164	7056	2373	2227	2383	6984	27194	0.04	1130.91
GI	498	503	547	51	46	64	162	45	34	70	149	60	58	47	166	57	55	63	174	654	0.19	106.64
GYN	10630	12154	14010	1211	1221	1292	3725	986	961	1278	3225	1307	1213	1075	3596	1186	1189	1246	3622	14170	0.01	159.86
MED	55	49	44	0	7	3	10	1	2	2	6	1	5	7	14	1	4	3	9	40	-0.09	-3.93
NEU	7110	7194	7570	687	666	663	2016	492	465	710	1668	683	714	598	1996	642	670	688	2000	7683	0.01	112.52
OPH	3128	3199	3300	291	273	291	856	244	216	325	785	332	275	273	881	309	304	303	916	3441	0.04	141.56
ORA	1001	946	1120	104	129	117	351	119	68	120	308	104	84	77	266	94	73	99	266	1193	0.07	73.08
ORT	26757	29487	31377	2829	2893	2847	8569	2384	2265	2834	7484	2835	2709	2544	8089	2849	2742	2979	8571	32715	0.04	1338.27
PLS	6844	8004	8164	702	627	720	2049	586	551	713	1850	748	614	564	1926	621	637	721	1980	7807	-0.04	-356.10
POD	368	375	312	15	15	22	52	21	18	19	58	36	18	19	74	20	31	28	78	266	-0.15	-45.70
PSY	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	-4.77
RAD	495	477	492	32	51	35	119	59	47	42	149	52	45	34	132	57	52	69	177	579	0.18	87.76
RES	211	221	134	12	11	19	43	14	15	9	39	13	10	15	38	13	12	4	28	150	0.12	16.07
THO	1712	1618	1701	155	104	162	421	140	119	145	405	136	153	116	406	140	128	152	421	1655	-0.03	-45.94
TRN	1013	996	1033	72	76	122	269	95	64	85	244	56	63	82	201	83	89	85	257	975	-0.06	-58.57
URO	7586	8004	8242	742	730	734	2207	614	583	797	1995	805	738	763	2306	756	767	786	2309	8820	0.07	577.56
VAS	2977	2948	3170	269	286	253	808	249	182	214	645	233	206	206	646	287	271	247	805	2907	-0.08	-262.45
Total	110382	117855	123757	10949	10804	11201	32954	9252	8663	11077	28993	11286	10845	9911	32042	10973	10732	11437	33142	127186		

Surgical Statistical Activity by Admit Type

All Hospitals (FMC, RGH, PLC, ACH, SHC)



Calgary Zone
Surgical Statistical Activity by Admit Type
Zone/Site: Calgary

as of: Mar 2016

Srv	Admit Type	12/13	13/14	14/15	Apr	May	Jun	Q1	Jul	Aug	Sep	Q2	Oct	Nov	Dec	Q3	Jan	Feb	Mar	Q4	YTD	% change
Current Year Activity 2015-2016																						
*	Elective	207	85	100	0	10	8	18	9	12	4	25	1	0	2	3	0	0	1	1	47	-53.00
	Emergency	12	19	14	1	0	0	1	1	2	0	3	1	0	0	1	12	0	0	12	17	21.43
	Urgent	86	48	38	1	2	5	8	3	3	2	8	0	2	0	2	1	0	0	1	19	-50.00
	Total	305	152	152	2	12	13	27	13	17	6	36	2	2	2	6	13	0	1	14	83	
ANA	Elective	3	1	1	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2	100.00
	Emergency	23	37	37	2	1	7	10	2	0	1	3	4	0	0	4	1	1	3	5	22	-40.54
	Urgent	1	10	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	-50.00
	Total	27	48	40	4	1	8	13	2	0	1	3	4	0	0	4	1	1	3	5	25	
CAR	Elective	729	682	626	45	58	48	151	37	32	57	126	67	58	43	168	47	39	50	136	581	-7.19
	Emergency	158	166	132	11	9	11	31	18	13	11	42	22	10	10	42	14	10	11	35	150	13.64
	Urgent	473	488	470	47	47	43	137	52	46	40	138	49	42	55	146	38	28	31	97	518	10.21
	Total	1360	1336	1228	103	114	102	319	107	91	108	306	138	110	108	356	99	77	92	268	1249	
COH	**	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0.00
	Elective	32	11	28	3	4	5	12	2	4	6	12	2	3	3	8	5	24	12	41	73	160.71
	Emergency	234	273	232	15	31	20	66	20	11	24	55	18	25	30	73	22	25	26	73	267	15.09
	Urgent	820	874	1042	101	82	106	289	68	57	90	215	103	95	86	284	100	110	119	329	1117	7.20
	Total	1086	1158	1303	119	117	131	367	90	72	120	282	123	123	119	365	127	160	157	444	1458	
DEN	Elective	749	686	670	45	55	67	167	32	30	49	111	66	56	49	171	49	58	47	154	603	-10.00
	Emergency	16	14	13	1	0	1	2	2	1	1	4	0	1	1	2	0	0	3	3	11	-15.38
	Urgent	29	31	44	1	5	1	7	2	1	1	4	3	4	1	8	0	0	2	2	21	-52.27
	Total	794	731	727	47	60	69	176	36	32	51	119	69	61	51	181	49	58	52	159	635	
ENT	**	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.00
	Elective	5258	5357	5650	553	517	583	1653	323	300	518	1141	531	511	402	1444	521	451	493	1465	5703	0.94
	Emergency	318	342	372	37	28	42	107	24	23	26	73	24	18	37	79	21	31	30	82	341	-8.33
	Urgent	518	522	453	27	39	31	97	34	31	34	99	31	26	34	91	31	48	53	132	419	-7.51
Total	6094	6222	6475	617	584	656	1857	381	354	578	1313	586	555	473	1614	573	530	577	1680	6464		
GEN	**	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
	Elective	5408	6068	6099	597	540	613	1750	381	385	513	1279	621	608	514	1743	583	558	604	1745	6517	6.85
	Emergency	4414	4799	5015	416	422	413	1251	430	436	439	1305	426	404	400	1230	412	390	430	1232	5018	0.06

Surgical Statistical Activity by Admit Type

All Hospitals (FMC, RGH, PLC, ACH, SHC)

Continued



Calgary Zone Surgical Statistical Activity by Admit Type

as of: Mar 2016

Zone/Site: Calgary

Srv	Admit Type	12/13	13/14	14/15	Apr	May	Jun	Q1	Jul	Aug	Sep	Q2	Oct	Nov	Dec	Q3	Jan	Feb	Mar	Q4	YTD	% change
GEN	Urgent	3901	4047	3947	330	328	346	1004	317	306	319	942	340	359	342	1041	335	340	358	1033	4020	1.85
	Total	13723	14914	15062	1343	1290	1372	4005	1128	1127	1271	3526	1387	1371	1256	4014	1330	1288	1392	4010	15555	
GI	Elective	485	496	529	54	56	55	165	35	34	58	127	64	52	40	156	63	54	73	190	638	20.60
	Emergency	74	87	104	6	8	19	33	10	11	11	32	10	9	8	27	9	11	11	31	123	18.27
	Urgent	48	28	29	7	4	4	15	6	6	3	15	2	2	6	10	5	3	2	10	50	72.41
	Total	607	611	662	67	68	78	213	51	51	72	174	76	63	54	193	77	68	86	231	811	
GYN	**	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
	Elective	6520	6898	7591	706	693	737	2136	533	481	741	1755	700	678	544	1922	675	699	688	2062	7875	3.74
	Emergency	1331	1801	2111	149	194	164	507	157	194	166	517	184	168	201	553	191	147	160	498	2075	-1.71
	Urgent	1329	1333	1276	94	97	104	295	75	86	97	258	83	88	92	263	70	87	86	243	1059	-17.01
	Total	9181	10032	10979	949	984	1005	2938	765	761	1004	2530	967	934	837	2738	936	933	934	2803	11009	
MED	Elective	24	14	12	1	2	1	4	1	1	1	3	1	2	2	5	1	0	2	3	15	25.00
	Emergency	13	21	18	0	3	2	5	0	0	0	0	0	2	2	4	0	2	1	3	12	-33.33
	Urgent	22	22	13	0	2	0	2	0	1	3	4	0	1	1	2	1	1	1	3	11	-15.38
	Total	59	57	43	1	7	3	11	1	2	4	7	1	5	5	11	2	3	4	9	38	
NEU	**	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
	Elective	852	798	985	102	84	90	276	63	54	85	202	89	92	88	269	75	101	101	277	1024	3.96
	Emergency	416	392	508	38	36	38	112	40	43	45	128	56	46	31	133	33	37	46	116	489	-3.74
	Urgent	649	787	613	42	50	57	149	47	35	48	130	46	42	42	130	54	36	50	140	549	-10.44
	Total	1919	1979	2106	182	170	185	537	150	132	178	460	191	180	161	532	162	174	197	533	2062	
OPH	Elective	1387	1480	1647	167	142	146	455	104	88	186	378	168	162	128	458	164	142	174	480	1771	7.53
	Emergency	518	616	721	55	58	65	178	65	67	67	199	74	65	68	207	61	62	52	175	759	5.27
	Urgent	585	650	509	46	38	43	127	43	21	42	106	54	29	40	123	38	57	53	148	504	-0.98
	Total	2490	2746	2877	268	238	254	760	212	176	295	683	296	256	236	788	263	261	279	803	3034	
ORA	Elective	323	358	394	51	41	41	133	32	22	43	97	40	31	31	102	40	32	34	106	438	11.17
	Emergency	30	25	29	4	3	3	10	4	5	6	15	2	3	1	6	0	2	3	5	36	24.14
	Urgent	58	49	63	3	5	7	15	9	8	4	21	4	3	0	7	4	4	2	10	53	-15.87
	Total	411	432	486	58	49	51	158	45	35	53	133	46	37	32	115	44	38	39	121	527	
ORT	**	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0.00
	Elective	8485	9247	10003	930	872	948	2750	620	595	937	2152	993	930	796	2719	901	893	1008	2802	10423	4.20

Surgical Statistical Activity by Admit Type

All Hospitals (FMC, RGH, PLC, ACH, SHC)

Continued



Calgary Zone
Surgical Statistical Activity by Admit Type
Zone/Site: Calgary

as of: Mar 2016

Srv	Admit Type	12/13	13/14	14/15	Apr	May	Jun	Q1	Jul	Aug	Sep	Q2	Oct	Nov	Dec	Q3	Jan	Feb	Mar	Q4	YTD	% change
ORT	Emergency	2237	2528	2753	207	257	239	703	314	256	229	799	206	239	247	692	261	253	244	758	2952	7.23
	Urgent	3018	3260	3358	278	297	283	858	306	260	276	842	251	231	266	748	292	285	297	874	3322	-1.07
	Total	13741	15036	16114	1415	1426	1470	4311	1240	1111	1442	3793	1450	1400	1309	4159	1454	1432	1549	4435	16698	
PLS	Elective	2202	2493	2512	234	208	214	656	156	155	233	544	238	216	182	636	211	217	239	667	2503	-0.36
	Emergency	426	466	566	31	50	47	128	53	69	50	172	40	28	39	107	31	32	35	98	505	-10.78
	Urgent	595	679	743	56	55	65	176	50	42	52	144	61	44	45	150	45	40	54	139	609	-18.03
	Total	3223	3638	3821	321	313	326	960	259	266	335	860	339	288	266	893	287	289	328	904	3617	
POD	**	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0.00
	Elective	157	169	146	4	10	7	21	11	11	6	28	15	14	5	34	12	9	9	30	113	-22.60
	Emergency	30	24	23	0	0	2	2	0	0	0	0	3	1	3	7	1	1	1	3	12	-47.83
	Urgent	89	74	60	5	4	7	16	3	4	4	11	8	2	4	14	2	13	5	20	61	1.67
PSY	Total	276	267	229	9	14	16	39	15	15	10	40	26	17	12	55	15	23	15	53	187	
	Elective	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
	Emergency	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
	Urgent	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
RAD	Total	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	**	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3	3	0.00
	Elective	143	188	174	14	19	11	44	18	21	22	61	15	13	3	31	20	14	18	52	188	8.05
	Emergency	379	313	371	27	40	27	94	53	40	31	124	38	32	37	107	47	37	41	125	450	21.29
RES	Urgent	27	48	29	3	0	0	3	2	1	3	6	4	0	0	4	0	1	0	1	14	-51.72
	Total	549	550	574	44	59	38	141	73	62	56	191	57	45	40	142	68	52	61	181	655	
	Elective	18	22	27	3	2	2	7	0	2	0	2	2	1	0	3	3	2	2	7	19	-29.63
	Emergency	29	33	18	2	3	3	8	5	7	1	13	2	2	2	6	4	0	1	5	32	77.78
THO	Urgent	50	49	39	5	3	7	15	2	2	4	8	2	3	6	11	1	3	0	4	38	-2.56
	Total	97	104	84	10	8	12	30	7	11	5	23	6	6	8	20	8	5	3	16	89	
	Elective	30	15	15	1	1	2	4	1	3	4	8	3	1	2	6	1	1	0	2	20	33.33
	Emergency	23	31	20	1	4	2	7	5	3	2	10	0	2	2	4	2	2	2	6	27	35.00
TRN	Urgent	499	490	513	45	27	47	119	40	27	39	106	38	49	31	118	44	39	51	134	477	-7.02
	Total	552	536	548	47	32	51	130	46	33	45	124	41	52	35	128	47	42	53	142	524	
	Elective	344	389	395	34	32	25	91	31	19	23	73	18	29	15	62	21	25	28	74	300	-24.05

Surgical Statistical Activity by Admit Type

All Hospitals (FMC, RGH, PLC, ACH, SHC)

Continued



Calgary Zone
Surgical Statistical Activity by Admit Type
Zone/Site: Calgary

as of: Mar 2016

Srv	Admit Type	12/13	13/14	14/15	Apr	May	Jun	Q1	Jul	Aug	Sep	Q2	Oct	Nov	Dec	Q3	Jan	Feb	Mar	Q4	YTD	% change
TRN	Emergency	90	108	94	2	7	20	29	12	12	11	35	5	11	12	28	7	10	6	23	115	22.34
	Urgent	58	28	35	1	1	2	4	2	0	2	4	1	4	0	5	2	0	6	8	21	-40.00
	Total	492	525	524	37	40	47	124	45	31	36	112	24	44	27	95	30	35	40	105	436	
URO	**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
	Elective	3471	3670	3681	410	355	385	1150	264	253	403	920	431	343	319	1093	322	380	345	1047	4210	14.37
	Emergency	2621	2894	3000	239	253	228	720	230	250	252	732	265	286	271	822	248	248	277	773	3047	1.57
	Urgent	1362	1458	1492	109	116	137	362	112	82	120	314	116	126	139	381	124	128	152	404	1461	-2.08
	Total	7455	8022	8173	758	724	750	2232	606	585	775	1966	812	755	729	2296	694	756	774	2224	8718	
VAS	**	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
	Elective	405	395	370	32	42	41	115	15	17	37	69	33	27	29	89	34	35	35	104	377	1.89
	Emergency	203	170	184	9	14	10	33	14	11	7	32	14	8	11	33	12	11	15	38	136	-26.09
	Urgent	343	342	374	35	31	32	98	40	22	28	90	28	30	30	88	34	33	37	104	380	1.60
	Total	951	907	929	76	87	83	246	69	50	72	191	75	65	70	210	80	79	87	246	893	
**		5	5	4	0	0	0	0	1	0	0	1	0	0	0	0	1	2	3	6	7	
Elective		37232	39522	41663	3987	3743	4030	11760	2668	2519	3926	9113	4098	3827	3197	11122	3748	3734	3963	11445	43440	
Emergency		13595	15159	16336	1253	1421	1363	4037	1459	1454	1380	4293	1394	1360	1413	4167	1389	1312	1398	4099	16596	
Urgent		14560	15317	15146	1237	1233	1327	3797	1213	1041	1211	3465	1224	1182	1220	3626	1221	1256	1359	3836	14724	
Summary		65392	70003	73149	6477	6397	6720	19594	5341	5014	6517	16872	6716	6369	5830	18915	6359	6304	6723	19386	74767	

Surgical Statistical Activity by Patient Type

All Hospitals (FMC, RGH, PLC, ACH, SHC)



Calgary Zone Surgical Statistical Activity by Patient Type

as of: Mar 2016

Zone/Site: Calgary

Srv	Patient Type	12/13	13/14	14/15	Apr	May	Jun	Q1	Jul	Aug	Sep	Q2	Oct	Nov	Dec	Q3	Jan	Feb	Mar	Q4	YTD
Current Year Activity 2015-2016																					
*	InPatient	109	94	88	2	6	11	19	5	10	3	18	1	2	0	3	13	0	0	13	53
	OutPatient	196	58	64	0	6	2	8	8	7	3	18	1	0	2	3	0	0	1	1	30
	Subtotal	305	152	152	2	12	13	27	13	17	6	36	2	2	2	6	13	0	1	14	83
ANA	InPatient	24	45	39	3	1	7	11	2	0	1	3	4	0	0	4	1	1	3	5	23
	OutPatient	3	3	1	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
	Subtotal	27	48	40	4	1	8	13	2	0	1	3	4	0	0	4	1	1	3	5	25
CAR	InPatient	877	869	848	85	78	73	236	91	73	70	234	99	64	80	243	63	54	68	185	898
	OutPatient	483	467	380	18	36	29	83	16	18	38	72	39	46	28	113	36	23	24	83	351
	Subtotal	1360	1336	1228	103	114	102	319	107	91	108	306	138	110	108	356	99	77	92	268	1249
COH	InPatient	1085	1150	1300	119	117	131	367	90	72	120	282	121	123	118	362	123	143	149	415	1426
	OutPatient	1	8	3	0	0	0	0	0	0	0	0	2	0	1	3	4	17	8	29	32
	Subtotal	1086	1158	1303	119	117	131	367	90	72	120	282	123	123	119	365	127	160	157	444	1458
DEN	InPatient	51	58	54	6	2	6	14	8	2	3	13	5	4	5	14	4	2	3	9	50
	OutPatient	743	673	673	41	58	63	162	28	30	48	106	64	57	46	167	45	56	49	150	585
	Subtotal	794	731	727	47	60	69	176	36	32	51	119	69	61	51	181	49	58	52	159	635
ENT	InPatient	1410	1372	1531	147	147	151	445	99	103	146	348	120	145	122	387	132	130	132	394	1574
	OutPatient	4684	4850	4944	470	437	505	1412	282	251	432	965	466	410	351	1227	441	400	445	1286	4890
	Subtotal	6094	6222	6475	617	584	656	1857	381	354	578	1313	586	555	473	1614	573	530	577	1680	6464
GEN	InPatient	8884	9190	9509	807	792	820	2419	766	767	807	2340	825	805	757	2387	826	778	830	2434	9580
	OutPatient	4839	5724	5553	536	498	552	1586	362	360	464	1186	562	566	499	1627	504	510	562	1576	5975
	Subtotal	13723	14914	15062	1343	1290	1372	4005	1128	1127	1271	3526	1387	1371	1256	4014	1330	1288	1392	4010	15555
GI	InPatient	102	108	139	11	13	22	46	11	13	16	40	14	14	11	39	11	14	12	37	162
	OutPatient	505	503	523	56	55	56	167	40	38	56	134	62	49	43	154	66	54	74	194	649
	Subtotal	607	611	662	67	68	78	213	51	51	72	174	76	63	54	193	77	68	86	231	811
GYN	InPatient	4371	5203	5776	453	509	487	1449	404	422	489	1315	495	486	469	1450	488	449	457	1394	5608
	OutPatient	4810	4829	5203	496	475	518	1489	361	339	515	1215	472	448	368	1288	448	484	477	1409	5401
	Subtotal	9181	10032	10979	949	984	1005	2938	765	761	1004	2530	967	934	837	2738	936	933	934	2803	11009
MED	InPatient	18	30	26	0	5	3	8	0	1	2	3	1	2	3	6	1	2	2	5	22
	OutPatient	41	27	17	1	2	0	3	1	1	2	4	0	3	2	5	1	1	2	4	16

Surgical Statistical Activity by Patient Type

All Hospitals (FMC, RGH, PLC, ACH, SHC)

Continued



Calgary Zone Surgical Statistical Activity by Patient Type

as of: Mar 2016

Zone/Site: Calgary

Srv	Patient Type	12/13	13/14	14/15	Apr	May	Jun	Q1	Jul	Aug	Sep	Q2	Oct	Nov	Dec	Q3	Jan	Feb	Mar	Q4	YTD
	Subtotal	59	57	43	1	7	3	11	1	2	4	7	1	5	5	11	2	3	4	9	38
NEU	InPatient	1704	1779	1878	167	156	167	490	141	113	158	412	179	163	141	483	151	156	179	486	1871
	OutPatient	215	200	228	15	14	18	47	9	19	20	48	12	17	20	49	11	18	18	47	191
	Subtotal	1919	1979	2106	182	170	185	537	150	132	178	460	191	180	161	532	162	174	197	533	2062
OPH	InPatient	595	682	785	57	64	68	189	68	70	72	210	85	71	76	232	64	71	58	193	824
	OutPatient	1895	2064	2092	211	174	186	571	144	106	223	473	211	185	160	556	199	190	221	610	2210
	Subtotal	2490	2746	2877	268	238	254	760	212	176	295	683	296	256	236	788	263	261	279	803	3034
ORA	InPatient	327	301	349	35	39	36	110	35	26	42	103	28	29	22	79	24	18	27	69	361
	OutPatient	84	131	137	23	10	15	48	10	9	11	30	18	8	10	36	20	20	12	52	166
	Subtotal	411	432	486	58	49	51	158	45	35	53	133	46	37	32	115	44	38	39	121	527
ORT	InPatient	10170	10987	11465	988	1,029	1,050	3067	937	794	1020	2751	1014	958	908	2880	1056	1015	1058	3129	11827
	OutPatient	3571	4049	4649	427	397	420	1244	303	317	422	1042	436	442	401	1279	398	417	491	1306	4871
	Subtotal	13741	15036	16114	1415	1426	1470	4311	1240	1111	1442	3793	1450	1400	1309	4159	1454	1432	1549	4435	16698
PLS	InPatient	1627	1740	1857	152	149	169	470	145	155	164	464	152	120	123	395	123	128	138	389	1718
	OutPatient	1596	1898	1964	169	164	157	490	114	111	171	396	187	168	143	498	164	161	190	515	1899
	Subtotal	3223	3638	3821	321	313	326	960	259	266	335	860	339	288	266	893	287	289	328	904	3617
POD	InPatient	182	156	133	7	3	14	24	5	7	9	21	16	8	7	31	5	11	10	26	102
	OutPatient	94	111	96	2	11	2	15	10	8	1	19	10	9	5	24	10	12	5	27	85
	Subtotal	276	267	229	9	14	16	39	15	15	10	40	26	17	12	55	15	23	15	53	187
PSY	InPatient	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Subtotal	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAD	InPatient	440	386	429	28	48	28	104	62	45	37	144	43	37	38	118	52	41	46	139	505
	OutPatient	109	164	145	16	11	10	37	11	17	19	47	14	8	2	24	16	11	15	42	150
	Subtotal	549	550	574	44	59	38	141	73	62	56	191	57	45	40	142	68	52	61	181	655
RES	InPatient	78	81	55	7	7	9	23	7	8	2	17	4	6	7	17	7	2	3	12	69
	OutPatient	19	23	29	3	1	3	7	0	3	3	6	2	0	1	3	1	3	0	4	20
	Subtotal	97	104	84	10	8	12	30	7	11	5	23	6	6	8	20	8	5	3	16	89
THO	InPatient	486	482	511	42	31	45	118	42	30	39	111	40	47	31	118	44	37	51	132	479
	OutPatient	66	54	37	5	1	6	12	4	3	6	13	1	5	4	10	3	5	2	10	45
	Subtotal	552	536	548	47	32	51	130	46	33	45	124	41	52	35	128	47	42	53	142	524
TRN	InPatient	209	221	195	10	14	28	52	21	16	21	58	12	14	20	46	18	17	23	58	214

Surgical Statistical Activity by PatientType

All Hospitals (FMC, RGH, PLC, ACH, SHC)

Continued



Calgary Zone Surgical Statistical Activity by Patient Type

as of: Mar 2016

Zone/Site: Calgary

Srv	Patient Type	12/13	13/14	14/15	Apr	May	Jun	Q1	Jul	Aug	Sep	Q2	Oct	Nov	Dec	Q3	Jan	Feb	Mar	Q4	YTD
TRN	OutPatient	283	304	329	27	26	19	72	24	15	15	54	12	30	7	49	12	18	17	47	222
	Subtotal	492	525	524	37	40	47	124	45	31	36	112	24	44	27	95	30	35	40	105	436
URO	InPatient	4795	5141	5242	442	444	425	1311	421	387	464	1272	477	489	477	1443	455	471	491	1417	5443
	OutPatient	2660	2881	2931	316	280	325	921	185	198	311	694	335	266	252	853	239	285	283	807	3275
	Subtotal	7455	8022	8173	758	724	750	2232	606	585	775	1966	812	755	729	2296	694	756	774	2224	8718
VAS	InPatient	765	761	790	66	76	65	207	66	44	64	174	71	53	62	186	73	70	72	215	782
	OutPatient	186	146	139	10	11	18	39	3	6	8	17	4	12	8	24	7	9	15	31	111
	Subtotal	951	907	929	76	87	83	246	69	50	72	191	75	65	70	210	80	79	87	246	893
Summary																					
	InPatient	38309	40836	43012	3634	3730	3815	11179	3426	3158	3749	10333	3806	3640	3477	10923	3734	3610	3812	11156	43591
	OutPatient	27083	29167	30137	2843	2667	2905	8415	1915	1856	2768	6539	2910	2729	2353	7992	2625	2694	2911	8230	31176
	Total	65392	70003	73149	6477	6397	6720	19594	5341	5014	6517	16872	6716	6369	5830	18915	6359	6304	6723	19386	74767

2.2 NHSF Surgical Indicator Report

NHSF Surgical Indicator Report for the period ending March 31, 2016



	Fiscal	Fiscal	Fiscal	Fiscal 2014-2015				Fiscal	Fiscal 2015-2016												Fiscal				
	2011/12	2012/13	2013/14	1 QT	2 QT	3 QT	4 QT	2014/15	Apr	May	June	1 QT	July	Aug	Sept	2 QT	Oct	Nov	Dec	3 QT	Jan	Feb	Mar*TD	4 QT	2015/16
NHSF Activity																									
Cataracts	12,955	12,607	13,244	3,066	2,855	3,072	3,658	12,651	954	946	1,101	3,001	958	831	1,060	2,849	1,118	1,103	881	3,102	982	1,204	1,631	3,817	12,769
Non-Cataracts	3,681	3,965	3,662	1,021	884	969	1,036	3,900	318	349	400	1,067	282	262	319	863	346	382	298	1,036	325	364	310	999	3,965
Ophthalmology Total	16,636	16,572	16,906	4,087	3,739	4,031	4,694	16,551	1,272	1,295	1,501	4,068	1,240	1,093	1,379	3,712	1,464	1,495	1,179	4,138	1,307	1,568	1,941	4,816	16,734
Oral Maxillofacial Surgery	854	984	912	264	190	208	227	889	85	93	117	295	73	84	74	231	103	55	57	215	42	33	29	104	845
Podiatry	860	947	1,195	303	276	299	204	1,082	95	140	81	316	46	27	133	206	132	89	54	275	116	105	75	296	1,093
Restorative Dentistry	484	528	403	137	114	175	166	592	55	52	81	188	65	47	53	165	52	39	51	142	44	48	49	141	636
Vestibular Testing	229	234	140	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C
NHSF Activity	19,063	19,265	19,556	4,791	4,319	4,713	5,291	19,114	1,507	1,580	1,780	4,867	1,424	1,251	1,639	4,314	1,751	1,678	1,341	4,770	1,509	1,754	2,094	5,357	19,308
Kensington Clinic	4,913	5,015	5,045	1,273	1,291	1,303	1,275	5,142	423	386	457	1,266	407	383	430	1,220	407	388	449	1,254	427	405	446	1,278	5,018
Total NHSF Activity	23,976	24,280	24,601	6,064	5,610	6,016	6,566	24,256	1,930	1,966	2,237	6,133	1,831	1,634	2,069	5,534	2,158	2,076	1,790	6,024	1,936	2,159	2,540	6,635	24,326

(Note: Data is continuously & retrospectively updated & adjusted as information is received).

Each bilateral cataract Ophthalmology (OPH) procedure is counted as two in the Cataracts column within this activity report.

	Fiscal 2014-2015				Fiscal 2015-2016												Fiscal								
	1 QT	2 QT	3 QT	4 QT	2014/15	Jan	Feb	Mar	Apr	May	June	1 QT	July	Aug	Sept	2 QT	Oct	Nov	Dec	3 QT	Jan	Feb	Mar	TD	4 QT
NHSF Waiting List																									
Cataracts	5,723	5,409	6,294	6,565	7,436	7,750	7,528	7,528	7,575	7,499	7,771	7,771	7,840	7,639	8,047	8,047	8,046	8,210	7,905	7,905	7,930	7,726	7,327	7,327	
Non-Cataracts	2,077	1,454	1,494	1,146	982	971	1,000	1,000	998	1,025	1,072	1,072	1,203	1,142	1,128	1,128	1,097	1,138	1,125	1,125	1,113	1,151	1,189	1,189	
Ophthalmology Total	7,800	6,863	7,788	7,711	8,418	8,721	8,528	8,528	8,573	8,524	8,843	8,843	9,043	8,781	9,175	9,175	9,143	9,348	9,030	9,030	9,043	8,877	8,516	8,516	
Oral Maxillofacial Surgery	318	536	468	328	248	263	280	280	319	327	350	350	363	303	302	302	304	332	333	333	352	386	432	432	
Podiatry	1,344	976	894	694	543	676	725	725	710	607	565	565	592	592	559	559	540	514	554	554	525	488	540	540	
Restorative Dentistry	169	174	221	220	313	399	339	339	396	413	420	420	456	437	454	454	452	468	473	473	484	508	554	554	
Vestibular Testing	59	53	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C	
Total NHSF Wait List	9,690	8,602	9,371	8,953	9,522	10,059	9,872	9,872	9,988	9,871	10,178	10,178	10,454	10,113	10,490	10,490	10,439	10,662	10,390	10,390	10,404	10,259	10,042	10,042	
Total NHSF taken at the end of each reporting period (e.g. month, quarter, year)																									

Wait List is a snapshot taken at the end of each reporting period (e.g. month, quarter, year)

2.3 Wait Times Reports by Procedure Group



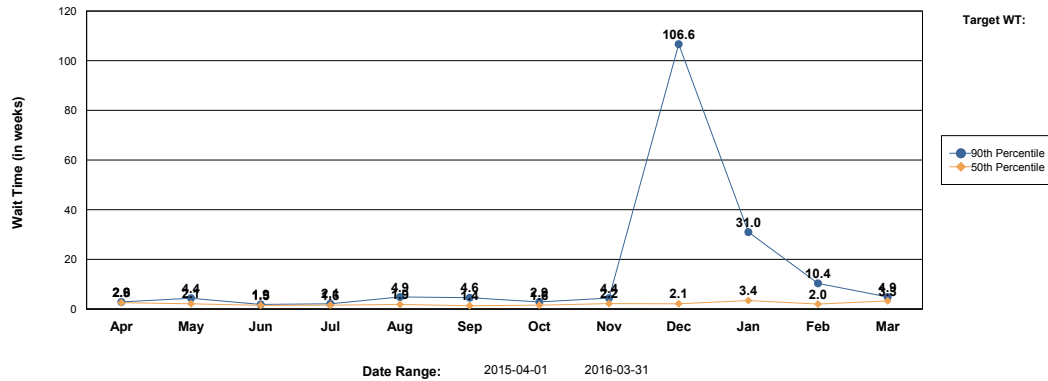
Procedure Group Wait Time Percentile Trend

as of: Mar, 2016

Site: Adult Sites Service: ENT_ORL Group: Throat Endoscopy
 Admit Cat: Urgent Cancer Y/N: ALL

Total Cases: 82
 %50th: 2.14
 %90th: 4.57

Target WT:



Notes:

- 01) Report includes only scheduled cases for the previous 12 months.
 02) Wait Time = Decision to Treat Date to Surgery Date, measured in weeks.
 03) Cancer = Y Includes cancer confirmed and cancer suspected

<Site> AHS CAL Zone facility at which surgical services were provided.
 <Service> Surgeon Service Mnemonic as specified in AHS CAL Zone OR Manager Surgeon dictionary.
 <Group> Procedure Group as defined in OR Manager system.
 <FYTD> Fiscal Year To Date.

Generated: 2016-04-13 10:00:37

Source: CAL ORIS mdsurg

Internal: proc_grp_WT_prntile_trend

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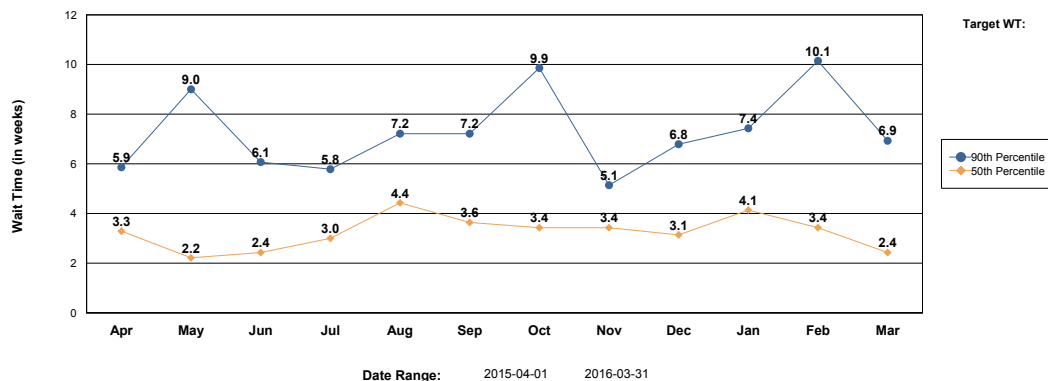
Procedure Group Wait Time Percentile Trend

as of: Mar, 2016

Site: Adult Sites Service: GEN Group: Breast Mastectomy
 Admit Cat: Urgent Cancer Y/N: ALL

Total Cases: 1,165
 %50th: 3.29
 %90th: 7.29

Target WT:



Notes:

- 01) Report includes only scheduled cases for the previous 12 months.
 02) Wait Time = Decision to Treat Date to Surgery Date, measured in weeks.
 03) Cancer = Y Includes cancer confirmed and cancer suspected

<Site> AHS CAL Zone facility at which surgical services were provided.
 <Service> Surgeon Service Mnemonic as specified in AHS CAL Zone OR Manager Surgeon dictionary.
 <Group> Procedure Group as defined in OR Manager system.
 <FYTD> Fiscal Year To Date.

Generated: 2016-04-13 10:00:37

Source: CAL ORIS mdsurg

Internal: proc_grp_WT_prntile_trend

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2.3 Wait Times Reports by Procedure Group



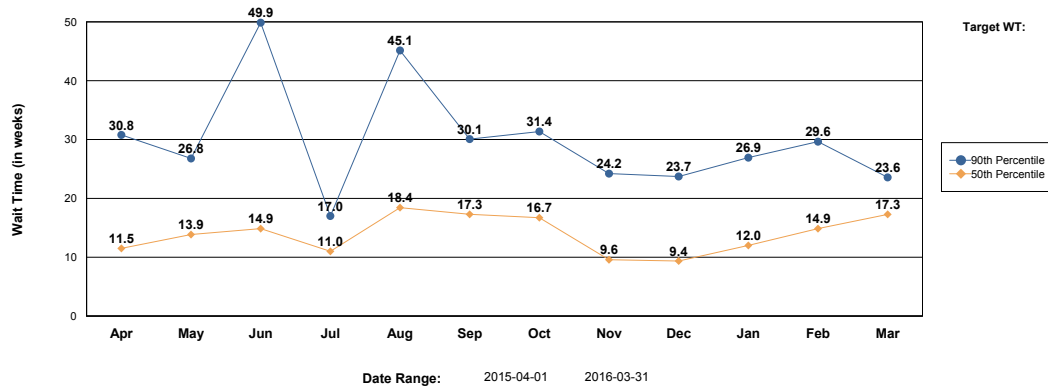
Procedure Group Wait Time Percentile Trend

as of: Mar, 2016

Site: Adult Sites Service: NEU Group: Spine Thoracic/Lumbar
 Admit Cat: Elective Cancer Y/N: ALL

Total Cases: 306
 %50th: 13.57
 %90th: 28.22

Target WT:



Notes:

- 01) Report includes only scheduled cases for the previous 12 months.
 02) Wait Time = Decision to Treat Date to Surgery Date, measured in weeks.
 03) Cancer = Y Includes cancer confirmed and cancer suspected

<Site> AHS CAL Zone facility at which surgical services were provided.
 <Service> Surgeon Service Mnemonic as specified in AHS CAL Zone OR Manager Surgeon dictionary.
 <Group> Procedure Group as defined in OR Manager system.
 <FYTD> Fiscal Year To Date.

Generated: 2016-04-13 10:00:37

Source: CAL ORIS mdsurg

Internal: proc_grp_WT_prntile_trend

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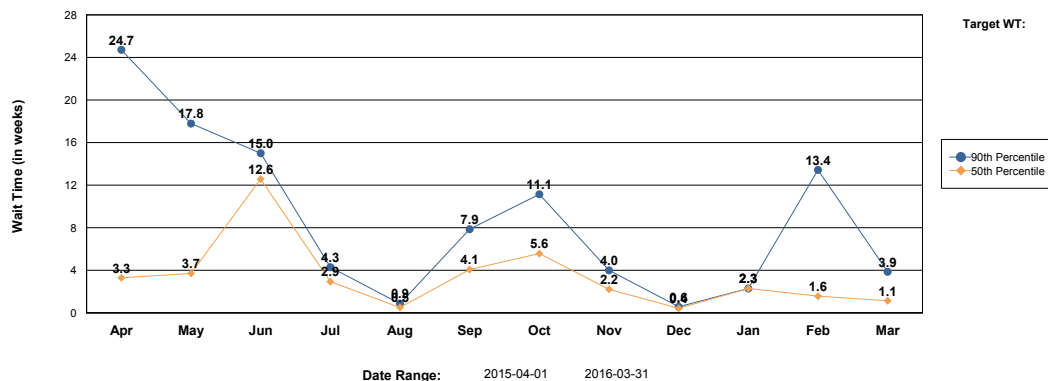
Procedure Group Wait Time Percentile Trend

as of: Mar, 2016

Site: Adult Sites Service: GYN Group: Hysteroscopy
 Admit Cat: Urgent Cancer Y/N: ALL

Total Cases: 50
 %50th: 3.22
 %90th: 14.43

Target WT:



Notes:

- 01) Report includes only scheduled cases for the previous 12 months.
 02) Wait Time = Decision to Treat Date to Surgery Date, measured in weeks.
 03) Cancer = Y Includes cancer confirmed and cancer suspected

<Site> AHS CAL Zone facility at which surgical services were provided.
 <Service> Surgeon Service Mnemonic as specified in AHS CAL Zone OR Manager Surgeon dictionary.
 <Group> Procedure Group as defined in OR Manager system.
 <FYTD> Fiscal Year To Date.

Generated: 2016-04-13 10:00:37

Source: CAL ORIS mdsurg

Internal: proc_grp_WT_prntile_trend

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2.3 Wait Times Reports by Procedure Group



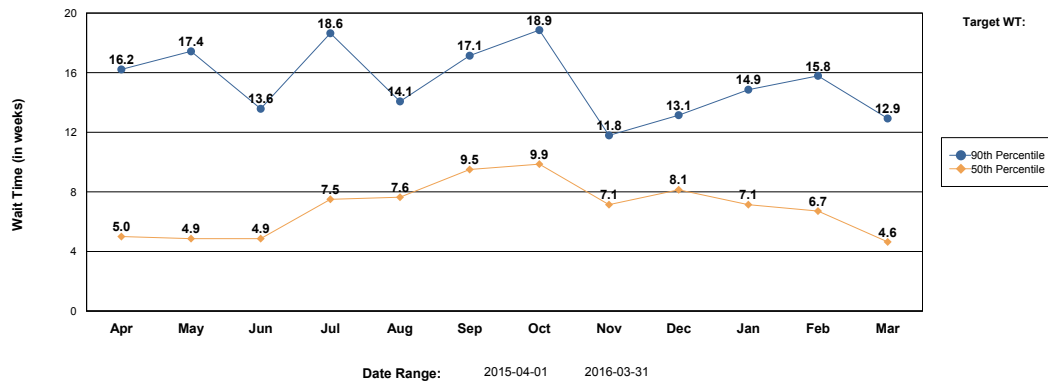
Procedure Group Wait Time Percentile Trend

as of: Mar, 2016

Site: Adult Sites Service: OPH Group: Eye Retina/Choroid/Vitreous
 Admit Cat: Elective Cancer Y/N: ALL

Total Cases: 895
 %50th: 6.71
 %90th: 15.43

Target WT:



Notes:

- 01) Report includes only scheduled cases for the previous 12 months.
 02) Wait Time = Decision to Treat Date to Surgery Date, measured in weeks.
 03) Cancer = Y Includes cancer confirmed and cancer suspected

<Site> AHS CAL Zone facility at which surgical services were provided.
 <Service> Surgeon Service Mnemonic as specified in AHS CAL Zone OR Manager Surgeon dictionary.
 <Group> Procedure Group as defined in OR Manager system.
 <FYTD> Fiscal Year To Date.

Generated: 2016-04-13 10:00:37

Source: CAL ORIS med surg

Internal: proc_grp_WT_prntile_trend

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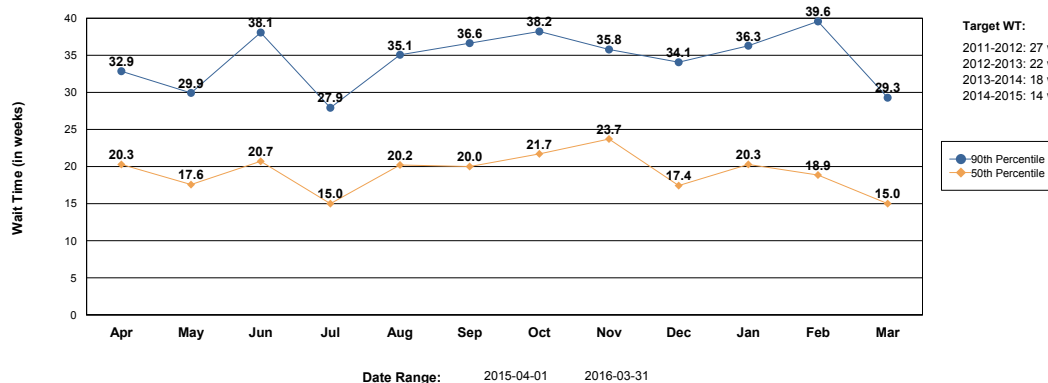
Procedure Group Wait Time Percentile Trend

as of: Mar, 2016

Site: Adult Sites Service: ORT Group: Hip Arthroplasty
 Admit Cat: Elective Cancer Y/N: ALL

Total Cases: 1,431
 %50th: 19.14
 %90th: 35.43

Target WT:



Notes:

- 01) Report includes only scheduled cases for the previous 12 months.
 02) Wait Time = Decision to Treat Date to Surgery Date, measured in weeks.
 03) Cancer = Y Includes cancer confirmed and cancer suspected

<Site> AHS CAL Zone facility at which surgical services were provided.
 <Service> Surgeon Service Mnemonic as specified in AHS CAL Zone OR Manager Surgeon dictionary.
 <Group> Procedure Group as defined in OR Manager system.
 <FYTD> Fiscal Year To Date.

Generated: 2016-04-13 10:00:37

Source: CAL ORIS med surg

Internal: proc_grp_WT_prntile_trend

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2.3 Wait Times Reports by Procedure Group



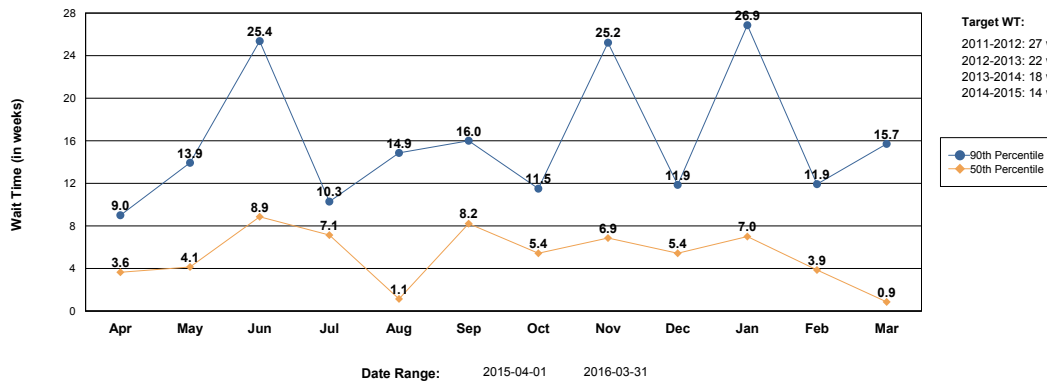
Procedure Group Wait Time Percentile Trend

as of: Mar, 2016

Site: Adult Sites Service: ORT Group: Hip Arthroplasty
 Admit Cat: Urgent Cancer Y/N: ALL

Total Cases: 122
 %50th: 5.93
 %90th: 13.93

Target WT:
 2011-2012: 27 weeks
 2012-2013: 22 weeks
 2013-2014: 18 weeks
 2014-2015: 14 weeks



Notes:

- 01) Report includes only scheduled cases for the previous 12 months.
 02) Wait Time = Decision to Treat Date to Surgery Date, measured in weeks.
 03) Cancer = Y Includes cancer confirmed and cancer suspected

<Site> AHS CAL Zone facility at which surgical services were provided.
 <Service> Surgeon Service Mnemonic as specified in AHS CAL Zone OR Manager Surgeon dictionary.
 <Group> Procedure Group as defined in OR Manager system.
 <FYTD> Fiscal Year To Date.

Generated: 2016-04-13 10:00:37

Source: CAL ORIS medsurg

Internal: proc_grp_WT_prntile_trend

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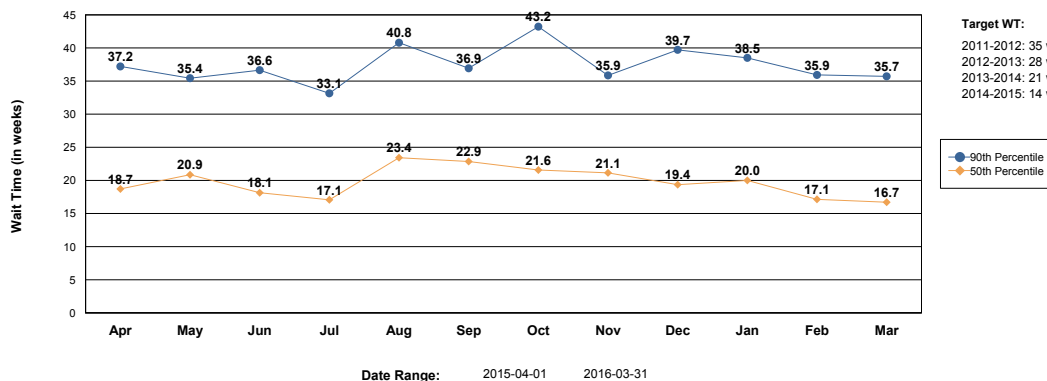
Procedure Group Wait Time Percentile Trend

as of: Mar, 2016

Site: Adult Sites Service: ORT Group: Knee Arthroplasty
 Admit Cat: Elective Cancer Y/N: ALL

Total Cases: 2,404
 %50th: 19.57
 %90th: 37.29

Target WT:
 2011-2012: 35 weeks
 2012-2013: 28 weeks
 2013-2014: 21 weeks
 2014-2015: 14 weeks



Notes:

- 01) Report includes only scheduled cases for the previous 12 months.
 02) Wait Time = Decision to Treat Date to Surgery Date, measured in weeks.
 03) Cancer = Y Includes cancer confirmed and cancer suspected

<Site> AHS CAL Zone facility at which surgical services were provided.
 <Service> Surgeon Service Mnemonic as specified in AHS CAL Zone OR Manager Surgeon dictionary.
 <Group> Procedure Group as defined in OR Manager system.
 <FYTD> Fiscal Year To Date.

Generated: 2016-04-13 10:00:37

Source: CAL ORIS medsurg

Internal: proc_grp_WT_prntile_trend

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2.3 Wait Times Reports by Procedure Group



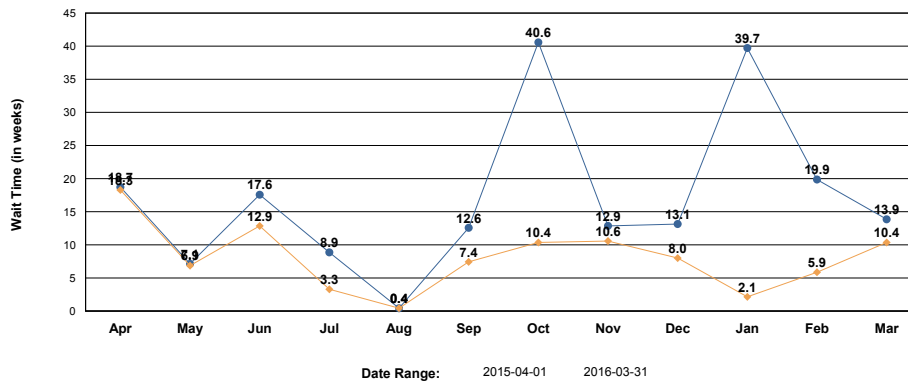
Procedure Group Wait Time Percentile Trend

as of: Mar, 2016

Site: Adult Sites Service: ORT Group: Knee Arthroplasty
 Admit Cat: Urgent Cancer Y/N: ALL

Total Cases: 36
 %50th: 6.86
 %90th: 25.86

Target WT:
 2011-2012: 35 weeks
 2012-2013: 28 weeks
 2013-2014: 21 weeks
 2014-2015: 14 weeks



Notes:

- 01) Report includes only scheduled cases for the previous 12 months.
 02) Wait Time = Decision to Treat Date to Surgery Date, measured in weeks.
 03) Cancer = Y Includes cancer confirmed and cancer suspected

<Site> AHS CAL Zone facility at which surgical services were provided.
 <Service> Surgeon Service Mnemonic as specified in AHS CAL Zone OR Manager Surgeon dictionary.
 <Group> Procedure Group as defined in OR Manager system.
 <FYTD> Fiscal Year To Date.

Generated: 2016-04-13 10:00:37

Source: CAL ORIS mdsurg

Internal: proc_grp_WT_prntile_trend

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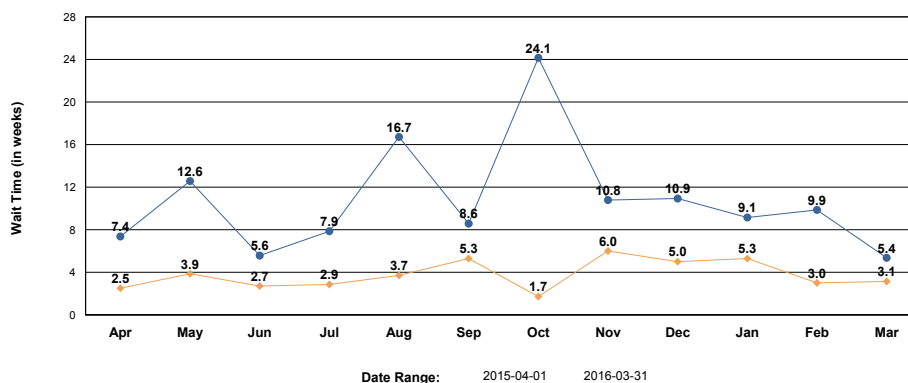
Procedure Group Wait Time Percentile Trend

as of: Mar, 2016

Site: Adult Sites Service: THO Group: Lung
 Admit Cat: Urgent Cancer Y/N: ALL

Total Cases: 255
 %50th: 4.00
 %90th: 8.79

Target WT:



Notes:

- 01) Report includes only scheduled cases for the previous 12 months.
 02) Wait Time = Decision to Treat Date to Surgery Date, measured in weeks.
 03) Cancer = Y Includes cancer confirmed and cancer suspected

<Site> AHS CAL Zone facility at which surgical services were provided.
 <Service> Surgeon Service Mnemonic as specified in AHS CAL Zone OR Manager Surgeon dictionary.
 <Group> Procedure Group as defined in OR Manager system.
 <FYTD> Fiscal Year To Date.

Generated: 2016-04-13 10:00:37

Source: CAL ORIS mdsurg

Internal: proc_grp_WT_prntile_trend

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2.3 Wait Times Reports by Procedure Group



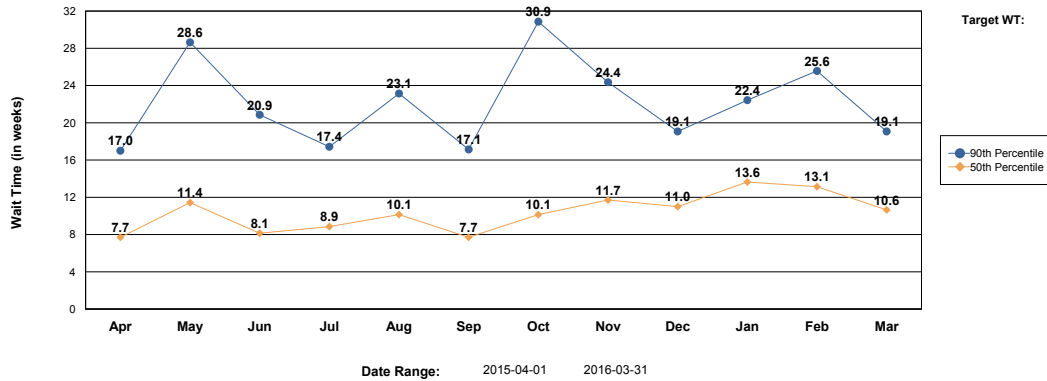
Procedure Group Wait Time Percentile Trend

as of: Mar, 2016

Site: Adult Sites Service: URO Group: Prostate Other
 Admit Cat: Elective Cancer Y/N: ALL

Total Cases: 517
 %50th: 10.00
 %90th: 21.86

Target WT:



Notes:

- 01) Report includes only scheduled cases for the previous 12 months.
 02) Wait Time = Decision to Treat Date to Surgery Date, measured in weeks.
 03) Cancer = Y Includes cancer confirmed and cancer suspected

<Site> AHS CAL Zone facility at which surgical services were provided.
 <Service> Surgeon Service Mnemonic as specified in AHS CAL Zone OR Manager Surgeon dictionary.
 <Group> Procedure Group as defined in OR Manager system.
 <FYTD> Fiscal Year To Date.

Generated: 2016-04-13 10:00:37

Source: CAL ORIS medsurg

Internal: proc_grp_WT_prntile_trend

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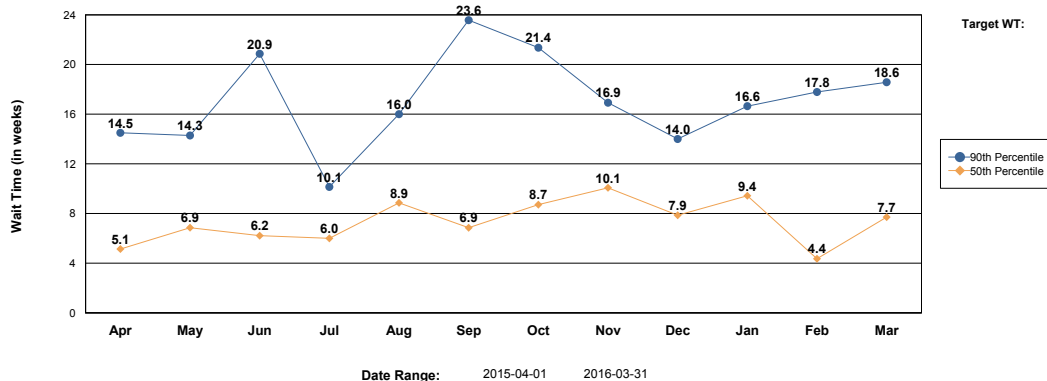
Procedure Group Wait Time Percentile Trend

as of: Mar, 2016

Site: Adult Sites Service: URO Group: Prostate Other
 Admit Cat: Urgent Cancer Y/N: ALL

Total Cases: 177
 %50th: 7.29
 %90th: 15.15

Target WT:



Notes:

- 01) Report includes only scheduled cases for the previous 12 months.
 02) Wait Time = Decision to Treat Date to Surgery Date, measured in weeks.
 03) Cancer = Y Includes cancer confirmed and cancer suspected

<Site> AHS CAL Zone facility at which surgical services were provided.
 <Service> Surgeon Service Mnemonic as specified in AHS CAL Zone OR Manager Surgeon dictionary.
 <Group> Procedure Group as defined in OR Manager system.
 <FYTD> Fiscal Year To Date.

Generated: 2016-04-13 10:00:37

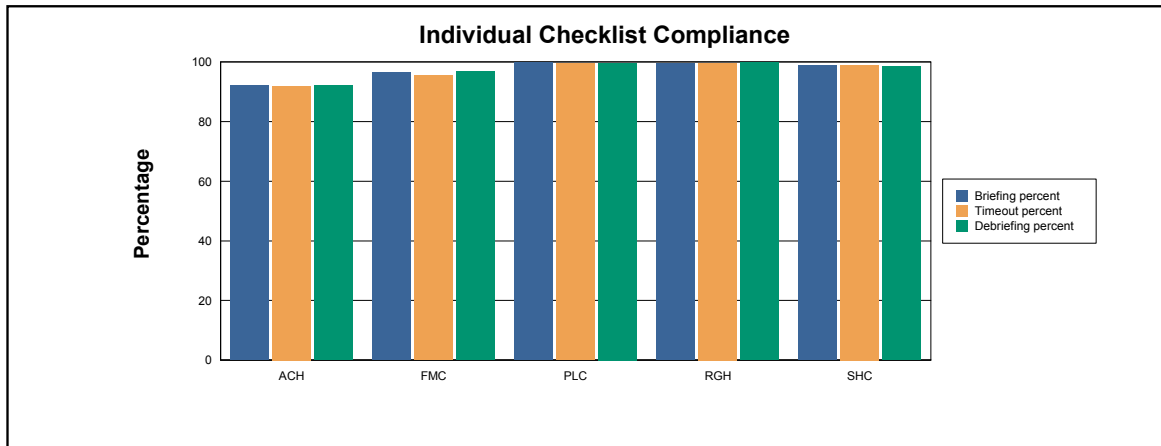
Source: CAL ORIS medsurg

Internal: proc_grp_WT_prntile_trend

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2.4 Safe Surgery Checklist Compliance



Site	Total Case Counts	Briefing Yes	Briefing Percent	Timeout Yes	Timeout Percent	Debriefing Yes	Debriefing Percent
ACH	1041	958	92	957	92	958	92
FMC	1983	1913	96	1895	96	1922	97
PLC	1381	1378	100	1373	99	1376	100
RGH	1732	1725	100	1726	100	1727	100
SHC	951	940	99	941	99	937	99

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Source: CAL ORIS domedsurg Internal:Safe_surg_checklist_activity

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3.0 General Information

Peer-Reviewed Journal Articles

Section of General Surgery

1. **Kirkpatrick AW**; Roberts DJ; Jaeschke R; De Waele JJ; De Keulenaer BL; Duchesne J; Bjorck M; Leppaniemi A; Ejike JC; Sugrue M; Cheatham ML; Ivatury R; **Ball CG**; Reintam Blaser A; Regli A; Balogh Z; D'Amours S; De Laet I; Malbrain ML (2015) Methodological background and strategy for the 2012-2013 updated consensus definitions and clinical practice guidelines from the abdominal compartment society [In Process Citation]. *Anaesthesiol Intensive Ther* 2015;47 Spec No:63-77 (ISSN: 1731-2515)
2. **Kirkpatrick AW**; McKee JL; McKee I; Panebianco NL; **Ball CG** (2015) Remote Telementored Ultrasound-Directed Compression to Potentially Accelerate Hemostasis in Exsanguinating Junctional Vascular Injuries. *J Spec Oper Med* 2015 Winter;15(4):71-4 (ISSN: 1553-9768)
3. Navsaria PH; Nicol AJ; Edu S; Gandhi R; **Ball CG** (2015) Selective Nonoperative Management in 1106 Patients With Abdominal Gunshot Wounds: Conclusions on Safety, Efficacy, and the Role of Selective CT Imaging in a Prospective Single-center Study [In Process Citation]. *Ann Surg* 2015 Apr;261(4):760-4 (ISSN: 1528-1140)
4. Robertson-More C; Wells BJ; **Nickerson D**; **Kirkpatrick AW**; **Ball CG** (2015) The economic and logistical burden of care for severe work-related injuries in a level 1 tertiary care trauma referral center [In Process Citation]. *Am J Surg* 2015 Sep;210(3):451-5 (ISSN: 1879-1883)
5. Wells BJ; Roberts DJ; **Grondin S**; Navsaria PH; **Kirkpatrick AW**; **Dunham MB**; **Ball CG** (2015) To drain or not to drain? Predictors of tube thoracostomy insertion and outcomes associated with drainage of traumatic hemothoraces [In Process Citation]. *Injury* 2015 Sep;46(9):1743-8 (ISSN: 1879-0267)
6. **Ball CG** (2015) Damage control surgery [In Process Citation]. *Curr Opin Crit Care* 2015 Dec;21(6):538-43 (ISSN: 1531-7072)
7. Driedger MR; Gupta A; Wells B; **Dixon E**; **Ball CG** (2016) "Oh the weather outside is frightful": Severe injury secondary to falls while installing residential Christmas lights [In Process Citation]. *Injury* 2016 Jan;47(1):277-9 (ISSN: 1879-0267)
8. Zargarani E; Adolph L; Schuurman N; Roux L; Ramsey D; Simons R; Spence R; Nicol AJ; Navsaria P; Puyana JC; Parry N; Moore L; Aboutanos M; Yanchar N; Razek T; **Ball CG**; Hameed SM Collective Name: Trauma Association of Canada; Collective Name: Trauma Society of South Africa; Collective Name: Panamerican Trauma Society. (2016) A global agenda for electronic injury surveillance: Consensus statement from the Trauma Association of Canada, the Trauma Society of South Africa, and the Panamerican Trauma Society [In Process Citation]. *J Trauma Acute Care Surg* 2016 Jan;80(1):168-70 (ISSN: 2163-0763)
9. McMillan MT; Vollmer CM; Asbun HJ; **Ball CG**; Bassi C; Beane JD; Berger AC; Bloomston M; Callery MP; Christein JD; **Dixon E**; Drebin JA; Castillo CF; Fisher WE; Fong ZV; Haverick E; House MG; Hughes SJ; Kent TS; Kunstman JW; Malleo G; McElhany AL; Salem RR; Soares K; Sprys MH; Valero V; Watkins AA; Wolfgang CL; Behrman SW (2016) The Characterization and Prediction of ISGPF Grade C Fistulas Following Pancreatoduodenectomy [In Process Citation]. *J Gastrointest Surg* 2016 Feb;20(2):262-76 (ISSN: 1873-4626)
10. Fehr A; **Beveridge J**; D'Amours SD; **Kirkpatrick AW**; **Ball CG** (2016) The potential benefit of a hybrid operating environment among severely injured patients with persistent hemorrhage: How often could we get it right? [In Process Citation]. *J Trauma Acute Care Surg* (United States), Mar 2016, 80(3) p457-60
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12. Baker L, Almadani A, **Ball CG** (2015) False negative pericardial Focused Assessment with Sonography for Trauma examination following cardiac rupture from blunt thoracic trauma: a case report. *J Med Case Rep* (England), 2015, 9(1) p155
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 15. Xiao Z; Wilson C; Robertson HL; Roberts DJ; **Ball CG; Jenne CN; Kirkpatrick AW** (2015) Inflammatory mediators in intra-abdominal sepsis or injury - a scoping review. *Crit Care* 2015;19:373 (ISSN: 1466-609X)
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 22. **Kirkpatrick AW; Hamilton D; Beckett A; La Porta A; Brien S; Glassberg E; Ball CG; Roberts DJ; Tien H** (2015) The need for a robust 24/7 subspecialty "clearing house" response for telementored trauma care. *Can J Surg* 2015 Jun;58(3):S85-7 (ISSN: 1488-2310)
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 46. Shroff RT; Knox J; **Dixon E** (2015) Consensus Conference on Gallbladder Cancer. *HPB (Oxford)*

- 2015 Aug;17(8):664-5 (ISSN: 1477-2574)
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Adjunct Appointments

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Research Grants

Total Grants: 94 Grants

Total Funding: \$32,905,878.92

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
William	Astle	Research with no funding or non-peer reviewed support					
		Refractive Surgery in Children. Huang PT, Farran P, Paszuk A	principal investigator	clinical			
		Research funded with peer-reviewed grant support					
		ATS 1, & 10-16	co-investigator	clinical	Ongoing / Renewed	NIH	\$4,000.00
		2 grants					\$4,000.00

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
Oliver	Bathe	Research funded with peer-reviewed grant support					
		Development of an Assay for a Blood Test for Colorectal Cancer and Adenoma	principal investigator	basic/biomedical	New	Alberta Surgery Strategic Clinical Network	\$10,000.00
		Exploring the Role of HMGB1 in the Inflammatory Response associated with Colorectal Cancer	principal investigator	basic/biomedical	Ongoing / Renewed	Tom Baker Cancer Centre Seed Grant	\$15,000.00
		Stereotactic body radiotherapy (SBRT) for oligo-metastatic colorectal cancer with biomarker evaluation for early progression.	co-investigator	basic/biomedical	New	Tom Baker Cancer Centre Investigator-initiated Clinical Trials	\$122,000.00
		Genetic and Molecular Basis of Severe Muscle Wasting (Sarcopenia)	co-investigator	multi-themed	Ongoing / Renewed	Canadian Institutes of Health Research	\$105,000.00
		Randomized controlled trial of early enteral feeding via a new gastrojejunostomy tube in patients undergoing laparotomy for peripullary and pancreatic neoplasms	principal investigator	multi-themed	Ongoing / Renewed	Novartis Nutrition Corporation	\$15,000.00
		Cancer Cachexia: Phenotype Definition, Markers for Genetic Predisposition and Prognosis	co-investigator	basic/biomedical	Ongoing / Renewed	Canadian Institutes of Health Research	\$470,365.00
		Factors that Regulate Eicosapentanoic Acid and Docosahexanoic Acid to Improve Cancer-associated Myosteatosis	co-investigator	basic/biomedical	New	Canadian Institutes of Health Research	\$657,292.00
		7 grants					\$1,394,657.00

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
Paul	Beaudry	Research funded with peer-reviewed grant support					
		Phage Display Study of Neuroblastoma	co-principal investigator	basic/biomedical	New	James Fund/Hospital for Sick Children/Peloton 65	\$80,000.00
		Immunotherapy for Cancer - Repurposing Targeted Therapeutics with Oncolytic Viruses (CRIO Grant)	co-principal investigator	basic/biomedical	New	Alberta Innovates - Health Solutions (AIHS)	\$750,000.00
		2 grants					\$830,000.00

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
Robert C.	Bray	Research funded with peer-reviewed grant support					
		Development Implementation and Testing of Temporary, Controllable Pseudobozaors for Reducing Excess Weight	co-investigator	clinical	Ongoing / Renewed	Development of Innovations by Startup Enterprises, Co-Financed by the EU	\$260,000.00
		1 grant					\$260,000.00

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
Mary E.	Brindle	Research funded with peer-reviewed grant support					
		The safety and efficacy of tranexamic acid in bleeding paediatric trauma patients: A systematic review of the literature	principal investigator	health services	New	Emergency Strategic Clinical Network	\$15,000.00
		Planning grant for health systems improvements in surgery: Expert focus group meeting	principal investigator	health services	New	Clinical Research Fund	\$9,961.92
		EQuIS OR- Efficiency Quality Innovation and Safety	principal investigator	health services	New	MacNeill Chair research funding	\$1,000,000.00
		The Canadian Pediatric Surgery Network (CAPSNet): Establishing Best Practices for Gastroschisis and Congenital Diaphragmatic Hernia	co-investigator	clinical	Ongoing / Renewed	Canadian Institutes of Health Research	\$100,000.00
		CIHR Secondary Analysis of Databases: Canadian Pediatric Surgery Network (CAPSNet)	co-principal investigator	multi-themed	Ongoing / Renewed	Canadian Institutes of Health Research	\$100,000.00
		Improving outcomes following diaphragmatic hernia repair using national data, systematic review and prospective trials	principal investigator	multi-themed	Ongoing / Renewed	ACHRI	\$60,000.00
		6 grants					\$1,284,961.92

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
W. Donald	Buie	Research with no funding or non-peer reviewed support					
		Long term oncologic outcomes for rectal cancer in the province of Alberta	principal investigator	clinical			\$0.00
		Research funded with peer-reviewed grant support					
		Rectal Cancer Care Clinical Pathway	co-investigator	health services	New	Alberta Innovates - Health Solutions (AIHS)	\$750,000.00
		2 grants					\$750,000.00

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
Elijah	Dixon	Research with no funding or non-peer reviewed support					
		Resectable colonic hepatic metastases: type of initial referral, time to surgical intervention and disease free survival.	local principal investigator	clinical			\$0.00
		Research funded with peer-reviewed grant support					
		Tranexamic Acid Versus Placebo to Reduce Preoperative Blood Transfusion in Patients Undergoing Major Liver Resection: A pilot randomized controlled trial.	co-investigator	clinical	New	Canadian Institutes of Health Research	\$248,319.00
		The Helix (Hemorrhage during liver resection: tranexamic acid) Trial	co-investigator	clinical	New	PSI Foundation	\$0.00
		Tranexamic Acid Versus Placebo to Reduce Perioperative Blood Transfusion in Patients Undergoing Major Liver Resection: A Pilot Randomized Controlled Trial	co-investigator	clinical	New	Canadian Institutes of Health Research	\$248,319.00
		Planning grant for health systems improvements in surgery: expert focus group meeting	co-investigator	health services	New	Alberta Health	\$9,961.00
		5 grants					\$506,599.00

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
Joseph C.	Dort	Research with no funding or non-peer reviewed support					
		Image Guided Surgery - Head and Neck Cancer Project	principal investigator	basic/biomedical			\$60,449.00
		Research funded with peer-reviewed grant support					
		Loop mediated isothermal amplification PCR (LAMP) for bedside detection of human papillomavirus (HPV) in oropharyngeal squamous cell carcinoma (OPSCC).	co-principal investigator	clinical	Ongoing / Renewed	Calgary Surgical Research Development Fund	\$4,000.00
		FFPE Validation of a Survival Gene Signature in HPV-Negative Oral Cavity Cancer	co-investigator	basic/biomedical	New	National Institutes of Health Research (NIH US)	\$2,008,985.00
		Developing and Testing a New Treatment for Oral Squamous Cell Carcinoma	co-principal investigator	basic/biomedical	New	Alberta Innovates - Health Solutions (AIHS)	\$746,000.00
		Efficacy of optically-guided surgery in the management of early-stage oral cancer	local principal investigator	clinical	New	Terry Fox Research Institute	\$180,000.00
		2014 Royal College Janes Visiting Professorship in Surgery	national principal investigator	health services (education)	New	Royal College of Physicians and Surgeons of Canada	\$7,000.00
							6 grants

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
David A.	Hart	Research with no funding or non-peer reviewed support					
		Bone and joint health research relevant to the bone and joint health SCN	principal investigator	clinical			\$500,000.00
		Research funded with peer-reviewed grant support					
		Stem Cells as Diagnostic Markers	co-principal investigator	basic/biomedical	Ongoing / Renewed	Alberta Innovates - Health Solutions (AIHS)	\$750,000.00
		2 grants					\$1,250,000.00

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
Kevin A.	Hildebrand	Research with no funding or non-peer reviewed support					
		Latitude Total Elbow Arthroplasty: A retrospective review	principal investigator	clinical			\$0.00
		Fungal periprosthetic joint infection following total elbow arthroplasty: a case report and review of the literature	principal investigator	clinical			\$0.00
		Research funded with peer-reviewed grant support					
		Strategies Targeted at Preventing Recurrent FRACTURES (STOP Fracture study)	team grant investigator	basic/biomedical	New	Alberta Innovates - Health Solutions (AIHS)	\$750,000.00
		PrEvention of post-traumatic contractuRes with Ketotifen (PERK)	principal investigator	basic/biomedical	New	Department of Defense (US)	\$238,420.00
		PrEvention of post-traumatic contractuRes with Ketotifen (PERK)	principal investigator	clinical	Ongoing / Renewed	Worker's Compensation Board of Alberta	\$59,228.00
		Typtase as Biomarker of Post-traumatic Joint Contractures	co-principal investigator	basic/biomedical	New	Orthopaedic Research Portfolio Grant, Section of Orthopaedics	\$4,500.00
		Investigations of Mechanisms and Treatment in Post-traumatic Joint Contractures	principal investigator	basic/biomedical	New	Workers' Compensation Board Research Program Alberta	\$20,000.00
		Investigations of Mechanisms and Treatment in Post-Traumatic Joint Contractures- Part II	principal investigator	basic/biomedical	New	Worker's Compensation Board Research Program	\$40,000.00
		Randomized Controlled Trial on the use of Low-Intensity Pulsed Ultrasound in the Healing of Scaphoid Non-Unions Treated with Surgical Fixation	co-investigator	basic/biomedical	New	Worker's Compensation Board Research Program	\$40,000.00
		Post-Traumatic Elbow Joint Contractures: Defining Pathologic Capsular Mechanisms and Potential Future Treatment Paradigms.	principal investigator	basic/biomedical	New	American Society for Surgery of the Hand	\$20,000.00
10 grants						\$1,172,148.00	

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
Gwendolyn	Hollaar	Research with no funding or non-peer reviewed support					
		Surgical Education Needs Assessment in Nigeria	co-investigator	health services (education)			\$0.00
		Research funded with peer-reviewed grant support					
		Improving Rural Health: A Lao PDR / University of Calgary Collaboration to Develop and Disseminate Maternal Health Learning Materials	local sub-investigator	health services (education)	New	McLaughlin Traveling Medical Education Fund: University of Calgary Faculty of Medicine	\$10,000.00
		2 grants					\$10,000.00

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
Carolyn R.	Hutchison	Research with no funding or non-peer reviewed support					
		Joint-Sparing Transplant with fresh osteochondral allografts. Schachar N, Timmerman S, Hutchison CR, Heard M, Miller S.	co-investigator	basic/biomedical			
		Assessment of Communication, Professional and Surgical Skills in an OSPRE: A Psychometric Study. Ponton-Carss, Donnone T, Hutchison CR.	co-investigator	health services (education)			\$40,000.00
		Research funded with peer-reviewed grant support					
		Medical Imaging of Knee Kinematics after Joint Replacement. Anglin C, Frayne R, Hutchison CR, Ronsky J, Wilson D: NSERC-CIHR Collaborative Health Research Projects (\$380,800; 2008-extended beyond 2011).	co-investigator	basic/biomedical	Ongoing / Renewed	NSERC	\$380,800.00
		3 grants					\$420,800.00

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
Andrew	Kirkpatrick	Research funded with peer-reviewed grant support					
		Peritoneal Vacuum therapy to reduce the systemic inflammatory insult from intra-peritoneal sepsis/injury/hypertension: A randomized comparison of baseline wall suction versus KCI AbThera abdominal dressing. Kirkpatrick AW (Principle Investigator). Ouellet JF (Resident Investigator). Ouellet JF, Kirkpatrick AW, McBeth PB, Doig C, Ball CG, Kubes P, Leger C, Tiruta C. Calgary Surgical Research Development Fund (\$4000.00).	principal investigator	clinical	Ongoing / Renewed	Calgary Surgical Research Development Fund	\$4,000.00
		2014 Telementoring of Resuscitative Care in Austere Environments (\$175,000.00) – Awarded from the Canadian Forces Health Services, PI – Major Andrew W Kirkpatrick	local principal investigator	health services	Ongoing / Renewed	Canadian Forces Health Services	\$175,000.00
		2015 Telementoring of Resuscitative Care in Austere Environments (\$10,000.00) – Awarded from the Royal College of Physicians and Surgeons of Canada Services, PI – Major Andrew W Kirkpatrick	local principal investigator	health services	Ongoing / Renewed	Royal College of Physicians and Surgeons of Canada	\$10,000.00
		Requested - CIHR ICRH Community Development Program Proposal: The Canadian Resuscitation Outcomes Consortium (CanROC). Principle Investigators Morrison L, Christenson J, and Stiell I. Co-investigator Kirkpatrick AW – Proposed Role Co-Investigator, Alberta Lead Trauma, Trauma Committee. Requested \$3,000,000.00	co-investigator	health services	New	Canadian Institutes of Health Research	\$0.00
		Telementoring to support Austere Resuscitations	principal investigator	clinical	New	Royal College of Physicians and Surgeons of Canada Services	\$10,000.00
		2011 Developing a Patient and Family-Centered Approach for Measuring the Quality of Trauma Care. STELFOX HT (Principle Investigator). STELFOX HT (Principle Investigator). Straus S, Nathens AB, Tallon JM, Gagliardi A, Hudak P, Quan H, Chernoff J, Burns K, Evans D, Loughheed V, Vuksic A, Fortin CM, Kagan C, Zarins H, KIRKPATRICK AW, Straus SE. CIHR's Partnerships for Health System Improvement Competition, \$628,692.00 over three years (C)	co-investigator	health services (education)	New	CIHR Partnerships for Health System	\$628,692.00
		6 grants					\$827,692.00

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
Roman	Krawetz	Research funded with peer-reviewed grant support					
		McCaig and Orthopaedic Surgery Seed Grant	principal investigator	basic/biomedical	New	Alberta Medical Association	\$10,000.00
		Synovial Mesenchymal Stem Cells: Distinct roles in cartilage regeneration and the pathogenesis of Osteoarthritis	principal investigator	basic/biomedical	New	Alberta EAE small equipment grant	\$272,000.00
		Synovial Mesenchymal Stem Cells: Distinct roles in cartilage regeneration and the pathogenesis of Osteoarthritis.	principal investigator	basic/biomedical	New	CFI	\$272,000.00
		Cellular basis of endogenous cartilage repair in super-healer mice	principal investigator	basic/biomedical	New	Canadian Institutes of Health Research	\$731,270.00
		Bone and Joint Stem Cell Biology. CRC.	principal investigator	basic/biomedical	New	CRC	\$500,000.00
		The p21 signaling axis in accelerated fracture repair.	principal investigator	basic/biomedical	New	AO Foundation	\$120,000.00
		Synovial stem cell biology	principal investigator	basic/biomedical	New	NSERC	\$195,000.00
		Consequences of knee joint injury in youth sport: Implications for knee osteoarthritis and other health outcomes.	co-investigator	clinical	New	Canadian Institutes of Health Research	\$380,640.00
		8 grants					\$2,480,910.00

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
T. Wayne	Matthews	Research funded with peer-reviewed grant support					
		Pan Canadian Optically Guided Approach for Oral Lesions Surgical Trial	local sub-investigator	clinical	New	Terry Fox Research Institute	\$4,734,000.00
		1 grant					

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
F. Mauricio	Monroy Cuadros	Research funded with peer-reviewed grant support					
		Safety and Outcomes of Accepting Hypertensive Individuals as Living Kidney DONors.	principal investigator	clinical	New	Canadian Institutes of Health Research	\$352,098.00
		Effect of living kidney donation on blood pressure during pregnancy	co-investigator	basic/biomedical	New	Kidney Foundation of Canada	\$97,620.00
		Standard Criteria Living Kidney Donor Safety Study	co-investigator	clinical	Ongoing / Renewed	Canadian Institutes of Health Research	\$1,214,665.00
		3 grants					\$1,664,383.00

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
Michael	Monument	Research funded with peer-reviewed grant support					
		Osteosarcomagenesis in the Longshanks Mouse	co-principal investigator	basic/biomedical	New	McCaig Bone and Joint Institute – Clinician-Scientist Collaboration	\$10,000.00
		Mouse modeling of bone sarcoma lung metastases	principal investigator	basic/biomedical	New	University of Calgary, Department of Surgery – Research and Education Development Fun	\$75,000.00
		Prevention of sarcoma lung metastases: Identification of targetable cooperative signalling pathways in tumour and lung tissue	principal investigator	basic/biomedical	New	Alberta Cancer Foundation	\$10,000.00
		Mouse modeling of Ewing sarcoma using a novel EWS/FLI PiggyBac Transposon electroporation strategy	principal investigator	basic/biomedical	New	Cancer Research Society Inc	\$1.00
		Development of an inducible, syngeneic mouse model of osteosarcoma and lung metastases	principal investigator	basic/biomedical	New	Kids Cancer Care Foundation – Childhood Cancer Research Grant	\$50,000.00
		5 grants					\$145,001.00

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
Randy D.	Moore	Research with no funding or non-peer reviewed support					
		Thoraflex: A New Approach to aortic arch disease	local principal investigator	clinical			\$20,000.00
		FDA Phase 2 STUDY OF THE ANACONDA ENDOVASCULAR STENT GRAFT REPAIR FOR THE TREATMENT OF INFRARENAL AAA	co-principal investigator	clinical			\$300,000.00
		Research funded with peer-reviewed grant support					
		Fluid Flow and Vascular Endothelial Cell Drug Response	co-investigator	basic/biomedical	Ongoing / Renewed	Heart & Stroke Foundation of Canada	\$300,000.00
		3 grants					\$620,000.00

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
Mark T.	Nutley	Research with no funding or non-peer reviewed support					
		Multi-center Same Day Discharge Post Endovascular and Percutaneous Endovascular Aneurysm Repair (EVAR and PEVAR).	national principal investigator	clinical			\$0.00
		1 grant					\$0.00

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
Elizabeth	Oddone Paolucci	Research with no funding or non-peer reviewed support					
		Exploring the learning experiences in the general surgery clerkship.	principal investigator	health services (education)			\$0.00
		"Faculty Development and Evaluation."	co-investigator	health services (education)			\$0.00
		"An investigation of the relationship between conformity and communication in medical education."	co-investigator	health services (education)			\$0.00
		"Assessment of Conformity."	co-investigator	health services (education)			\$0.00
		Research funded with peer-reviewed grant support					
		Multi-Source feedback for assessing clinical competence in surgical residents.	co-investigator	health services (education)	New	Dept of Surgery - Calgary Surgical Research Development Fund	\$2,900.00
		Local tools to global challenge: Standardizing clinical patient handovers	principal investigator	health services (education)	New	Departments of Medicine & Surgery, University of Calgary	\$12,500.00
		6 grants					\$15,400.00

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
May Lynn	Quan	Research with no funding or non-peer reviewed support					
		Calgary Breast Cancer Research Program	international principal investigator	clinical			\$5,000,000.00
		Research funded with peer-reviewed grant support					
		Towards better outcomes for young women with breast cancer: A Pan Canadian Collaborative	co-principal investigator	clinical	New	Canadian Institutes of Health Research	\$5,695,303.00
		2 grants					\$10,695,303.00

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
Anastasio	Salazar Banuelos	Research with no funding or non-peer reviewed support					
		IMMUNO - Artificial Immune Systems	principal investigator	basic/biomedical			\$0.00
		Research funded with peer-reviewed grant support					
		Cellular Transplantation in Swine: Effect of Bone Marrow Seeding on Graft Rejection, Tolerance, and Survival (Protocol #M03018)	principal investigator	basic/biomedical	Ongoing / Renewed	Department of Surgery	\$50,000.00
							2 grants

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
Francis R.	Sutherland	Research with no funding or non-peer reviewed support					
		Orienting Landmark for Laparoscopic Cholecystectomy Navigation	principal investigator	clinical			\$0.00
		Efficacy of a dual-ring wound protector for prevention of incisional surgical site infection after Whipple's procedure with per-operatively placed stents	co-investigator	clinical			\$0.00
		Posterior cystgastrostomy and debridement for walled off pancreatic necrosis	co-investigator	clinical			\$0.00
		Peroperative single-dose methylprednisolone versus placebo after major liver resection in adults	co-investigator	clinical			\$0.00
							4 grants \$0.00

First Name	Last Name	Title	Role	Theme	Status	Funding Source	Award
Gail M.	Thornton	Research with no funding or non-peer reviewed support					
		Biomechanical Evaluation of the Effect of Sutures on Tendons	co-principal investigator	clinical			\$20,000.00
		Research funded with peer-reviewed grant support					
		URGC SEM Faculty Seed Grant: Aging effects on lubricin gene expression and failure modulus in different ligaments and tendons	principal investigator	basic/biomedical	New	University Research Grants Committee (URGC)	\$15,000.00
		Mechanics of Damage in Biological Soft Tissues	principal investigator	basic/biomedical	Ongoing / Renewed	NSERC	\$110,000.00
		3 grants					\$145,000.00

Serdar	Yilmaz	Research with no funding or non-peer reviewed support					
		Long-term effects of becoming a living kidney donor study. CIHR sponsored study.	co-investigator	basic/biomedical			\$4,840.00
		Research funded with peer-reviewed grant support					
		Astellas Service Agreement RT703938 FKC Advagraf with IL-2 014	co-principal investigator	basic/biomedical	Ongoing / Renewed	Astellas Pharma	\$633,750.00
							2 grants \$638,590.00

