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Message from the Department Head

Thank you for taking a few minutes to go through this report. This year the report highlights a few areas in our department, with the usual detailed information placed as appendices. Please share with colleagues in your department, so they too can celebrate the successes of our colleagues as well as hopefully understand this diverse department a little better.

The Department underwent an Internal Review in the fall of 2017, for the end of the Department Head’s first 5-year term. The report was not finalised and released until April 2017 and therefore the recommendations will appear in next year’s annual report. However, the first recommendation was to reappoint Dr. Preston for a 2nd term, which has been done.

Faculty Renewal
The Department needs faculty renewal in Pharmacology and Therapeutics as there will be no Assistant Professors by July 2016. Using the department’s identified strategic research priorities, two positions in the Faculty of Medicine Faculty Renewal process were applied for at the end of 2017. One for critical succession in Pharmacology and one for translational research in pain, in collaboration with ICORD. There will be a second faculty renewal application process in late spring 2018 for subsequent applications. At present, this is the only method for acquiring new faculty positions for departments that do not have secure recurring funding to support an Assistant Professor.

The Department’s financial position is somewhat improved as all debts have been cleared, and there is some soft funding available to support term faculty positions, and/or to build funding to support a professorship.

The Department has continued to build on faculty development with the fourth annual Faculty Development Day on November 11, 2017. Dr. James Brown, the Faculty Development Director, pulled together an excellent program on ‘Challenging Communications’, led by Dr. Paul Mohapel.

Building on the success of the first three years of the Vancouver Summer Program course in Pharmacology, Dr. Andrew Horne is now the Program Director of the UBC Faculty of Medicine Vancouver Summer Program. He will also still be the course director for APT’s offerings.

The study program for international medical graduates to prepare for the Royal College Exams in Anesthesiology was created and run for a fourth year, from October 2017 to June 2018. Many anesthesia faculty were engaged as session reviewers and practice oral examiners. If success is candidates who pass their exams after prior failed attempts, then we had a successful program. Once again the Whistler Anesthesia Summit held in March 2017 was an enormous success, with a star-studded list of anesthesia experts and some excellent workshops. The co-chairs, Dr. Cynthia Yarnold and Dr. Juliet Atherstone are truly formidable organizers!
The Pain Medicine Residency Program has 2 residents now in the program, with hopes that funding for additional annual position will be found. The Program Director, Dr. Brenda Lau has put together an excellent curriculum, drawing on colleagues in a variety of specialties for this 2 year program that focuses on non-interventional multidisciplinary management of pain.

Research continues to flourish within the department. We have some very strong pharmacology researchers with well-established careers, and some young researchers such as Tillie Hackett who is proving very successful in the highly competitive grant and scholarship opportunities available in Canada. On the anesthesia side, we have clinician-researchers such as Mark Ansermino, Stephan Schwarz, Don Griesdale, David Ansley, Alana Flexman, Himat Vaghadia, Ray Tang, Steve Head, Kevin Froehlich, Juliet Atherstone, Gord Finlayson, Jens Lohser, Calvin Au, Peter Choi, Angela Enright, Joanne Douglas, Andrew Sawka, and Anton Chau, whose work is making a difference in health outcomes.

Teaching is what connects our department, with passion amongst so many for teaching students of all levels and interests. I would like to thank everyone who engages in teaching undergraduates and medical students as I know how important it is for the future of the department to incite passion for our work in our learners. Those teaching in pharmacology receive consistently excellent teaching evaluations and our undergraduate and graduate programs in Pharmacology are highly competitive. Our anesthesia training core sites (VGH, SPH, BCCH, BCWH, RCH) and our affiliated sites (Lions Gate, Richmond, Burnaby, Surrey, Delta, Langley, Abbotsford, Chilliwack, Victoria, Nanaimo, Prince George, Kelowna Vernon, Kamloops, Penticton, Terrace/Mills, Kootenay) all have numerous trainees from various disciplines, and have constant pressure to take on more.

I would like to thank all of you for continuing to be generous with your time, your energy, your knowledge and your passion. We continue to be in a miserly financial position in the department, and this does not allow me to reward you for all your contributed time and effort as I would like to be able to. Let us work on our strategic priorities together, of which the most important is fostering the strengths of our people.

Most appreciatively

Roanne Preston, MD FRCPC
Department Head
Department Leadership

Roanne Preston – Department Head

Site Chiefs:
Hamed Umedaly – Head, VGH/UBCH Department of Anesthesia & Perioperative Care
Jim Kim – Head, St. Paul’s Hospital Department of Anesthesia
Norbert Froese – Head, BC Children’s Hospital Department of Anesthesia
Roanne Preston and Simon Massey – Co-heads, BC Women’s Hospital Department of Anesthesia
John Ramsden – Head, Royal Columbian Hospital Department of Anesthesia
Dean Jones – Regional Head, Fraser Health Authority
Martin Roos – Head, Lions Gate Hospital Department of Anesthesia
Sam Tang – Head, Richmond General Hospital Department of Anesthesia
Gavin Gracias – Burnaby General Hospital Department of Anesthesia
Michael Breden – Chilliwack General Hospital Department of Anesthesia
Tom Ruta – Head, Victoria General/Royal Jubilee Hospitals Department of Anesthesia
Mark Masterson – Head, Kelowna General Hospital Department of Anesthesia
Tom Cull – Vernon Jubilee Hospital Department of Anesthesia
M Jamil Akhtar – Head, University Hospital of Northern BC Department of Anesthesia

Academic Leadership
T. Laine Bosma – Anesthesia Residency Program Director
Matt Klas – Competence by Design (CBD) Program Director
Don Griesdale – Anesthesia Research Director
Sastry Bhagavatula – Director/Advisor, PCTH Graduate Program
Brad Merriman – Medical Undergraduate Program Director
John McAlpine – Family Practice Anesthesia Residency Program Director
John Veall – Simulation Program Director
James Brown – Faculty Development Chair
Giselle Villar – Visiting Professor & Continuing Professional Development Program Director
Cynthia Yarnold and Juliet Atherstone – Whistler Anesthesia Conference co-chairs
Stephan KW Schwarz – Dr. Jean Templeton Hugill Chair in Anesthesia
K Malcolm Maclure – BC Patient Safety Chair

Divisions
Ray Tang/Steven Petrar – Division Heads, Regional Anesthesia
Bobby Lee – Division Head, Cardiac Anesthesia
Alana Flexman – Division Head, Neuroanesthesia
Michael Negraeff – Division Head, Pain Management
Norbert Froese – Division Head, Pediatric Anesthesia
Roanne Preston – Division Head, Obstetric Anesthesia
Jens Lohser – Division Head, Thoracic Anesthesia
James Wright – Co-Managing Director, Therapeutics Initiatives
Ken Bassett – Co-Managing Director, Therapeutics Initiatives
DEPARTMENT HIGHLIGHTS

AWARDS OF EXCELLENCE

Dr. Jennifer Shabbits
Senior Instructor, Pharmacology & Thearapeutics Section,
Recipient of the UBC Killam Teachings Prize
Awarded to faculty nominated by students, colleagues, and alumni in recognition of excellence in teaching.

Dr. Stephan Schwarz
Professor
St. Paul’s Hospital
Chair – Hugill Anesthesia Research Centre
Recipient of the UBC Killam Teachings Prize
Awarded to faculty nominated by students, colleagues, and alumni in recognition of excellence in teaching.

Dr. Laura Duggan
Clinical Associate Professor
Royal Columbian Hospital
Recipient of Clinical Faculty Award for Excellence in Clinical Teaching
Recognizes excellence in teaching by clinical faculty members.
APT Instructor (Pharmacology), Dr. Jennifer Shabbits, and Hugill Chair, Dr. Stephan Schwarz, gowned in preparation for their official receipt of their respective UBC Killam Teaching Prizes (UBC Spring Congregation, May 24, 2017).

Hugill Chair, Dr. Stephan Schwarz, receiving the UBC Killam Teaching Prize (UBC Spring Congregation, May 24, 2017).
11th Annual Research Day and Awards Night

Objective: To review research currently conducted by graduate and post-graduate trainees and fellows in the Department of Anesthesiology, Pharmacology & Therapeutics at the University of British Columbia.

Guest Judge & Keynote Speaker
Dr. Orlando Hung – Professor, Anesthesia, Surgery & Pharmacology
Dalhousie University and Victoria General Hospital

Acknowledgments:
Judges:
Dr. Mark Ansermino
Dr. David Ansley
Dr. Pascal Bernatchez
Dr. Peter Choi
Dr. Laura Duggan
Ms. Mitra Esfandiarei
Dr. Alana Flexman
Dr. Matthias Gorges
Dr. Vit Gunka
Dr. Tillie Hackett
Dr. Andrew Horne
Dr. Orlando Hung
Dr. Tim Kaan
Dr. Sandy Kisilevsky
Dr. Joanne Leung
Dr. Richard Merchant
Dr. Ricardo Rivera-Acevedo
Dr. Stephan Schwarz
Dr. Jennifer Shabbits
Dr. Ray Tang
Dr. Mariah Wallener
Dr. Simon Whyte
Dr. Cynthia Yarnold

The Research Day Organizing Committee:
Dr. Don Griesdale
Dr. Pascal Bernatchez
Ms. Allison Rintoul
Ms. Michelle Ho
Ms. Wynne Leung
Ms. Susan vanBruggen
Ms. Jill Delane
Research Day Coordinator (ANA Section)
Research Day Coordinator (PCTH Section)
Administrative Manager
PCTH Administrative Assistant
PCTH Graudate/Undergraduate Assistant
ANA Residency Program Assistant
ANA Residency Program Coordinator

Winning Presentations:
ORAL ABSTRACT # 17
Peripheral Nerve Blocks at St. Paul’s Hospital: Results from a Quality Improvement Project on Outcomes and Complications
JMB Wilson, S Petrar, C Prabhakar, XL Li, SKW Schwarz, CH Yarnold
Dept. of Anesthesiology, St. Paul’s Hospital
ORAL ABSTRACT # 13
Usability Evaluation of Panda, a Smartphone Application Designed to Support Pediatric Post-Operative Pain Management at Home
Terri Sun, Ian Miao, Dustin Dunsmuir, Nicholas West, Matthias Görjes, Gregor M Devoy, Gillian R Lauder, J Mark Ansermino,
Department of Anesthesiology, Pharmacology, and Therapeutics; BCCH-PART; University of Aberdeen

ORAL ABSTRACT # 10
Combining micro-CT imaging and transcriptomics to find new therapeutics for small airways disease and emphysema in COPD
Steven Booth, Hyun-Kyoung Koo, Guohai Zou, Jackson Steinkamp, Jake Kantrowitz, Dragoș M. Vasilescu, Maen Obeidat, Marc Lenburg, James C. Hogg, Avrum Spira, Tillie-Louise Hackett
Center for Heart Lung Innovation, Department of Anesthesiology, Pharmacology and Therapeutics; Department of Medicine, University of Boston.

ORAL ABSTRACT # 19
A new intraplantar hypertonic saline assay for repeatable rapid detection of effective analgesics without tissue damage in mice
Yahya I. Asiri, Timothy Fung, Stephan K.W. Schwarz, Alasdair M. Barr, Ernest Puil, and Bernard A. MacLeod
Hugill Anesthesia Research Centre, Department of Anesthesiology, Pharmacology, and Therapeutics, UBC

AWARDS NIGHT

RESEARCH COMPETITION WINNERS:

1st Place - Anesthesia Oral Presentation:
Jason Wilson

2nd Place - Anesthesia Oral Presentation:
Terri Sun

1st Place - Pharmacology & Therapeutics Oral Presentation:
Steven Booth

2nd Place - Pharmacology & Therapeutics Oral Presentation:
Yahya Asiri

1st Place - Anesthesia Poster Presentation:
Michal Nowakowski

2nd Place – Anesthesia Poster Presentation:
Lucas Porto
1st Place - Pharmacology & Therapeutics Poster Presentation:
Jade Yau

AWARDS

Dr. Dimitri Giannoulis Memorial Award in Regional Anesthesia – Vishal Varshney
Dr. John A. McConnell Memorial Award for Academic Excellence – Steven Moore
Dr. Derek Daniel Wolney Memorial Prize for Clinical Proficiency – Peter Rose
Dr. Jone Chang Memorial Award in Anesthesiology Excellence – Anne-Marie Madden
Dr. Jone Chang Memorial Prize in Chronic Pain – Vishal Varshney
Dr. Anthony Boulton Award for FPA Clinical Excellence – Cory Veldman
Dr. Paul Kliffer Golden Epidural Award – Kristen Kidson (Jr. Resident)  
Peter Rose (Sr. Resident)

Dr. Michael Smith Award for Pediatric Anesthesia – Anne-Marie Madden

RCH Resident Award for Clinical Excellence – Martha DiGuisepppe (Jr Resident)  
Navraj Chima (Sr Resident)

Ken C.K. Wong Award for Clinical Teaching – Hao Chen
Kenny Wong Award for Clinical Excellence and Collegiality – Kali Romano

UBC APT Advance Simulation Training Program –  
Alexandre Lefebvre and Shannon Lockhart

Dr. Keith Mills Award for Excellence in Neuroanesthesia Studies – Kali Romano

Pharmacology & Therapeutics Undergraduate Awards

Esther Anderson Memorial Prize (highest graduating average in Honors Pharmacology)  
Mengtian Zhu

Prakish Gill Memorial Prize (highest graduating average in Majors Pharmacology)  
Andy Jiang

MERCK Canada (formerly FROSST) Medical Scholarship (final year medical student who has made achievement in Therapeutics) - Dr. John-Jose Nunez

MERCK Canada Scholarship in Medicine - Dr. Vincent W.S. Wong

Thomas L. Perry Memorial Prize in Medical Pharmacology & Therapeutics  
Dr. Nick Zhygan

Pharmacology & Therapeutics Graduate Awards

Sacks Prize (Best presentations in 2016/2017 PCTH 514) – Victoria Baronas
FACULTY AWARDS

Master Teacher Awards:
Vancouver General Hospital – Dr. Henrik Huttunen
St Paul’s Hospital – Dr. Chris Prabhakar
Royal Columbian Hospital – Dr. Laura Duggan
BC Children’s Hospital – Dr. Stephan Malherbe
BC Women’s Hospital – Dr. Anton Chau
Rural/Community hospitals – Dr. John Veall (LGH)
Medicine – Dr. Don Griesdale (Critical Care)
Family Practice Anesthesia Master Teacher Award – Dr. Anton Chau (BCW)
Family Practice Anesthesia Master Teacher Award – Dr. Stephan Malherbe (BCCH)
Family Practice Anesthesia Master Teacher Award – Dr. Sarah Hall (Nanaimo Gen Hosp)
Dr. Dimitri Giannoulis Resident Appreciation Award - Dr. Alana Flexman

PROMOTIONS, RESEARCH AWARDS, SCHOLARSHIPS AND OTHER KUDOS
In 2017:

Promotions:
Clinical Instructor to Clinical Assistant Professor:
  Dr. Gavin Gracias – Burnaby General Hospital
  Dr. Kenneth Ryan – Royal Columbian Hospital
  Dr. Christopher Prabhakar – St. Paul’s Hospital
  Dr. Marshall Cheng – Surrey Memorial Hospital
  Dr. Alex Veseley – Surrey Memorial Hospital
  Dr. Andrea Brovender – Vancouver General Hospital
  Dr. Chris Durkin – Vancouver General Hospital
  Dr. Jacqueline Trudeau – Vancouver General Hospital
  Dr. Andrew Neitzel – Lower Mainland

Clinical Assistant Professor to Clinical Associate Professor
  Dr. Shafik Thobani – Lions Gate Hospital
  Dr. Stephen Head – St. Paul’s Hospital

Clinical Professor to Clinical Professor Emeritus
  Dr. Peter Duncan – Victoria General/Royal Jubilee Hospitals
Congratulations to Kristen Kidson for securing the 2017 Canadian Anesthesiologists Society Critical Care Medicine Award for the paper entitled “Trends and Outcomes of Severe Sepsis in Women of Childbearing age according to Pregnancy Status in the U.S 1998 – 2013”
The proliferation of mobile devices around the world is shrinking the gap between patients and hospitals, making health care more accessible and affordable. Medical professionals today can connect with patients and labs with unprecedented ease, even in the most remote regions, and a Canadian innovation is putting powerful diagnostic tools at their fingertips.

Guy Dumont of The University of British Columbia and Liongate Technologies partnered to develop the Kenek O2, a small, easy-to-use diagnostic tool that connects to the audio port on your mobile device. Patients clip a sensor onto their finger and an app on the phone tests for signs of easily preventable diseases such as pneumonia, sepsis and pre-eclampsia. Currently, the sensor, a pulse oximeter, measures blood oxygen saturation and heart rate, but Dumont and Liongate Technologies have plans to improve their device to measure multiple vital signs including respiration, and—through the use of additional sensors—blood pressure and body temperature, greatly expanding the range of ailments it can diagnose.

The Kenek O2 has already been approved by Health Canada, and now Dumont and Liongate Technologies are bringing their mobile health innovation to the world. They are establishing partnerships in Africa, China and India, as the Kenek O2 will be particularly useful in remote and developing regions where access to hospitals is limited.

For additional information or to request photos of NSERC Prize Winners, please contact Media Relations.
Department Statistics

Full-time faculty - 20
Clinical Faculty - 429
Fellows - 11
Residents - 59
Medical Students - 192
Number of ORs – 210
Pharmacology Graduate Program – 20 students
Pharmacology Undergraduate Program – 47 students
Postdoctoral Fellows - 9
The year 2017 saw the opening of the new TECC Acute Care Centre. This brand new eight story building on the Children’s Hospital Campus houses all the acute care operations of the hospital including the Emergency Department, the Intensive Care Units, all inpatient units and the Operating Rooms. In addition to all new operating rooms, the Department of Anesthesia routinely cares for patients in a purpose designed oncology procedures suite integrated into the oncology unit, in a burn wound care facility on the inpatient floor as well as in a new diagnostic imaging centre on the main floor.

The new facility has imposed changes in the work flow and flow of patients as a result of design considerations. The image guided procedural work in interventional radiology and cardiac catheterization has been brought into a comprehensive procedures unit. The resulting size of the unit’s footprint together with a desire to maintain critical adjacencies between high acuity procedure rooms and the Pediatric Intensive Care Unit have resulted in the procedures rooms and the associated anesthesia care units (ACU’s) being spread vertically over two adjacent floors. The two ACUs combine the functionality of what previously was the surgical day care unit and the post anesthesia care unit. All rooms in the ACUs have moved away from the traditional multi-bed ward model and are single family rooms with individual glass doors.

The Department of Anesthesia academic and administrative space including shared office space for anesthesiologists is located on the third floor immediately adjacent to the procedure rooms.

The Pediatric Anesthesia Fellowship program remained strong in the 2017 calendar year under the leadership of Katherine Bailey as fellowship director.
BC Children’s Hospital enthusiastically continued as the major site for anesthesia resident education in pediatric anesthesia under the direction of Residency Coordinator Zoe Brown. The hospital welcomed second year as well as fourth year residents to rotations at the hospital. Previously residents were not placed at BC Children’s until their fourth year. 2017 saw the hospital prepare for the transformation to competency based training with the first trainees under the new system anticipated for 2018.

The Department of Anesthesia relaunched its popular Pediatric Anesthesia Update course under the direction of Zoe Brown with participation of a large portion of the BC Children’s Hospital faculty. The course is aimed at bringing community anesthesiologists with a pediatric practice together with BC Children’s Hospital anesthesia faculty for a day of learning. The format of primarily simulation and problem based learning discussions was well received. The course will be offered on an annual basis.

The revamped research structure with Simon Whyte and Matthias Gorges as co-chairs of the Department research committee became established 2017. A significant milestone achieved was the hiring of Andrew Poznikoff as Research Coordinator for the Department.
Mid 2017 saw the retirement of one of the pillars of clinical and academic anesthesia at BC Children’s Hospital, Dr. Carolyne Montgomery. Her wisdom, experience and enthusiasm will be missed.
The new Teck Acute Care Centre (TACC) opened at the end of October 2017, and includes for BC Women’s a fabulous new labour and delivery unit with 4 high acuity rooms, as well as 4 new operating rooms. The new NICU has 70 single rooms, and is on 2 levels of the new building. There is an amazing new ‘pod’ called ‘Rabbit’ that is a mother-baby unit in the NICU – so new moms can room in with their new baby(ies) that need some intermediate level NICU attention. Our very old and cramped ‘Assessment Room’ has been replaced by a spacious and well-lit Urgent Care Centre – so not an emergency room, but better positioned to manage our busy obstetric programs. So, we are now proudly spread over the old 1950s Shaughnessy building, the 1982 building and the TACC centre, with more renovations planned in order to expand the gynecological services programs at BCWH. Roller skates are required on some days!

BCW has an amazing fellowship program, run very skillfully by Dr. Anton Chau. We have an excellent list of applicants to choose from, and take 3 fellows annually for a year-long obstetric anesthesia and research fellowship. Our presence at the premier research meeting for obstetric anesthesia – SOAP- is being felt as our fellows present their research and challenge with new ideas.

We hope to be able to have 24/7 Anesthesia Assistant coverage by January 2019, which will allow us to offer cell salvage 24/7 – a milestone for us since the loss of Children’s perfusionist support.

Staffing/Recruitment – There are 14 faculty in the department, several AAs and a research assistant. A new search for a Department Head is in progress.
St. Paul’s is a Clinical Medical Academic Centre in downtown Vancouver that is integral to the University of British Columbia Faculty of Medicine. It is part of Providence Health, which comprises St. Paul’s Hospital, Mt. St. Joseph’s Hospital, and a number of residential facilities. The main foci of tertiary care is in Cardiac Sciences, Respiratory, HIV, and Renal disease. The Department of Medicine houses major initiatives in Respiratory, Cardiac, HIV, and Nephrology areas. The Department of Surgery aside from Cardiac sciences also has components including Urology, Otolaryngology, General, Gynecologic, Plastic, and Orthopedic surgery as well as Thoracic and Vascular surgery.

Anesthesiology at St. Paul’s Hospital is a major Department comprising 40 anesthesiologists. The Department also delivers anesthetic services at Mt. St. Joseph’s hospital (a community hospital) where 4 Operating Rooms and 3 Ophthalmology Procedure Rooms are in operation. The Department supports a Trans-esophageal Echo Program as well as various initiatives in interventional cardiology and radiology. At present 2 anesthesiologists have sub-specialty training in Intensive Care as the Department continues to evolve care in the Cardiac Surgery Intensive Care Unit, and increase connections with ICU. Recruitment has resulted in two anesthesiologists with fellowships in regional anesthesia advancing the regional anesthesia program.

Dr. Jill Osborn is the lead for Acute and Interventional Pain. Dr. Colm Cole, Dr. Clinton Wong, Dr. Alan Berkman, and Dr. Brenda Lau continue to work on staff. Dr. Ainsley Sutherland is new to St. Paul’s this year and will provide a much needed extra person in the pain setting. The Acute Pain service portion of this division treated over 1000 inpatients with PCA, regional and epidural analgesia in the last year. Increasing use of various nerve catheters continues to grow.

The chronic pain diagnosis and management portion of this division had over 425 fluoro assisted and over 1500 non-fluoro injections in the last year. Increasing numbers of Spinal Cord Stimulators are being inserted in conjunction with Neurosurgery, and 416 intrathecal pumps. Neuromodulation is becoming a growth industry. This is the only multidisciplinary chronic pain clinic in the province, and provides services with outreach to many areas outside the lower mainland. Given its unique and well-planned efficiency this is hoped to be used as a model for the evolution of various chronic pain programs in the province.

The research of one of our members, Chris Prabhakar, has also been featured in the following video in “Anesthesiology News”: http://www.anesthesiologynews.com/Multimedia/Article/05-16/Echogenic-Needles-Provide-Best-Needle-Visualization-at-Steeper-Angles-of-Insertion/36408

Simulation
The CodePINK simulation program continues to run 6 times per year. Two scenarios take an Obstetrician, Anesthesiologist, Anesthesia Assistant, OR nurses, Maternity nurses and PAR nurses through a maternal fetal crisis from the ward through patient transport into OR and skin incision. Debriefing focuses on system issues as well as team communication, decision making
and situational awareness. This program is run through funding from the St Paul’s Hospital Foundation. Work has started to expand this type of multidisciplinary simulation at St. Paul’s Hospital.

**Future Directions**
The Department of Anesthesia at St. Paul’s Hospital will continue to develop as one of the larger departments in Providence Health Care. This will certainly bring changes to the department both as a result of external pressures as well as internal changes within the organization. Expansion of the Cardiac Surgery Program into trans-apical values has resulted in an endovascular OR suite where Trans-femoral aortic valves are also performed. This also supports vascular surgeries involved in endovascular stents. The CSICU continues to evolve under a small subset of departmental anesthesiologists. Future evolution of the surgical approach to heart failure as well as research initiatives in delirium promise to take it in new directions.

The Department continues to explore opportunities in alternative funding of anesthesia delivery. It views itself as a leader in innovative solutions and is attempting to work within the greater provincial funding to find new ways of allowing anesthesiologists to practice.

The Department therefore continues to recruit and energize its membership. Despite continuing changes the next year or two should show great evolution in our involvement with UBC, hospital and research.

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**VANCOUVER GENERAL/UBC HOSPITALS**
Dr. Hamed Umedaly
Department Head

Members of the Department of Anesthesiology and Perioperative Care were engaged in clinical interactive teaching and mentorship of medical students, residents and fellows. They continue to develop their clinical and academic capability, with lenses on perioperative care, quality improvement, safety, as well as tertiary and quaternary referral and community levels of care in subspecialized areas including neuroanesthesia, trauma, solid organ transplantation, cardiac and thoracic anesthesia, spinal injury and reconstruction, vascular anesthesia, complex and hepatobiliary general surgery, and ambulatory anesthesia. With the aforementioned clinical substrate, the department’s 70 committed anesthesiologists continue to provide outstanding learning opportunities, with a focus on quality, and dedication to teaching and research.

Academic activity has been well resourced, and the strong commitment of the newly formed academic group has culminated in a highly productive publication output of superb quality, consisting of both peer reviewed publications and book chapters. A significant proportion of these publications were collaborative.
ROYAL COLUMBIAN & EAGLE RIDGE HOSPITALS
Dr. John Ramsden
Department Head

Royal Columbian Hospital
As the tertiary care centre for the entire Fraser Health Authority, which serves over one-third of the population of BC, the Royal Columbian Hospital provides a wide spectrum of surgical services. In fact, the range of surgical services provided at RCH is unmatched by any other site in British Columbia. RCH is the highest volume cardiac center in BC and also sees the most high-level trauma--it is by far the busiest trauma neurosurgery center in BC and is one of the top three centers in Canada for trauma orthopedics. Year after year RCH continues to have one of the highest risk-adjusted performing NICU; it is the one of the few centers in BC that can handle high-risk OB cases that require ICU and/or cardiac care. Interestingly, over 60% of the cases performed at RCH are classified as urgent/emergent. Over the last decade, NSQIP data has consistently ranked RCH surgical patients as having the highest acuity amongst the hundreds of North American hospitals participating in the study; at the same time, RCH has managed to have exemplary results.

Eagle Ridge Hospital
The six operating rooms at ERH provide space for nearly 10000 surgical cases a year, the majority of which are Surgical Day Care cases. Most of the pediatric cases done by the Department are performed at ERH.

BURNABY GENERAL HOSPITAL
Dr. Gavin Gracias
Department Head
Dr. Liz Chuah – Site Coordinator

Burnaby General Hospital runs seven operating rooms on a daily basis with caseloads consisting of urology, general surgery, ophthalmology, orthopedic, OB/gyne, ENT, and plastics cases. One of our most significant endeavours in recent years was the development of a Regional Anesthesia Program. We believe this improved patient care drastically particularly for patients undergoing total joint replacements. This program also led to increased interest from anesthesia residents wanting to do regional anesthesia rotations at our site. Unfortunately, due to anesthesia staffing shortages and lack of funding, the regional program was put on hold in 2018. Due to the program’s cancellation, some residents have opted to go elsewhere for their elective time. We are currently working to fill anesthesia staffing shortages, obtain adequate funding for the regional anesthesia program, and hire an anesthesia assistant in the hopes of reviving this program in 2019. We have enjoyed teaching anesthesia residents at our site and hope to see more of them in the future.
VANCOUVER ISLAND HEALTH AUTHORITY
Sites:
Victoria General Hospital, Cowichan District Hospital
Royal Jubilee Hospital, Westcoast General

Hospital
Saanich Peninsula Hospital, Nanaimo Regional Hospital
Comox Valley Hospital, Campbell River Hospital

Dr. Tom Ruta
Department Head and Medical Director for Vancouver Island Health Authority

Division Heads:
Dr. Mike Atherstone: Campbell River/Comox Valley Hospital
Dr. Jim Capstick: Nanaimo Regional Hospital/West Coast General Hospital
Dr. Steven Krauss: Cowichan District Hospital/Saanich Peninsula Hospital
Dr. Terry Murphy: Royal Jubilee Hospital/Victoria General Hospital
Dr. Christie Avenant: Family Practice Anesthesia

The health authority’s mandate for 2017 was to reduce surgical waiting lists. As a result, there were additional funds available to support this initiative and were principally directed to do more joint and dental surgery. This required additional hiring of nurses, surgeons, AA’s and anesthesiologists.

Two new hospitals were opened in Campbell River and Comox in October 2017 and the OR capacity increased. In addition, the OR’s are state of the art and this is a welcome improvement from the old hospital.

View Royal Surgical Center is a private surgical center that opened in 2017 to help reduce surgical wait lists. The goal is to have 2 rooms running and they will be doing same day cases on ASA 1 and 2 patients.

We continue to have staffing challenges at Cowichan and Campbell river

New members were hired at:
West Coast General Hospital (Dr. Cassim)
Saanich Peninusla Hospital (Dr Fard)
NRGH (Dr Le Roux, Dr James)
RJH/VGH Dr Vethanayagam, Dr Penner, Dr Bishop, Dr Anderson

SSC Funding Initiatives
Rob Rideout-OSA and PACU
Gus Chan-Parallel processing outside of the OR and how it would improve OR efficiency
Kevin Yee-MINS protocol implementation
Sean Lougheed-Preadmission Clinic redesign. Collaborating with Dr Karen Wong (NRGH)
**Dept Highlights**

Dr Logan Lee is our Education Representative and has helped coordinate the many students and residents training in the South Island.

Meghan O’Connell, organizes our CME events for the year

Dr Shuen King and Dr Sarah Hall (NRGH) continued to organize simulations for dept members.

Dr Pooyah Kazemi organized a TTE course in early 2017

Dr Steve Head organized a regional workshop in the fall of 2017

Several south Island members host a Resident Exam Session annually in Victoria

Many sites host evening journal rounds and these have been successful in helping members get together and discuss topics of interest.

Dr Brent Caton organizes a care team from Victoria that travels to Guatemala annually

Dr Peter Duncan was awarded an Emeritus Professor award at UBC

**Future**

The Department continues grow to meet increased surgical demand and provide innovative ways to improve efficiency and quality of care. It is a very exciting and busy time.

We have had a great year and continue to appreciate the talented people contributing to the care of patients and education of others.

**NANAIMO REGIONAL GENERAL HOSPITAL**

Dr. Sarah Hall, Site Coordinator

Nanaimo Regional General Hospital (NRGH) has 288 acute-care beds and serves as a regional referral centre for mid and upper Vancouver Island. Residents typically enjoy exposure to interesting ENT and general surgery cases, with frequent awake intubations. Nanaimo is a great place to get exposure to pediatric cases and to consolidate obstetrical anesthesia skills. A wide range of general, urologic, plastic, maxillofacial and orthopedic surgeries is performed with an emphasis on regional and neuraxial techniques. Department members staff a Preadmission Clinic and monthly Morbidity and Mortality rounds are held. Three anesthesiologists are involved in the Interventional Interdisciplinary Pain Program where 7000 patients are seen annually.

2017 was a year of flux for our department because we bid adieu to our colleagues—Judy Coursley and James Lindsay. As they head off to a well-deserved retirement, we are joined in 2018 by Theo LeRoux and Mark James – both seasoned anesthesiologists from Saskatchewan. They join Hans Babst, Jason Lee, John Riendl, Scott Neilson, Paul Castner, Sarah Hall, Bob Gaultois, Georgia Hirst, Michael Seltenrich , Jim Capstick, Karen Wong, Trevor VanOostrom, Michael Pariser and Karl Muendel.
Summary of 2017:

- Dr. Jim Capstick served as Division Head Specialist Anesthesia Geography 2 and Medical Lead Anesthesia NRGH
- The Simulation program continued to be highly successful. Many of the sessions over the past year were cross-disciplinary, involving other specialties including ENT, Emergency and General Surgery. The latest expansion of the program was the launch of our Inter-professional Perioperative Simulation Workshops, for which we have obtained Section 3 accreditation.
- Our innovative Chronic Pain Clinic includes Dr. Michael Pariser, a recent grad from Western who passed Canada’s first pain fellowship exam in 2016. Dr. Van Oostrom is back in practice from his pain fellowship year spent at the Cleveland Clinic. Dr. Karl Muendel practices chronic pain full time.
- Our Anesthesia Assistant department now has four members and is soon to have three full time positions. Jessica Barak and Evgeni Schvarzman join Paul Gear and Sarah Repa with the hopes that before the end of 2018 we will have coverage in the evenings and on weekends too!
- The Anesthesia Consult Clinic is undergoing a complete redesign under the guidance of Dr. Karen Wong.
- We are working on updating our pre-operative testing to conform with the Choosing Wisely Canada Guidelines.
- ERAS is being implemented.
- We launched a highly successful monthly Journal Club, typically led by the Anesthesia resident rotating through. It is held at a different restaurant every month and is a very popular event.

Every year, our department hosts medical students and residents from UBC, across Canada and throughout the world. We look forward to welcoming more students, continuing to be pioneers in the simulation world and to ongoing medical education in 2018.
Since taking over as the new head, Dr Akhtar has been working on multiple forms of standardization for the department according to Anesthesia guidelines.

As the current Disciplinary Site-Specific Lead (DSSL) for the Department of Anesthesia at UHNBC, Dr Akhtar has worked towards recruiting and obtaining more funding/resources and instruments that can improve the teaching of medical students/residents regarding procedural skills. Dr Akhtar, with the help of Dr Winwood, was able to obtain airway teaching devices through the generation donations of the Northern Medical Program (NMP). The NMP kindly donated two new CMAC blades for students to use in light of the significant efforts made by the Anesthesia Department and Dr Akhtar to enhance the teaching of CC3/CC4 students in new intubation techniques.

The Department teaches 3rd year medical students from the NMP during their anesthesia rotation, participates in the training of Family Practice residents, provides opportunities to 1st and 2nd year medical students for shadowing, as well as teaching 4th year students from educational institutions within BC and other provinces during their electives.

Resident from UBC are not rotating Prince George as part of a rural rotation during their residency. The Anesthesia Residency Program Director at UBC has encouraged UBC residents to consider Prince George for their rural anesthesia rotation. This has been reiterated by the Anesthesia Department here at UHNBC.

The Anesthesia department here is proud to announce the regular utilization of the Northern Simulation Centre at UHNBC for CC3 teaching sessions as per UBC curriculum. It is encouraging to see the interest in session by preceptors and students alike.

A new OR is being developed and is in the near-completion phase with the overarching goal to have a new OR dedicated for Obstetric emergencies. In addition to ORs, the anesthesiologists at UHNBC also run a pre-surgical screening consult clinic and chronic pain clinics. Services are also provided for ECT, cardioversion, endoscopy, sedation for pediatric MRI/radiology, as well as in the Emergency and Critical Care Departments. In order to accommodate for the increasing operating room capacity, and use of anesthetic services, our department is in the process of recruiting more anesthesiologists. We are proud to announce that Dr Lucile will be joining us in January 2019. In addition to this, the Department of Anesthesia has also recruited three new part time anesthesiologists. Overall, we are proud to also announce that the chronic pain clinic is now currently staffed by two anesthesiologists with dedicated clinic as well as OR duties.
Kelowna General Hospital continues to grow in 2017, hiring 3 new anaesthesiologists bringing our total to 30. This year has also seen Dr. Jackson step down from the role of Department head after 3 years of calm and thoughtful leadership. Thank you for your hard work which has lead to much improved relationships with the health authority and set a foundation for creative problem solving. Dr. Jackson has been succeeded by Dr. Mark Masterson.

Residents at all levels continue to visit from across the country and our department embraces the opportunity to teach them in our high volume and complexity referral hospital.

New members have brought great energy to the department, including development of our first locally run simulation sessions for consultants anaesthesiologists delivered in conjunction with UBCs simulation centre. Plans are now underway to build multidisciplinary simulation with our allied health partners.

In September we began offering anaesthesia support for all ERCPs performed at KGH. This has been a great success for patients with decreased failure rates for inability to cannulate and has been highly appreciated by the RNs and patients. Enhanced recovery programs are slowly expanding to include esophagectomies, whipple’s and arthroplasties.

The department has also been very active with the MSA and has been successful in leading projects looking at the reorganisation of paediatric surgical services in the interior as well as improving efficiency in management of OSA patients. Early work last year has now led to the start of several PQI projects on perioperative Suboxone, blood utilisation and management of autistic children.

The Surgical Services Strategy will lead to expansion at KGH in the coming years, with more ORs and opportunity for creative efficiency gains. Much like other departments in the province we will be recruiting for excellent candidates in the coming months.
Pharmacology and Therapeutics

PHARMACOLOGY

As part of the Department of Anesthesiology, Pharmacology & Therapeutics (APT), we are committed to excellence in Pharmacology and Anesthesiology education and research through creativity and dedication. Our present research strength is in areas of neural, cardiovascular, respiratory, ion channels, and clinical pharmacology as well as drug development. We have strong collaborations within the Department in Anesthesiology, Pharmacology and the Therapeutics Initiative as well as outside of the Department.

In addition to research efforts, we have maintained our excellence in teaching at the undergraduate, graduate and postgraduate levels in both pharmacology and therapeutics. The department has been offering degree programs in undergraduate and graduate pharmacology. The PCTH 514 seminar series, led by Dr. David Fedida and Dr. B.R. Sastry, continue to provide opportunities for our students to share their research interests and accomplishments; and the Department Seminar Series, organized by Dr. D. Fedida, continue to provide an opportunity for faculty and students to be exposed to other related research areas from within and outside the university.

Medical Undergraduate Teaching
Pharmacology-driven educational activities and assessable learning objectives have been incorporated into most weeks of the year 1 and 2 curricula. The Department has increased its engagement of faculty members to give pharmacology lectures. Existing Case Based Learning (CBL) cases are undergoing review for opportunities to add further pharmacology content. We have been working collaboratively to include pharmacology in multi-disciplinary clinical reasoning sessions, and collaborations with complementary theme leads (e.g. patient safety, addictions) have provided further opportunities to reinforce pharmacology principles.

The clinical experiences in years 3 and 4 continue to focus on clinical rotations where pharmacology teaching is integrated into the clinical setting. Further pharmacology teaching is being incorporated into several aspects of the new Transition into Professional Practice (TIPP) course, which is presently being developed.

Graduate Program
The department offers both Ph.D. and M.Sc. degrees in pharmacology and therapeutics. In 2017-2018, 3 new MSc students joined, and 4 students graduated with a degree (1 MSc and 3 PhDs).
Undergraduate Pharmacology

Undergraduate Education-Non-Medical, Bachelor of Science

The Department offers a 4-year B.Sc. and a 5-year B.Sc. Co-op Education program in Honours as well as Major pharmacology. The aim of our programs is to produce a graduate broadly trained in all aspects of pharmacology. The B.Sc. Pharmacology program has been in existence under the Faculty of Science for about three decades. In the first and second years, the students take a basic science program.

The program emphasizes the experimental and laboratory aspects of Pharmacology and students learn both the whole animal and isolated tissue techniques as well as biochemical and chemical procedures. Skills that are stressed include the ability to search for information, design appropriate experiments, carry out experiments individually and as a member of a team, analyze data and, communicate and write effectively.

Since there is room for a maximum of 24 students in third year, all those in registered second year are interviewed by Dr. S. Karim as part of the selection process. Entrance to third year is primarily on the basis of marks and completion of a minimum of 60 credits within the winter terms of year 1 and 2. Students then select Honours or Majors in either the four year or five year (Co-op) program.

Co-op Program

For the co-op program, in addition to classical laboratory-based university instruction, the students will 12 to 16 months of paid work placement (i.e., 3 to 4 work-terms) in pharmacology research laboratories in pharmaceutical companies or academic institutions.

Work placement starts in May or September after the completion of year 3 and continues through year 4. Students in the honours program will take additional credits in years 2,3, and 5 and conduct a laboratory-based research project for 6 months during year 5 (Sept. to March) within the Department and present an Honours thesis (PCTH 449).

Students participating in the Co-op program register for PCTH 398, 399, and 498, in addition to the normal academic requirements, and pay the Co-op Education Program fee for each course (see Index for Fees-Special Fees). PCTH 499 is optional for students who want to have four work placements.

Over the past few years, we have had our co-op students placed in various pharmaceutical and biotechnology companies in Canada, Japan, Germany, Singapore, Austria, and the United States.
The Therapeutics Initiative (TI) was established in 1994 by the Department of Pharmacology and Therapeutics in cooperation with the Department of Family Practice at The University of British Columbia with its mission to provide physicians and pharmacists with up-to-date, evidence-based, practical information on prescription drug therapy. To reduce bias as much as possible, the TI is an independent organization, separate from government, pharmaceutical industry and other vested interest groups. We strongly believe in the need for independent assessments of evidence on drug therapy to balance the drug industry sponsored information sources.

Over the years the TI has substantially enhanced its ability to assess the clinical evidence presented in published articles, meta-analyses by the Cochrane Collaboration and scientific material presented by the pharmaceutical industry. In pace with the extensive assessment of clinical evidence, the TI has developed effective ways of knowledge translation and dissemination of this evidence to all active players involved in drug therapy: physicians, pharmacists, nurses and policy-makers (Ministry of Health) and is committed to analyzing its own impact.
The Therapeutics Initiative (TI) provide physicians and pharmacists with up-to-date, evidence-based, practical information on prescription drug therapy. In pace with the extensive assessment of clinical evidence presented in published articles and meta-analyses by the Cochrane Collaboration, the TI has developed effective ways of knowledge translation and dissemination of this evidence to all active players involved in drug therapy: physicians, pharmacists, nurses and policy-makers (Ministry of Health).

Funding

On October 1, 2017, the Ministry of Health of BC awarded the TI a $10M grant support till 2023.

Educational events

The Education Working Group of the TI offered more than 30 different educational events throughout British Columbia in 2017, highlights:

- “Best Evidence for Clinicians” – Accredited one-day course at Surrey Memorial Hospital, Surrey, BC on Oct 21, 2017 with over 150 participating physicians and pharmacists
- "Drugs, Dinner, and Dinosaurs" – Accredited course at Tumbler Ridge, BC on May 10, 2017. Therapod admires tracks left by Therapeutics Initiative on Wolverine Creek and Dr. Tom Perry sweeps up afterwards.

Training & Teaching

Evidence-based medicine, systematic review, meta-analysis methodology, and critical appraisal of randomized controlled studies for a very diverse student body.

- 20 elective medical students coming from BC, Quebec, England, Australia and New Zealand.
- 30 pharmacy practice residents for a 2-week to one-month critical appraisal rotation
Therapeutics Letters

Bi-monthly practical letter distributed to clinicians in BC on problematic therapeutic issues, publically available on the TI website: https://www.ti.ubc.ca/therapeutics-letter/

- Nov-Dec: [107] EMPA-REG OUTCOME Trial: What does it mean?
- Sept-Oct: [106] Using Best Evidence for the Management of Hypertension
- Jul-Aug: [105] Is cyclobenzaprine useful for pain?
- May-Jun: [104] Does Medication Review improve health?
- Mar-Apr: [103] Is the current ‘glucocentric’ approach to management of type 2 diabetes misguided?
- Jan-Feb: [102] Indacaterol for chronic obstructive pulmonary disease

Publication Articles

11. Tejani AM, O’Sullivan C. Should Patients Continue to Receive Statins Once They Reach 80 Years of Age? (CON). Canadian Journal of Hospital Pharmacy 2017;70(3):244-246.
EDUCATION

POST-GRADUATE MEDICAL EDUCATION PROGRAM
ANESTHESIA RESIDENCY

Dr. T. Laine Bosma
Program Director

Training Positions
As of December 2017, a total of 58 residents were registered in the 5-year Royal College Physicians & Surgeons program. Eleven of these residents are scheduled to complete their residency during the 2018 calendar year and will be taking their RCPSC examinations in Anesthesiology in the spring of 2018. The number of CaRMS positions has remained stable at ten or eleven for the last few years. Eleven residents joined the program in 2017. We continued to have a large applicant pool of over 100 well qualified students with a large contingent of UBC students applying.

New Graduates
Eleven of our twelve PGY5 residents were successful in the 2017 Royal College specialty examinations in Anesthesiology. Our PGY 5 Seminar Series, led by Dr. Ron Ree, continues to be very successful and a model for Royal College exam preparation. Most of 2017’s graduates have found faculty positions at UBC academic hospitals.

Competency by Design
In July 2017 the UBC Anesthesiology program admitted its first cohort of residents under the new Royal College Competency based training program. After successful completion of the initial 8-week Transition to Discipline stage all 10 of the 1st year residents are currently mid-way through their Foundation stage.

A committed group of faculty have assisted in implementing changes in our program design as well as developing a new electronic evaluation portfolio. A new Competency Committee has been formed with representation from across the province that will provide a more detailed and robust system for assessing resident progress and promotion.

We will continue to check in with the residents and training sites on a regular basis to ensure the new systems are functioning smoothly. We welcome feedback to continue to modify and improve our CBD program to make it work for our UBC training sites

Resident Selection Committee
A very robust and active sub-committee of the Residency Training Committee (RTC) reviewed all applicants. The Selection Committee was chaired by Trina Montemurro, with committee members representing all of the major BC teaching hospitals. Resident members are also well represented on the committee.
Resident Wellness

Peer mentorship is a new initiative designed to complement the current UBC Anesthesia Mentorship Program, which pairs residents with staff. This project was inspired by an identified need for increased peer (resident-resident) mentorship within the UBC Anesthesia program, particularly to support residents coming from other provinces, and those taking part in the new CBD curriculum. Senior resident mentors may help ease the transition to residency having recently completed this transition themselves, and can offer mentorship regarding housing, different hospitals, and life as a resident in Vancouver. Residents involved in the early years of CBD implementation will also be able to offer support and wisdom to junior colleagues. This year, the incoming R1 residents have been paired with outgoing R1 residents in mentorship pairs. Subsequently, the residents will be matched with staff mentors when they enter their second year, gaining access to further personal mentorship as well as important advice in areas such as career planning.

Academic Program

- **Academic Day** - The full day academic program involving active participation from each of the teaching hospitals was very successful. The current curriculum format, continues to be actively reviewed and updated with each successive year. Updates for the 2017/2018 academic year include:
  - Interactive afternoon sessions that replaced resident presentations and M&M/Interesting case, on the following topics:
    - Breaking Bad News, Charlie Chen, Palliative Care
    - Airway Adjuncts Workshop, Henrik Hutennen
    - Creating effective presentations, Toastmaster’s
    - POCUS, SPH and VGH (Kevin Rondi and Hamed Umedaly)
    - Royal College Exam: Busting the Black Box, Mike Barker
    - Ventilator Workshop, UBC AA’s
    - Transfusion Workshop, Rita Selby, Sunnybrook Hospital
    - Workplace Equity and Professionalism, Gurdeep Parhar
  - Feedback has been positive for the workshops
    - Resident presentations
      - Changed from one 1-hour presentation to 2 x 20-minute presentations
      - well received with more focus on pertinent points
    - M&M/Interesting cases
      - For the most part, people still presented interesting cases, but there were a few debriefs that took place during which useful discussion was had amongst the group
      - Also meant the sessions were protected, e.g. nondiscovery, for potentially sensitive discussions
    - Interpreting the Evidence CBL, Julena Foglia and Don Greisdale
    - Surgical Perspective presentation, Serge Makarenko, organized by Hao Chen
    - POCUS rapid-fire presentations
    - R2 residents were asked to share a 5 minute presentation with a case and image they had acquired and one slide on teaching how to acquire and interpret that particular image
Very well received, sounds like Chris Prabhakar and the US group (Rosie, Dan, Ayda) would like to continue this into next year

- The Residency Training Committee continues to support the autonomy of each participating UBC teaching hospital in delivering their contribution to the residents’ educational program. Program content was tailored to match the area of clinical expertise of each site. Specific days on Airway Management (in collaboration with ENT), Regional Anesthesia, Perioperative cardiac ultrasound, and Research continue to take place.

- **Simulation** - as led by Dr. John Veall, simulation continues to be a mainstay of our residency program. Please refer to the simulation report for specific details

- **Journal Club** - an integral part of the academic program. Meetings occur monthly at faculty members’ homes or other venues. Dr. Anton Chau has done an excellent job in the coordinator role through 2017. These sessions continue to provide the residents with an excellent educational opportunity to learn about critical appraisal skills.

### Clinical Program
The clinical program continues to be a strong element of the UBC Anesthesiology training program. Core training in both core anesthesiology as well as subspecialty anesthesiology is distributed between the primary teaching sites, as well as distributed to the secondary teaching sites. The program continues to work at recruiting new training experiences for residents, with Surrey Memorial Hospital increasing their participation in the program. These expansions will be monitored closely. Many of the primary teaching sites continue to have increasing resident experience out of OR/Perioperative Medicine days which have been favorably viewed by residents and faculty. Residents are also on the Code Blue team at VGH and SPH.

### In-House Examinations
The residency program continues to participate in the Anesthesia Knowledge Test (AKT) pre, 1, 6, and 24, as well as the American Board of Anesthesiology (ABA) exams. These help benchmark resident’s academic performance throughout the residency.

The May and December in-house oral examinations continued with the Royal College format. All residents were examined in one day by faculty volunteer examiners. Each resident received two half-hour exams. Residents generally found the experience stressful but educational.

### Residency Training Committee (RTC)
This committee met every 2 months during 2017 and as always was very effective in guiding the activities of the residency training program. Committee members include hospital program coordinators from each site, our Royal College Examiners, members at large, UBC APT Department Head, resident representation from all years, and the program director as chair.
Dr. John McAlpine  
Program Director

The UBC FPA Enhanced Skills program can accommodate 3 residents per year with a mandate to produce family practice anesthetists committed to working in rural British Columbia. It is a challenging and demanding 12 month program with rotations in tertiary centers throughout the lower mainland in adult, pediatric, and obstetrical anesthesia, a community rotation in Whitehorse, adult ICU, and an elective block. Though an Enhanced Skills program and administered through the Dept of Family Practice, it naturally has a very close clinical affiliation with the Royal College anesthesia program from which it benefits greatly participating in its academic days and other educational opportunities such as airway, regional and simulation workshops in addition to the shared rotation experiences with the fabulous UBC anesthesia faculty.

Early in the year, the FPA residents attended the “FPA Bootcamp” which is an intensive and innovative conference/simulation training program hosted by the NOSM. It is a week in duration and comprised many hours of simulation sessions and lectures and receives very positive reviews from participants. The UBC FPA program is very grateful to the BC REAP program for supporting the tuition for this resident event.

In November, the annual UBC FPA Refresher Course was held with high attendance from the BC FPA community and increasing attendance from other regions. This conference receives tremendous support from the UBC Anesthesia faculty towards the academic content of lectures and workshops. This teaching contribution has been so greatly appreciated and is key to its success.

Administration
Ms. Jill Delane continued in her role as the Program Coordinator. Ms. Susan Van Bruggen continues to be an excellent Program Secretary. Both have been invaluable in the administration of the program.

Summary
Overall, this has been a successful year for the UBC Anesthesiology Residency Training Program. This is due to the many hours of hard work on the part of our clinical faculty working with our residents, taking part in the academic program, as well as helping senior residents prepare for the oral exam and to become skilled anesthesiology consultants. The goodwill and high level of commitment to residency training is a credit to this department.
### UBC Anesthesia Residents 2016-2017 - PGY 3

<table>
<thead>
<tr>
<th>Richard Alexander</th>
<th>Hao Chen</th>
<th>Christine Graf</th>
<th>Rana Hamidizadeh</th>
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### UBC Anesthesia Residents 2016-2017 - PGY 4

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<tr>
<th>Navraj Chima</th>
<th>Amber Galbraith</th>
<th>Aaron Lau</th>
<th>Pawel Martinka</th>
<th>Justendra Naidu</th>
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UBC ANESTHESIA RESIDENTS 2016-2017 - PGY 5

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<tr>
<th>Tonia Berg</th>
<th>Landon Berger</th>
<th>Michael Chuang</th>
<th>Reza Faraji</th>
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<td>Carrie Goodine</td>
<td>Su-Yin MacDonell</td>
<td>Anne-Marie Madden</td>
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<td>François Pomerleau</td>
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<td>Alison Read</td>
<td>Peter Rose</td>
<td>Siu-Kae Yeong</td>
<td>Parisa Soltani</td>
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The 2017 academic year ushered in significant changes to the anesthesia clerkship as part of UBC’s renewal of the undergraduate medical curriculum. As disruptive as change can be, thanks to the combined efforts of administrative staff, physician site leaders and residents within the Department of Anesthesiology, Pharmacology and Therapeutics, the implementation of the renewed curriculum has been seamless.

Among the various changes, students now sit a completely revised exam at the end of the newly-created 12-week Surgery and Perioperative Care (SPC) block, integrating concepts from anesthesia, general surgery, orthopedics and other surgical sub-specialties. Newly created academic full days have rounded out the clinical experience with simulation and small group sessions with multi-discipline content. Student evaluations have been augmented with novel Work-based Assessments (WBAs), and the traditional evaluation paradigm has been reversed with online assessments of preceptors by students (a key accreditation requirement).

Less obvious to the casual observer is the behind-the-scenes work that has occurred to ensure compliance with the undergraduate program’s overarching pedagogical goal of a “spiraled” curriculum. The spiraled curriculum reintroduces core concepts learned at earlier stages of training in increasing complexity in the hope that repeated longitudinal exposure in multiple diverse contexts will enhance long-term retention. To this end, the learning objectives of the anesthesia clerkship have been explicitly linked to lectures and other learning material encountered in years 1 and 2 of the undergraduate program via Educational Activity Forms, which can be easily accessed by students and preceptors alike online via Entrada.

The 2018 academic year should bring a degree of stability to the anesthesia clerkship as we consolidate the changes implemented in 2017. One area of major change, however, will be in leadership. I have decided, as of June 2018, to step down from the role of Clerkship Director. Replacing me on an interim basis will be Dr. Peter Choi, who has been instrumental in the conception and execution of the undergraduate curriculum renewal as the previous Associate Director of Curriculum Years 1 and 2. Dr. Choi is an exceptional academic clinician and Professor within the Faculty of Medicine; I can think of nobody more qualified than him to lead the anesthesia clerkship beyond this year of transition. I wish Dr. Choi every success in his transition, and want to extend to all of the APT administrators, site leaders and residents, with whom I’ve worked over the past two years, my most heartfelt thanks for their support and collaboration.
The goal of the Visiting Professor program is to provide anesthesiologists from around the province stimulating and thought provoking speakers throughout the academic year. Each regional hospital (Vancouver General Hospital, St. Paul’s Hospital, Royal Columbian Hospital, BC Children’s Hospital, BC Women’s Hospital) selects a speaker which best reflects that hospital’s interests at that particular time.

Our visiting professor committee consist of: Dr(s). Giselle Villar (Chair and BCWH representative), Stephan Malherbe (BCCH representative), Kevin Rondi (SPH representative), Paula Meyler (RCH representative), Jacquie Trudeau (VGH representative).

Our speaker this academic year was:
Dr. Philip Hess – Assistant Professor, Anesthesiology, Harvard Medical School.
January 18 and 19, 2017 - What’s New in Obstetric Anesthesia.
- Haemorrhage and Obstetric Anesthesia

Dr. Jean Templeton Hugill Memorial Lecture (organized by Dr. Stephan Schwarz)
Dr. Jean Templeton Hugill Visiting Professor Lecture was on April 26, 2017. The speaker was Dr. Gregory Bryson, Clinical Associate professor, University of Ottawa.
We continue to video-conference the visiting professor lecture series with multiple sites now having access to our speakers in real time. Sites involved via video-conference link include Lions Gate, Nanaimo, Port Alberni, Prince George, Nanaimo, Vernon and Victoria. Feedback from the program has been very positive. Our video library of speakers continues to grow and is available on our website below.

http://apt.med.ubc.ca/anesthesiology/video-lectures/

The UBC department website is linked to the Canadian Anesthesiology Society Continuing Professional Development website so that interested anesthesiologists can access our departmental website and visiting professor videos.
The Department of Anesthesiology, Pharmacology and Therapeutics is composed of basic scientists, clinician scientists and epidemiologists who conduct impactful research in many diverse areas within and between these three pillars. The main research themes of our department include: neurosciences, cardiopulmonary, clinical outcomes and patient safety, and perioperative technology integration. Not surprisingly, there are broad research focuses within these domains. Important areas of basic research include: physiology and pharmacology of the cardiovascular, respiratory and central nervous system. Our clinical research touches all the major domains of anesthesiology: cardiothoracics, critical care, obstetrics, neuroanesthesiology, regional anesthesia, pediatrics, perioperative medicine, patient safety, and clinical monitoring. Finally, there is an important research program in pharmacoepidemiology.

With the strengths of three related but different sections in our department, our diversity enables us to build partnerships between the sections, which allow us to pursue investigations from the bench to the bedside to the population. Furthermore, our department has a long-standing tradition of collaboration with other groups within the UBC Faculty of Medicine (Critical Care, Neurology, Population and Public Health, Psychiatry) and other UBC faculties (Electrical and Computer Engineering).

**Number of publications between 2008 and 2017:**

![Graph showing number of publications between 2008 and 2017]
GLOBAL OUTREACH

Many department members are engaged global outreach activities. Specific missions were:

1. Guatemala - Health for Humanity Surgical Mission
2. Guatemala – C.A.R.E. Team Services Society
3. Uganda – Makerere Hospital/Mulago Hospital
4. Sudan - International Committee for the Red Cross (ICRC).
5. Andra Pradesh, India – St. Ann’s Hospital – Plastic Surgery Camps

Thanks to all faculty, clinical fellows and residents who organized and participated in such important outreach activities.

Antigua, Guatemala
Health for Humanity Surgical Mission –
Health 4 Humanity (H4H) strives to improve the lives of Guatemalans by organizing multidisciplinary teams of volunteers health care professionals on annual medical assistance trips. Since 2002, the group of nurses, doctors and surgeons from around the world have been travelling at their own expense to, among many other things, repair the cleft lips and palates of infants and children. The Primary Health Care team has performed upwards of 300 surgeries to date.

UBC Anesthesiologists - three of the Members of the Board of Directors of Healthy 4 Humanity

Surgical Mission Team – Antigua, Guatemala
Anesthesiologists -
William Abbott                                  Peter Scoates
Joe Del Vicario                                 Tim Sveinbjornson
Wendy MacLeod                                  Brent William Caton
James Prentice
Robert Purdy
In 2014 Dr. Brent William Caton was the Co-founder of the CARE Team Service Society, a registered non-profit Society. He has served as a Director and Medical Lead since the inception of CARE. The Society is dedicated to supporting improvements in health, education and living conditions of impoverished people.
Uganda, Africa
Makerere Hospital/Mulago Hospital
BC Children’s Hospital Team Uganda –

Sudan - International Committee for the Red Cross (ICRC)

This is a completed musculocutaneous skin flap graft - calf to foot - for a 9 year old girl. Note the broom sticks and plaster fixation to keep the legs in position for the next couple weeks - true austere-style surgery. And note the Glostavent halothane drawover anesthetic machine.

Entrance to Red Cross Compound
Andra Pradesh, India
Plastic Surgery Camps at St. Ann’s Hospital for women and girls with burns contractures

Dr. Giselle Villar with O.R. staff and volunteers at Saint Ann’s Hospital in Vijayawada, Andra Pradesh, south of India.
APPENDICES
DIVISION REPORTS

DIVISION OF CARDIAC ANESTHESIA
Dr. Bobby Lee, Head

Resident Training
The UBC anesthesia residents complete a two month cardiac anesthesia rotation at SPH, VGH, and/or RCH, where all sites offer the opportunity to gain experience in the surgical contexts of: CABG, valve repair/replacement, and transcatheter valve implantation. Each site also has their unique training opportunities such as endovascular thoracic aortic aneurysm repair, mechanical assist devices and newer percutaneous cardiac procedures, outside of the standard experience during such a rotation.

Cardiac Surgery ICU
Penultimate and final year UBC anesthesia residents, ICU fellows, and cardiac anesthesia fellows complete a rotation ranging from 1-3 months in the CSICU, either at VGH or SPH. Given the increasing complexity of cardiac surgery patients over the past 15 years, this has resulted in an excellent learning experience for residents in managing complex patients with a variety of mechanical assist devices such as ECMO and LVAD’s as well as challenging medical conditions often seen in the ICU.

TEE/POCUS
For those final year residents with an interest in TEE, a one month rotation has been established at SPH. There is also an opportunity at RCH for a two month rotation to be spent with the cardiologists.

The VGH and SPH sites have recently placed more emphasis on the teaching of POCUS skills to the residents/fellows given that regular POCUS teaching rounds have been established at both sites and staff from both sites have participated in helping teach this skill at the annual UBC Whistler conference. Clearly, this skillset is not isolated to cardiac anesthesia since it overlaps with perioperative medicine but there is ample opportunity to use these skills in the perioperative setting/cardiac surgery ICU.

Fellowship Training
A 1 - 2 year cardiac anesthesia fellowship is offered at both SPH and VGH.

Cardiac Anesthesia Staff Update
There are 5 sites where cardiac surgery/anesthesia is performed in BC though formal resident training in cardiac anesthesia does not occur at all sites: Vancouver General Hospital, St. Paul’s Hospital, Royal Columbian Hospital (New Westminster), Royal Jubilee Hospital (Victoria), and Kelowna General Hospital (Kelowna).
New cardiac staff added in 2017:

**Kelowna General Hospital**
Dr. Shawn Mawhinney

**Vancouver General Hospital**
Drs. Graham Noble and Patrick Hecht

**Victoria/Royal Jubilee Hospital**
Dr. Brian Gregson

**St. Paul’s Hospital**
Dr. Anne-Marie Madden

**UBC City Wide Cardiac Anesthesia Journal Club**
The 5th annual UBC City Wide Cardiac Anesthesia Journal Club took place in May/2017 which was well attended. This year, we discussed one article that was presented by:

Dr. Jean Reaubenheimer (SPH Cardiac Anesthesia fellow):

**SITE UPDATES**

**Victoria/Royal Jubilee Hospital**
Given the recent literature coming from the Canadian Cardiovascular Society guidelines on Perioperative Risk Assessment and management for patients undergoing non cardiac surgery, the cardiac group at RJH led the successful launch of a Myocardial Injury after Non-cardiac Surgery protocol (MINS) which involved collaboration with internal medicine as well as the perioperative anesthesiologist position at RJH.

**VGH**
Given the concentration of surgical expertise that is located at VGH, the management of the majority of thoracic aneurysm cases has occurred there. As a result, there have been many multidisciplinary meetings involving cardiac surgery, vascular surgery, interventional radiology, cardiac critical care nursing and anesthesiology aimed at updating their management of thoracic aneurysm cases, both open and endovascular, aimed at implementing best practice management of these patients, particular with respect to spinal cord protection and monitoring. Protocols for high and low risk patients have been implemented as well as rescue protocols should spinal cord hypoperfusion occur postoperatively.

In terms of completed research, congratulations go to the group at VGH given their involvement in the TRIC-III trial, analyzing the transfusion requirements in cardiac surgery patients, which was recently published in November/2017.

Related to the incidence of blood transfusion in cardiac surgery, both VGH and SPH have successfully implemented ROTEM thromboelastography to help guide coagulopathy management during cardiac surgery. At VGH, they are gathering data on how this has affected
their transfusion practice and providing ongoing education to reduce transfusion rates in the cardiac surgery population. At SPH, an internal audit showed a significant decrease in the use of frozen plasma with a concomitant increase in the use of prothrombin complex concentrates along with a decrease in the use of packed red cells. Both sites have worked extensively with their hematopathology colleagues at each site in order to ensure a common understanding of ROTEM’s utility.

Both sites have also transitioned to the new Syngo TEE reporting system from Phillips with each site developing a unique template for reporting. In addition, both sites have requested and been approved for new TEE equipment, specifically the Phillips Epiq Q machine. It is hoped that the transition to these new TEE machines will occur in the next year.

SPH
In the past two years, there has been momentum for establishing simulation scenarios in the diverse environments where cardiac anesthesiology is involved. Two primary areas have been identified in the CSICU: critical incidents involving the care of patients undergoing ECMO and the management of post cardiac surgery patients undergoing a cardiac arrest. These simulations started in 2016 and continued on in 2017. The sessions have been a great tool in furthering team dynamics and an excellent source of learning for all involved. Simulation involving TAVI procedures also started in 2017 with the inaugural session well received.

The launch of the MINS protocol in conjunction with general internal medicine/cardiology was well received at SPH early in 2017. Dr. Amelie Pelland presented a poster at the 2018 UBC Research Day, “An audit to the adherence to a cardiovascular risk assessment and monitoring protocol at St. Paul’s Hospital” for which she won the award for best poster by a UBC fellow.

DIVISION OF NEUROANESTHESIA
Dr. Alana Flexman, Head

Summary

The Division of Neuroanesthesia has been active in the three key areas of providing 1) expert clinical care for neurosurgical cases; 2) education to residents, fellows and faculty in the subspecialty of neuroanesthesia; and 3) research and quality assurance. The Division of Neuroanesthesia provides subspecialty education to senior UBC anesthesia residents, Clinical Fellows at VGH, medical students and students in the Anesthesia Assistant training program. The Division is also active in research, supporting several medical student, resident and fellow projects. One member of the Division, Dr. Donald Griesdale, is an Intensivist with a clinical and research focus on neurologic injury. The Division was also active in providing educational activities to the VGH Department of Anesthesiology through grand rounds, as well as with the Division of Neurosurgery with regular joint rounds. The Division increased outreach to the distributed UBC faculty through initiation of a newsletter highlighting recent publications and city-wide journal clubs. Finally, the Division met with delegates from visiting Neurosurgeons and Anesthesiologists from Singapore in collaboration with the Division of Neurosurgery.
**Membership**

In 2017, there were 11 members in the Division of Neuroanesthesia - Dr. Alana Flexman (Head), Dr. Cynthia Henderson, Dr. Bali Dhaliwal, Dr. Henrik Huttunen, Dr. Jon McEwen, Dr. Oliver Applegarth, Dr. Kelly Mayson, Dr. Lynn Martin, Dr. Yvonne Peng, Dr. Jason Wilson, Dr. William Rieley. The Division was fortunate to welcome two new members: 1) Dr. Jason Wilson who returned from a regional fellowship at St Paul’s Hospital in July 2017, and has a PhD in Neuroscience; and 2) Dr. William Rieley who completed a neuroanesthesia fellowship at VGH in 2016 and became staff in November 2017. Dr. Alexandra Kisilevsky will complete a fellowship in Neuroanesthesia at UCSF in 2018, and return to the Division upon her return.

**Clinical Neuroanesthesia**

The Division has targeted several areas for development in advancing clinical neuroanesthesia care:

1) Anesthesia for Endovascular Therapy for Acute Ischemic Stroke: Education (in the form of grand rounds) was provided to the department on anesthetic care for patients undergoing endovascular treatment for acute ischemic stroke (AIS) by Drs. Henderson and Dr. Heran (radiology). In addition, increased involvement of anesthesia in the interventional radiology suite for patients with AIS has been pursued in collaboration with radiology and nursing colleagues with a pilot project planned.

2) ERAS for Spine Surgery: Dr. McEwen has been actively involved in development an ERAS protocol for complex spine surgery with Dr. John Street, building on the general ERAS work that Dr. Kelly Mayson has established in the Department.

3) Advanced hemodynamic monitoring of acute spinal cord injury at VGH: Dr. McEwen has represented anesthesia in the development of a project to collect hemodynamic data on spinal cord injured patients at VGH throughout the ER, OR and ICU. This data will be useful to determine the relationship between MAP and outcomes.

4) Moya Moya Disease patients: With the increasing number of bypass procedures for Moya Moya disease done by Dr. Peter Gooderham, the Division of Neuroanesthesia has continued to develop our neuromonitoring and anesthetic management of this complex population. Dr. Helen Fenner, the current fellow, is undertaking a chart review on the management and outcomes for the past five years. Joint educational rounds on Moya Moya disease with neurosurgical and anesthesia colleagues from VGH and BC Children’s Hospital will take place in 2018.

**Resident Education**

Residents in their R4/5 year spent one month in Neuroanesthesia at Vancouver General Hospital gaining expertise in routine and unusual cases in Neurosurgery, Neuroradiology, and Major Spine Surgery. Resident education in neuroanesthesia continues to evolve towards the new competency by design model of education currently being implemented in the broader residency program. Resident on rotation now have access to a binder of core and non-core cases (developed and graciously shared by the University of Ottawa) covering the expected competencies and are expected to complete at least four during their rotation. This new tool has been met with positive feedback from both residents and staff. In addition, residents have access to a neuroanesthesia
handbook during their rotation (Essentials of Neuroanesthesia and Neurointensive Care, Gupta AK and Gelb AW (eds), 2008).

The Residents’ Academic Days in Neuroanesthesia were presented on November 22 and 29, 2017 and were supported by Drs. Flexman, Rieley, Wilson, Dhaliwal and Griesdale. In addition, members of the Division of Neuroanesthesia were actively involved in the R5 Senior Anesthesiology Residents’ Preparatory Course and the UBC Anesthesia Departmental Residents’ Oral exams. Finally, Division members (Dr. Applegarth, Dr. Kisilevsky, Dr. Griesdale and Dr. Flexman) supported a Neuroanesthesia-themed resident journal club on November 20, 2017. Dr. Don Griesdale is actively involved in teaching of residents and critical care medicine residents and fellows, with a focus on neurophysiology and neurocritical care.

**Neuroanesthesia Fellowship**
The Division of Neuroanesthesia has continued to attract excellent candidates in neuroanesthesia, with Dr. Helen Fenner completing a fellowship between July 2017 to June 2018. Dr. Fenner is regularly assigned to neurosurgical operating rooms and neuroradiology as well as exposure to neuromonitoring with our neurophysiologist, Dr. Charles Dong. Dr. Fenner has participated in resident academic day education and presented at city-wide neuroanesthesia journal club. Dr. Fenner is undertaking two research projects with a plan to present at the Canadian Anesthesiologists’ Society Annual Meeting and the Society for Neuroscience in Anesthesiology and Critical Care in 2018.

**Faculty Education**
The Division was active in providing educational activities for VGH and UBC anesthesiology faculty. Division members provided grand rounds at VGH on topics in neuroanesthesia. In addition, the Division has actively collaborated with the Divisions of Neurosurgery and Spine surgery, as well as our neuromonitoring group in our Neuroanesthesia-Neurosurgery joint rounds. Topics included postoperative visual loss, transfusion in neurosurgical patients and neuromonitoring. The Division launched a regular newsletter for interested UBC faculty highlighting recent publications relevant to neuroanesthesia. In addition, the Division organized a city-wide neuroanesthesia journal club for faculty from various hospitals in the lower mainland on complications after spine surgery. Dr. Flexman served as a faculty moderator for the Rural Anesthesia Online Journal Club.

The Division participated in meeting with a delegation of neurosurgeons, anesthesiologists and nurses from Singapore to share neuroanesthesia practice details (photo below). This visit was organized by the Division of Neurosurgery.

Dr. Flexman is a member of the Neuroanesthesia Section of the Canadian Anesthesiologists’ Society and was been involved in organizing the neuroanesthesia content at the annual meeting in Niagara Falls, ON in June 2017. Dr. Flexman was elected as a Director-at-Large at the Society for Neuroscience in Anesthesiology and Critical Care (SNACC) and chairs the SNACC Scientific Affairs Committee.

Dr. Griesdale has presented to the Departments of General Surgery and Medicine, as well as the Division of Neurology on neurocritical care topics. Dr. Griesdale was also the co-chair of the annual UBC APT Resident Research Day in May 2017 and serves as the UBC APT Research Director.
DIVISION OF THORACIC ANESTHESIA
Dr. Jens Lohser, Head

STAFFING
Thoracic Anesthesia staff:
Dr Chris Durkin, Dr Gord Finlayson, Dr Brett Fitzmaurice, Dr Bevan Hughes, Dr Paul Kapnoudhis, Dr Jens Lohser (head), Dr Sean McLean, Dr Travis Schisler, Dr Hamed Umedaly.
Dr Patrick Hecht joined our department in 2016 and is currently completing a cardiothoracic fellowship at Cambridge (UK). He will join our division upon his return in 2018.

Surgical staff:
Kyle Grant (locum), Dr Alex Lee, Dr Anna McGuire, Dr John Yee (head).

LUNG TRANSPLANTATION
We have achieved an all-time high of 52 lung transplants in 2017.

EDUCATION
Drs Durkin and Schisler have re-initiated morning case rounds with rotating residents at VGH in 2016. In 2017 they have started to include a dedicated morning round once monthly for thoracic cases to be reviewed by the resident rotating through the thoracic anesthesia service at that time.
DIVISION OF REGIONAL ANESTHESIA
Dr. Ray Tang, Co-Head
Dr. Steven Petrar, Co-Head

St. Paul’s Hospital provides regional anesthesia services three times weekly in the ambulatory “Surgical Procedures Room” (SPR), which is a satellite operating room area in the Burrard Building of the SPH site. In this area, patients undergo orthopedic or plastic surgical procedures under regional anesthetic block as the sole anesthetic. All cases in the SPR area are ambulatory in nature, and have demonstrated a high degree of safety and efficiency. Our regional anesthesia program remains the busiest in the Province, with more than 2500 nerve blocks performed in 2017. In addition, we are extremely active in resident and fellow medical education, community anesthesiologist education, and research.

Main OR block room:
2017 was a very active year for the regional anesthesiologists at Providence Healthcare. Our main OR block room completed a total of 1934 blocks. These blocks consisted of a variety of upper and lower limb single shot and continuous catheter techniques along with epidurals. Our regional anesthesiology group has grown to include 12 regional anesthesiologists, all of whom have advanced skills as well as a special interest in regional anesthesia. We have initiated a database with the help of the Centre for Health Evaluation and Outcome Science (CHEOS) here at Providence Health. The database is used to follow-up on patient experiences once they are discharged home. Each patient who has had a block is phoned 48 hours afterward. Data is collected on duration of pain-relief, tolerability of the transition, and incidence of untoward effects or complications. With this data we have determined overall durations of various blocks and local anesthetic combinations. We also provide appropriate follow-up for any patients with complications.

Surgical Procedure Rooms:
Our surgical procedure rooms also had a busy year in 2017, during which 621 cases were completed. With minimal sedation, and safe, effective regional anesthesia, five to ten patients are looked after during their surgical procedure and discharged home through our unique and innovative swing-room model.

Teaching
In addition to providing provincial leadership in the field of resident and fellow education in regional anesthesia, many of our members have made significant teaching contributions at the consultant level, both nationally and internationally in 2017. For example, our members have
been appointed to be workshop teachers or speakers at a number of conferences, including the UBC Refresher Course for GP-Anesthetists, the Whistler Anesthesia Summit, the Canadian Anesthesiologists Society Meeting, the BC Anesthesia Society and Washington State Society Meeting, and the Cleveland Clinic Regional Anesthesia Workshop. We have also continued with providing observership opportunities for GP-Anesthesiologists from all over the country. A one-day curriculum of small-group discussion and observation of blocks in the main OR block room continues to be a well-received adjunct to the UBC Refresher course for GP-Anesthetists. A similar day is offered to UBC Emergency Medicine Ultrasound fellows and our own GP-Anesthesia residents.

We continue to progress with our research in regional anesthesia. In 2017 we published two papers related to work done by department members in our subspecialty, including one study that was administered at our site. Research was presented at the 2017 annual ASRA meeting as well as the UBC Whistler Anesthesia Summit. Our former fellow, Dr. Jason Wilson, presented his research on complications related to regional anesthesia at the UBC Anesthesia Research Day and he was awarded first prize for his presentation. We are currently in the midst of pursuing a number of research opportunities and look forward to more academic output in the coming years. Our regional anesthesia program remains the busiest in the Province, with more that 2500 nerve blocks performed in 2015. In addition, we are extremely active in resident and fellow medical education, community anesthesiologist education, and research.
NOTE FROM THE CHAIR & 2017 HIGHLIGHTS

Welcome to the *Dr. Jean Templeton Hugill Chair in Anesthesia’s* 2017 Annual Report! The last year has again been one of exciting research, and I am delighted to summarize below some of the activities that took place under the aegis of the Chairship in 2017. My first priority as Hugill Chair in 2017 was to continue to foster the interdisciplinary team-based laboratory research in the *Hugill Anesthesia Research Centre*. Emphasis centered around three ongoing lines of investigation (below), results from which appeared three full-length peer-reviewed manuscripts published in 2017. My second priority was to continue to expand the Chair’s spectrum of activities to the realm of clinical anesthesia research and provide support for younger colleagues. As a result, two top-tier journal papers have been published in 2017. In addition to the full-length articles, the Centre presented two posters at the *10th Congress of the European Pain Federation, EFIC*® (*EFIC 2017*; Copenhagen, Denmark; September 6–9, 2017); one at *Neuroscience 2017* (Society for Neuroscience 47th Annual Meeting; Washington, DC; November 13, 2017), and three papers at the annual *APT Research Day* (May 11, 2017). In pursuing the above, the third priority was to utilize the Hugill Chair position to continue to attempt to build bridges between Anesthesiology and Pharmacology & Therapeutics; as a reflection and example of this spirit, I am delighted to report that Dr. Alasdair Barr has again been a regularly participating *Hugill Centre* Faculty member. The fourth priority was to bring in another high-profile speaker for our Department’s annual (i.e., 2016/17 [third]) Hugill lecture. Supported by the Dr. Jean Templeton Hugill Endowment for Anesthesia Memorial Fund, this succeeded and we hosted on April 25, 2017 the Deputy Editor-in-Chief of the *Canadian Journal of Anesthesia* & Vice Chair of Research, Department of Anesthesiology, University of Ottawa – Dr. Gregory Bryson.

**Laboratory research** in the Hugill Anesthesia Research Centre continued to feature new discoveries related to a first-in-class novel peripheral analgesic prototype drug developed in the Centre, isovaline. For example, highlighted in a paper published in the journal, *Amino Acids*, one project provided the first structure-activity insight into isovaline’s actions. Another line of investigation, emphasizing fundamental cellular and molecular mechanisms of the local anesthetic, lidocaine – now frequently used as an intravenous infusion – explored this drug’s actions on Hyperpolarization-activated Cyclic Nucleotide-gated (HCN) channels. Lastly, published in *Anesthesia & Analgesia*, an innovative graduate student project led to the development a novel intraplantar hypertonic saline assay in mice for rapid preclinical screening of analgesics while producing minimal animal suffering without tissue damage.

**Clinical research** continued to focus on the St. Paul’s Hospital (SPH) Regional Anesthesia Program. 2017 saw the print publication of the full-length manuscript with the results of a randomized controlled trial (RCT) on ultrasound-guided techniques aimed to optimize saphenous nerve blockade for foot & ankle surgery patients. Other work focused on a new quality improvement project on outcomes associated with the use of perineural adjuvant dexamethasone.
UBC Department Head, Dr. Roanne Preston, and Hugill Chair, Dr. Stephan Schwarz, arriving for their lectures at the Hanoi Medical University/Vietnam Society of Anaesthesiologists 2017 International Conference on Anesthesia and Pain Control; Hanoi, Vietnam (March 12, 2017).

Dr. Roanne Preston lecturing at Hanoi Medical University (March 12, 2017).
2016/17 Hugill Visiting Professor, Dr. Gregory Bryson, leading an academic day session on research with UBC anesthesiology residents (April 26, 2017).

Dr. Gregory Bryson interacting with Hugill Anesthesia Research Centre graduate students, Tim Fung and Yahya Asiri (April 26, 2017).
Dr. Gregory Bryson presenting the 2016/17 Dr. Jean Templeton Hugill memorial lecture, entitled “From Clinical Observation to Publication: The Changing World of Scientific Publication” (April 26, 2017).