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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 will be undergoing an External Review in Spring 2022 as I come to the end of my second term as Department Head. I believe the Department has moved forward substantively since the 2017 internal review, and it is working as a truly merged department, seeking collaborations for research and teaching, and sharing resources.

**Faculty Renewal**

The Department has been successful in faculty renewal applications since 2018 with 2.5 positions gained via the FoM process, all of whom will have started by January 2022. In addition, the Therapeutics Initiative has received an endowment from the Ministry of Health that will allow for the hiring of tenure-track faculty to support the work of the TI. Searches have led to the hiring of one full-time TI researcher, and one part-time as part of the Dr. Wright ‘replacement’ tenure-track position. These individuals will be starting in March 2022. Finally, the Department has successfully recruited an individual into the 3 year limited term Assistant Professor Pharmacology position that allows us to us accrued soft funds. This individual will be starting in late 2022.

The Department’s financial position is stable at present, with limited capacity to add any salaried positions given the recent faculty additions.

The Department has continued to build on faculty development and plans to restart the annual Faculty Development Day retreat in 2022 or 2023 (pandemic-dependent).

The Vancouver Summer Program, capably led at FoM level by Dr. Andrew Horne, will restart in 2023. The study program for international medical graduates to prepare for the Royal College Exams in Anesthesiology continues to be successful, thanks to all the faculty reviewers that Katharine manages to recruit (thanks Katharine!).

The Whistler Anesthesia Conference will return to in-person, with virtual hybrid options, in March 2022 after 1 year of on-line only in 2021. The co-chairs, Dr. Su-Yin MacDonnell and Dr. Sandy Kisilevsky have capably taken over and produce an excellent program, with the fantastic support from UBC CPD (Michelle Baysan).

The Pain Medicine Residency Program now accepts 2 new positions per year, and continues to improve the program offerings based upon feedback under the skilled leadership of Dr. Michael Butterfield. It successfully underwent Accreditation on November 26, 2020.
Research continues to flourish within the department. We have some very strong pharmacology researchers with well-established careers, and have our first CRC Tier 1 in the department: Congratulations to Dr. Tillie-Louse Hackett who started a Tier 1 Canada Research Chair in Asthma and COPD Lung Pathobiology & Therapeutics and Canadian Foundation for Innovation Funding for Single Cell Imaging Research on December 1, 2021.

On the anesthesia side, we have clinician-researchers such as Mark Ansermino, Stephan Schwarz, Don Griesdale, Alana Flexman, Himat Vaghadia, Ray Tang, Steve Petrar, Kevin Froehlich, Juliet Atherstone, Gord Finlayson, Jens Lohser, Zoe Brown, Gillian Lauder, Simon Whyte, John Veall, Jason Wilson, Simon Massey, Aaron MacInnes, Peter Choi, Sean McLean, Rael Klein, Kelly Mayson, Andrew Sawka, Jacquie Trudeau, Neal Badner, Janny Ke and Anton Chau, all of 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. Despite our improved departmental financial picture, I can never provide adequate compensation 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:
Jens Lohser – Head, VGH/UBCH Department of Anesthesia & Perioperative Care
Jim Kim –Head, St. Paul’s Hospital Department of Anesthesia
Simon Whyte – Head, BC Children’s Hospital Department of Anesthesia
James Brown, - BC Women’s Hospital Department of Anesthesia
Feisal Mohamedali – co-Head, Royal Columbian Hospital Department of Anesthesia
Kenneth Ryan – co-Head, Royal Columbian Hospital Department of Anesthesia
Feisal Mohamedali – Regional Head, Fraser Health Authority
Magda Lipowski – Head, Lions Gate Hospital Department of Anesthesia
Glenn Dong– Head, Richmond General Hospital Department of Anesthesia
Liz Chuah – Head, Burnaby General Hospital Department of Anesthesia
Clara Gramberg/Alex Vesely/Freda Wong – co-Heads, Surrey Memorial Hospital
Parisa Soltani – Head, Chilliwack General Hospital Department of Anesthesia
Catherine Mattheus – Head, Abbotsford Regional Hospital & Cancer Centre
Desmond Sweeney – Head, Victoria General/Royal Jubilee Hospitals Department of Anesthesia
Alistair Graham – Head, Kelowna General Hospital Department of Anesthesia
Adam van der Merwe – Medical Director Kelowna General Hospital Department of Anesthesia
Tom Cull – Head, Vernon Jubilee Hospital Department of Anesthesia
Mark Edge – Head, Royal Inland Hospital Kamloops Department of Anesthesia
Kenneth Harder – Head, Penticton Regional hospital Department of Anesthesia
Pal Dhadly – Head, University Hospital of Northern BC Department of Anesthesia

Academic Leadership
Colin Dormuth – Co-Managing Director, Therapeutics Initiatives
Ken Bassett – Co-Managing Director, Therapeutics Initiatives
Stephan KW Schwarz – Dr. Jean Templeton Hugill Chair in Anesthesia
K Malcolm Maclure – BC Patient Safety Chair
T. Laine Bosma – Anesthesia Residency Program Director
Sadiq Abdulla – Anesthesia Residency Program Associate Director
Michael Butterfield – Pain Medicine Residency Program Director
Alana Flexman – Vice-Chair, Equity, Diversity and Inclusion
Peter Choi – Vice-Chair, Education
Tillie Hackett – Vice-Chair, Research
Pascal Bernatchez – Basic Science Research Director
Don Griesdale – Clinical Research Director
Pascal Bernatchez – Director/Advisor, PCTH Graduate Program
Peter Choi – Medical Undergraduate Program Director
John McAlpine - Family Practice Anesthesia Residency Program Director
John Veall - Simulation Program Director
Sadiq Abdulla – BC Anesthesia Clinical fellowships Director
James Brown - Faculty Development Chair
Giselle Villar – Visiting Professor & Continuing Professional Development Program Director Su-Yin Macdonell and Sandy Kisilevsky - Whistler Anesthesia Conference co-chairs
Bali Dhaliwal – Clinical Faculty Advisory Committee Representative

Divisions
Alexander Wong – Division Heads, Regional Anesthesia
Bobby Lee – Division Head, Cardiac Anesthesia
William Rieley – Division co-Head, Neuroanesthesia
Sandy Kisilevsky – Division co-Head, Neuroanesthesia
Aaron MacLNNES – Division Head, Pain Management
Simon Whyte – Division Head, Pediatric Anesthesia
James Brown – Division Head, Obstetric Anesthesia
Travis Schisler – Division co-Head, Thoracic Anesthesia
Chris Durkin – Division co-Head, Thoracic Anesthesia
DEPARTMENT HIGHLIGHTS

AWARDS OF EXCELLENCE

Canadian Journal of Anesthesia – new Editor-in-Chief
Dr. Stephan Schwarz – Professor
The Canadian Journal of Anesthesia (The Journal) is owned by the Canadian Anesthesiologists’ Society and is published by Springer Nature Switzerland AG. From the first year of publication in 1954, the international exposure of the Journal has broadened considerably, with articles now received from over 50 countries. The Journal is published monthly and has an impact Factor (mean journal citation frequency) of 3.779 (in 2019).

Michael Smith Foundation Health Research Scholar Award 2021
Dr. Matthew Wiens – Assistant Professor, Partner Track
Matthew has been conducting research examining the epidemiology of pediatric post-discharge mortality in Uganda since 2009. This research has focused primarily around the development of prediction models to identify children at high risk of mortality following discharge and on the development of interventions to improve post-discharge outcomes among these children.

Canada Research Chair – Tier 1
Dr. Tillie Louise-Hackett – Professor
Outstanding researcher acknowledged by their peers as world leaders in their fields. Chairholders aim to achieve research excellence in engineering and the natural sciences, health sciences, humanities, and social sciences. They improve our depth of knowledge and quality of life, strengthen Canada’s international competitiveness, and help train the next generation of highly skilled people through student supervision, teaching, and the coordination of other researchers’ work.
Craig H Neilsen Foundation Postdoctoral Fellowship Award
Dr. Ryan Hoiland – Postdoctoral Fellow (Griesdale Lab)

Craig H Neilsen Foundation Postdoctoral Fellowship Award
Dr. Lukas Linde (Kramer Lab)
15th Annual Research Day and Awards Night
May 25, 2021 (2nd virtual Research Day)

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.

Winning Presentations

Oral - Anesthesiology

1st Place – Parker Nann
2nd Place – Ryan Hoiland

Oral - Pharmacology & Therapeutics

1st Place – Kimia Ziafat

Lightning Talks

1st Place – Michael Jew
Runner Up – James Taylor

Winning Presentations

Dr. Pascal Bernatchez
Dr. Shannon Lockhart

High prevalence of plasma lipid abnormalities in human and canine Duchenne and Becker muscular dystrophies depicts a new type of primary genetic dyslipidemia

Personal protective equipment (PPE) for both anesthesiologists and other airway managers: principles and practice during the COVID-19 pandemic
**AWARDS 2021**

**Anesthesiology Residents**

- Dr. Derek Daniel Wolney Prize for Clinical Proficiency – Dr. Kelli O’Reilly
- Dr. John A. McConnell Award for Academic Excellence – Dr. Daniel Werry
- Dr. Jone Chang Memorial Award in Anesthesiology Excellence – Dr. Julena Foglia
- Dr. Jone Chang Memorial Prize in Chronic Pain – Dr. Katrina Genuis
- Ken C.K. Wong Award for Clinical Teaching – Dr. Alex Dotto
- UBC APT Advanced Simulation Training Program –
  Drs. Heather Cadenhead, Alex Dotto, Naima Kotadia, Stephen Miazga, Cole Wong
- Dr. Dimitri Giannoulis Memorial Award in Regional Anesthesia – Dr. Michael Jew
- Dr. Keith Mills Award for Excellence in Neuroanesthesia – Dr. Connie Drewbrook
- Dr. Keith Mills Bursary for Excellence in Neuroanesthesia Studies – Dr. Kate Mittermaier
- VGH Kenny Wong Award for Clinical Excellence and Collegiality – Drs. Julia Cory, Kate Mittermaier
- BCAS Resident Award for Physician Leadership – Dr. Julena Foglia
- Dr. Anthony Boulton Award for FPA Clinical Excellence – Dr. Mimi He
- Dr. Paul Kliffer Golden Epidural Award –
  Dr. Danielle Tinker (Jr. Resident); Dr. Darren Lam (Sr. Resident)
- Dr. Michael Smith Award for Pediatric Anesthesia – Dr. Julena Foglia
- RCH Resident Award for Clinical Excellence – Dr. Vivien Hu (Jr. Resident); Dr. Michael Jew (Sr. Resident)
- Dr. Colin A. Sands Award for Most Collaborative R1 – Dr. David Li
- Dr. Albert Pace Floridia Memorial Award in Anesthesiology – Dr. Tyler Plyley

**Pharmacology & Therapeutics Undergraduate**

- Esther Anderson Memorial Prize (highest graduating average in Honors Pharmacology)
  Georgia Sloan De Rappard-Yuswack
- Prakish Gill Memorial Prize (highest graduating average in Majors Pharmacology)
  Amardeep Singh Sekhon
- MERCK Canada Scholarship in Medicine -
  Ms. Brynn Alexandra Walker

**Pharmacology & Therapeutics Graduate Awards**

- Sacks Prize (Best presentations)
  Aileen Hsieh
- Leighton Pharmacology Graduate Award
  Arash Yousefzadeh-Tehrani

**FACULTY AWARDS 2021**

**Master Teacher Awards:**
- VGH – Dr. Paul Kapnoudhis
- SPH – Dr. Su-Yin Macdonell
- RCH – Dr. Tonia Tauh
- BCCH – Dr. Zoe Brown
- BCWH – Dr. Anton Chau
- Rural/Community – (Victoria)- Dr. Mark Vu
- Medicine – (Critical Care) – Dr. Don Griesdale

**Dr. Dimitri Giannoulis Resident Appreciation Award** – Dr. Laine Bosma

**FPA Master Teacher Award** – Dr. Zoe Brown (BCCH)

**FPA Master Teacher Award** – Dr. Anton Chau (BCWH)
PROMOTIONS 2021

Approved for Promotion from Clinical Instructor to Clinical Assistant Professor
- Dr. Heng Gan – BC Children’s Hospital
- Dr. Jacqueline Hudson – Lion’s Gate Hospital
- Dr. Karen Wong – Nanaimo Regional General Hospital
- Dr. Sivakumar Raghavan – Ridge Meadows Hospital
- Dr. Simon Bruce – St. Paul’s Hospital
- Dr. Hao Chen – St. Paul’s Hospital
- Dr. Tim Jen – St. Paul’s Hospital
- Dr. Xi Lisa Li – St. Paul’s Hospital
- Dr. Shannon Lockhart – St. Paul’s Hospital
- Dr. Anne Marie Madden – St. Paul’s Hospital
- Dr. Steven Petrar – St. Paul’s Hospital
- Dr. Terri Sun – St. Paul’s Hospital
- Dr. Ainsley Sutherland – St. Paul’s Hospital
- Dr. Joshua Bennitz – Vancouver General Hospital
- Dr. Kathryn Dawson – Vancouver General Hospital
- Dr. Jason Fridfinnson – Vancouver General Hospital
- Dr. Patrick Hecht – Vancouver General Hospital
- Dr. Cyrus McEachern – Vancouver General Hospital
- Dr. Steven Moore – Vancouver General Hospital
- Dr. Darren Mullane – Vancouver General Hospital
- Dr. Graham Noble – Vancouver General Hospital
- Dr. Yvonne Peng – Vancouver General Hospital
- Dr. Neil Ramsay – Vancouver General Hospital
- Dr. William Rieley – Vancouver General Hospital
- Dr. Peter Rose – Vancouver General Hospital
- Dr. Logan Lee – Victoria General Hospital

Approved for Promotion from Clinical Assistant Professor to Clinical Associate Professor
- Dr. Anton Chau – BC Women’s Hospital
- Dr. Scott Bell – St. Paul’s Hospital
- Dr. Matthew Coley – St. Paul’s Hospital
- Dr. Charles Lo – St. Paul’s Hospital
- Dr. Trina Montemurro – St. Paul’s Hospital
- Dr. Jill Osborn – St. Paul’s Hospital
- Dr. Raja Rajamohan – St. Paul’s Hospital
- Dr. Cynthia Yarnold – St. Paul’s Hospital
- Dr. Bali Dhaliwal – Vancouver General Hospital

Approved for Promotion from Clinical Associate Professor to Clinical Professor
- Dr. Matt Klas – St. Paul’s Hospital
- Dr. George Isac – Vancouver General Hospital
Hospitals and Health Centres

CLINICAL OVERVIEW

Department Statistics

Full-time faculty - 21
Clinical Faculty - 534
Fellows - 20
Residents - 78
Medical Students – 332
Pharmacology Graduate Program – 16 students
Pharmacology Undergraduate Program – 39 students
Postdoctoral Research Fellows - 9
The UBC Department of Pediatric Anesthesia centred at BC Children’s Hospital has continued in its role as the home of pediatric academic and clinical anesthesia, perioperative medicine, and pain medicine.

Our clinical Faculty expanded in the academic 2020-21 year with the arrivals of Drs. Christa Morrison, Prakash Krishnan and Erica Dibb-Fuller. Meanwhile, Dr. Norbert Froese officially completed a 24-year career in the Department, during which time he served terms as Head of Cardiac Anesthesia and Head of Department. Happily for us all, he has remained available for clinical locum work, and ongoing mentorship, for which (the latter especially) I am extremely grateful.

The clinical fellowship program remained strong and active, providing both advanced pediatric anesthesia clinical training and academic research and teaching opportunities for our fellows. Stephan Kojic and Fabio Magistris, both Canadian, were our 2020-2021 Fellows. Our longstanding ambition to increase the size of our Fellowship program received concrete funding in mid-2021 and will come to fruition next year.

BC Children’s Hospital remained an active and engaged partner in the expanding UBC anesthesia residency training program. In addition, the department continues to provide exposure to anesthesia to non-anesthesia residents and fellows as well as medical students and associated health care providers.

The restructured Pediatric Anesthesia Research Team (PART) under the leadership of co-chairs Simon Whyte and Matthias Gorges has proven to be sustainable and effective in supporting clinical research in the Department. Andrew Poznikoff as the department’s research coordinator provides the backbone of the unit’s research support. The unit’s effectiveness is evidenced by the breadth of active projects and the number of staff anesthesiologists involved in clinical research projects. We continue to enjoy success in the competitive funding opportunities provided by the BCCH Research Institute, and this year we were able to capitalise on increased subsidies for the UBC Co-op Student programme to hire two students to PART, in addition to our usual support for Summer Students.
BRITISH COLUMBIA WOMEN’S HOSPITAL & HEALTH CENTRE
Dr. James Brown
Department Head

Dr. Jonathan Collins
Associate Department Head

Times have been interesting since the last BC Women’s Anesthesia update. As an institution we continued to learn to live with the Global Pandemic and we not only maintained, but expanded our clinical services thanks in no small part to the flexibility and professionalism of the group.

We are busier than ever on the Obstetric side, with increased cesarean section and epidural rates. We have expanded our Gynecology Surgical capacity (two full-time ORs with a further expansion to three rooms by early 2023) and case mix (adding two 23-hour inpatient stay beds). With this expansion we continue to grow the Department; this summer we are excited to welcome Drs. Andy Wang (UBC grad, completed a Fellowship in Toronto) and Elise Hindle (Retired Royal Air Force, most recently worked at the Birmingham Women’s Hospital, UK). This Fall will bring the end of an era as Dr. David Lea takes his well-earned retirement; his good humour, endless anecdotes, and pragmatic clinical wisdom will be sorely missed and we wish him well. In terms of the Anesthesia Care Team we have employed a full-time PAC Nurse, and continue to work to 24/7 Anesthesia Assistant (AA) coverage with three AAs due to complete their training this year, and a further two next year.

Dr. Anton Chau announced his departure from the Research and Fellowship Director role at the end of this academic year. Anton has worked tirelessly to grow our Research Program at BC Women’s and has gone above and beyond, again and again, to ensure that our Fellows get the most out of their time with us. We are excited that Dr. Clare Burlinson is taking over from Anton and bringing her ideas and energy to the program. Dr. Helen Parker has assumed the role of departmental simulation lead, expanding our program across disciplines and leading a number of very valuable airway skills refresher days. Dr. Katie Seligman has become our inaugural lead for Quality and Safety; in addition to leading quality reviews, she chairs regular M&M meetings, providing a welcome forum for reflection and learning.

BC Women’s recently made the move to computerization by way of CST Cerner implementation; from an Anesthesia perspective this was relatively painless due to the work and support of many in the wider BC Anesthesia community. Locally, Dr. Mike Wong spent many hours proactively ensuring that CST represented our clinical workflows and needs. Sites where CST were already live (SPH, LGH, MSJ) graciously hosted BC Women’s staff for part of their training, an invaluable opportunity to see CST for anesthesia in action. Drs. Jim Kim and Charles Lo were ever present and supportive during the Go-Live period. Thanks to you both, and to those many others who offered “at the elbow” support for your generosity and good humour!

Out of the events of the last couple of years there have been unexpected opportunities for which we are grateful. The CST implementation process and the opportunity to provide clinical cross-coverage between sites has presented a welcome opportunity to get to know our APT Faculty colleagues better. We are also delighted to have moved our department (including fellows, residents and AAs) into a single new space within the hospital, allowing us to literally bring our team closer, allowing enhanced awareness of the clinical situation, and collaboration on our research and quality portfolios.
The year 2021 continued to be marked by the pandemic, but thanks to the early access to vaccinations, staff illnesses remained fortunately limited. While a dedicated Anesthesia Covid intubation team was no longer required, the department continued to support pandemic activities by lending staff for Covid ward coverage and occasional Critical care support. The spring of 2021 saw the transition in departmental leadership. After 10 years at the helm of the Vancouver Acute Department of Anesthesia, which saw substantial growth of the department into multiple perioperative roles, major upgrades in equipment fleets due to successful foundation engagement and the transition onto the APP, amongst many other accomplishments, Dr Hamed Umedaly decided to step down from his role. After a year as Associate Head and pandemic lead, Dr Jens Lohser was appointed as his successor in April 2021.

Following the leadership transition the department underwent a retreat to establish a consensus strategic framework (Mission, Vision and Values) to guide our path in the coming years. In addition, the departmental leadership structure was amended to include a trio of associate heads with dedicated portfolios, Dr Andrea Brovender (Human Resources), Dr Jacqueline Trudeau (Clinical) and Dr Raymond Tang (Academic).

In May of 2021 the new operating room suite on the third floor of Jim Pattison Pavilion was opened and took on the majority of the 24/7 activity at VA. The 16 state of the art operating room suites have been well received and their design is being carried forward in eventual renovation of the existing operating room suite on the second floor of JPP. The original intent was to expand VGH operating room activity to 24 daytime rooms in September of 2021, however this implementation was delayed due to nursing shortages into the year 2022. The long-term goal of the OR expansion continues to be to run 24 operating at VGH, in addition to 8 operating rooms at UBCH and the full complement of out of OR sites, including interventional radiology, cath lab, electrophysiology, radiology and ECT. This expansion is providing significant hiring pressure on our department, which we are actively addressing. At the end of 2021 our staffing level was up to 66 individuals with an anticipated staffing level of 80 in the coming 4-5 years.

Staffing departures in 2021
Dr Kristin McRae left the department to explore other opportunities in the lower mainland.

New staff hires in 2021:
Dr Rosie Earle joined our department after completion of her residency at UBC with plans for future Airway Anesthesia training.
Dr Dan Werry joined our department after completion of her residency at UBC with plans for future Regional Anesthesia training.

Staff returns in 2021
Dr Kali Romano returned after a Critical Care Fellowship at VGH and an additional Cardiac Anesthesia Fellowship at the Royal Papworth Hospital.
Dr. Nav Chima returned from a Trauma Anesthesia and Simulation Fellowship at Sunnybrook Hospital.
Dr. Amber Galbraith returned from a Regional Anesthesia fellowship at St Paul’s Hospital.
**Royal Columbian and Eagle Ridge Hospitals**

The Department of Anesthesiology and Perioperative Medicine at Royal Columbian Hospital (RCH) provide anesthesia services at both RCH and Eagle Ridge Hospital (ERH). RCH, along with Vancouver General Hospital, is one of two Level 1 trauma centres in the province and serves as the tertiary care referral centre for the Fraser Health Authority (FHA), with approximately 1.9 million people or 38% of British Columbia’s population, as well as patients from other regions. RCH, the oldest hospital in the province, is a general hospital providing a wide spectrum of surgical and medical services. The range of surgical services provided at RCH is unmatched by any other single site in British Columbia.

RCH is the highest volume cardiac centre in BC, and cares for an ever growing volume of trauma patients, as a result of its large population base, proximity to major transportation corridors, among other factors. Supporting this care is a robust critical care team, and an ECMO service for patients with severe heart or lung dysfunction. RCH runs an orthopaedic trauma operating room 364 days per year. Additionally we have created a block room in the operating room, to facilitate the conduct and teaching of regional anesthesia for orthopaedic and plastic surgery patients. RCH is the regional neurosurgical referral centre for FHA, and sees a high volume of craniotomy, spine and neuro-interventional procedures annually.

RCH continues to have one of the best neonatal intensive care units in North America in terms of neonatal outcomes, and is the provincial centre of excellence for high-risk obstetrical care, specifically the management of complex invasive placenta conditions (e.g. placenta accreta), cases that require ICU and/or cardiac care for expectant mothers, while also being able to care for low birth weight, premature infants. A multidisciplinary approach to this complex work, underlies the successes we see at our site.

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 some of the highest acuity amongst the hundreds of North American hospitals participating in the program. Furthermore, RCH is actively involved in multiple multicentre clinical trials and is actively expanding its research activities and quality improvement initiatives, supported by a full-time research assistant, summer students, and clinician scientists.

Royal Columbian Hospital and Eagle Ridge Hospital are core teaching sites for medical students and for anesthesia resident training. The residency program has expanded recently to 20 positions per year. As well, there is a new Fraser track for 32 3rd year medical students based primarily at our site, but involving other sites within the FHA. We also train anesthesia assistant (AA) students, and have a growing group of AA’s who are integral to the work we do. We expect RCH to continue to evolve as an important academic and learning centre for medical learners in the years to come.

Finally, RCH is undergoing a $1.5 billion redevelopment. Phase 1 which is completed, is the Mental Health and Substance Use Wellness Centre with a stand-alone neuro stimulation suite where our group provides anesthesia care for electroconvulsive therapy. Phase 2, the 10 level
Acute Care Tower (ACT), is under construction with a planned opening in July of 2025. This includes an interventional platform with 17 operating rooms, 3 cardiac catheterization laboratories, and 5 interventional radiology suites. There will be a 3 bay block room, for regional anesthesia as part of the Interventional Platform. The obstetrical service will exist on its own floor with 2 obstetrical operating rooms. Phase 3 will renovate the existing hospital for future needs, and to support the function of the ACT.

Eagle Ridge Hospital (ERH), is our lower acuity community hospital in Port Moody, BC. There are six operating rooms that provide space for nearly 10,000 surgical cases a year, the majority of which are Surgical Day Care cases. This now includes a same day arthroplasty program which has been launched this year at ERH, as well as minimally invasive major general surgery cases in selected patients. Most of the elective pediatric cases done by the Department are performed at Eagle Ridge Hospital. The work of the department is supported by a Certified Anesthesia Assistant at ERH.
The past two years have seen a significant increase in the involvement of the Surrey Memorial Hospital Department of Anesthesia in the UBC Residency Program. 2019 UBC graduates Drs. Disha Mehta and Christine Graf took over the education leadership role last year from Dr. Alex Vesely, who has moved to co-Department Head after 7 years in the position.

Perennial favourites with residents rotating through the site continue to include Pediatrics, major Head and Neck, and Thoracics, for all of which we are the designated FHA site. New since 2020 is our Block Program, which has been very well received by surgeons, trainees and administration alike for its efficient high quality clinical service and educational experience in providing thoracic epidurals, upper and lower extremity, and truncal blocks to SMH surgical patients. Other new programs within the past year include a Surgical and Obstetric Hi-Fidelity Simulation Program led by Dr. Clara Gramberg, expansion of our Pacemaker implant program to include ICDs, and a nascent service to Interventional Radiology. We have also coordinated a practice Royal College oral exam session for the R5s since 2019.

Overall, SMH remains the second largest hospital in BC, with the busiest Emergency Department in the province, 46 bed ICU/HAU, and transfers from peripheral hospitals such as Delta and Peace Arch bringing substantial acuity. We also serve the busiest obstetric unit in BC outside of BCWH, now with over 5000 deliveries per year and growing.

Between SMH and our satellite ambulatory facility (Jim Pattison Outpatient Care and Surgery Centre, or JPOCSC), our highly varied mix of acute and fast paced inpatient/ambulatory elective surgery continues to expand. Other than the intermittent pandemic/congestion related slowdowns, we have come through the pandemic virtually unscathed, and have managed to preserve good morale and very low closures through sustainable growth. Despite the lack of new construction, we have benefited from renovations of our ORs and our Anesthesia space. In the coming year, completion of renovations and the activation of previously decommissioned/unused OR space will further grow what is already the busiest surgical program in FHA.

Our Department is sitting at 35 members totaling 25 FTE, having added several new members to the department with a diverse range of expertise throughout the 2021-2022 academic year, and we anticipate further expansion over the next few years to meet surgical demand. We have also very recently welcomed SMH’s inaugural fellow in the UBC Clinical Anesthesiology Fellowship Program, Dr. Rajvir Chahal, with local supervision by Dr. Maha Iyer. Dr. Chiaw Ling Chiu has just completed her first oral exam cycle as a Royal College Examiner in 2022. Our site subspecialty leads include Dr. Tim Dickson for Obstetric and Regional anesthesia, Dr. Jeremy Neufeld for Thoracic anesthesia, Dr. Stefan Kojic for Pediatric anesthesia, Dr. Disha Mehta for POCUS, Dr. Christine Graf for Regional anesthesia, and Dr. Peter Gajecki for Perioperative anesthesia. In June, Dr. Sujith Dandina took the reins as Local Department Head for our multidisciplinary Chronic Pain Clinic.

We are proud of the progress we have made, and look forward with anticipation to further growing our 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. Desmond Sweeney
Department Head

Division Heads:
Dr. Lindi Thibodeau: Campbell River/Comox Valley Hospital
Dr. Jason Lee: Nanaimo Regional Hospital/West Coast General Hospital
Dr. Christie Avenant: Cowichan District Hospital/Saanich Peninsula Hospital
Dr. Adrian Vethanayagan: Royal Jubilee Hospital/Victoria General Hospital
Dr. Christie Avenant: Family Practice Anesthesia

The health authority’s mandate was to continue 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.

Dept Highlights
Dr Richard Alexander is our Education Representative and has helped coordinate the many students and residents training in the South Island.
Dr. Sara Waters is the Clinical Education Lead until June 30 2022. Dr. Georgia Hirst will take on the role from July 1, 2022
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.
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

Future
The Department continues to grow to meet increased surgical demand and provide innovative ways to improve efficiency and quality of care. We have had a great year and continue to appreciate the talented people contributing to the care of patients and education of others.
The Southern Medical Programme celebrated 10 years of high quality hands-on teaching in 2022. The Kamloops site welcomed and continues to welcome 6-8 medical students into the anaesthetic department annually, as well as residents as part of their community anaesthetics rotation. Royal Inland Hospital shown perseverance in quality care delivery despite the challenges of staff shortages, inclement weather and a pandemic. The medical students have learnt adaptability and resilience from watching their preceptors and mentors navigate these challenges.

The Phil & Jennie Gaglardi Tower construction was completed in March 2022 with Operating Room, Trauma and Obstetrical services opening to patients in July 2022. This gives learners the opportunity grow and work in a modern, state of the art facility with access to some of the most sophisticated and technologically advanced equipment and hospital structures in B.C. The new Tower will significantly assist with surgical expansion, allowing another operating room to run from August 2022, with the ability to run up to three additional OR’s as staff recruitment allows. A new EMR was introduced to RIH in June 2021, with the hope of improving the efficiency and effectiveness of various order routines as well health care worker access to relevant medical patient information. The system has been adapted over the last 12 months, with continuous health care provider input, to suit the needs of the RIH staff.

The RIH anaesthetic department has continued to actively recruit new staff as we continue to offer more services, including ECT and sedation for cardioversion. The input and expertise of our new recruits has significantly to the learning experience available to our students. RIH continues to grow its services in order to meet the needs of the growing community of Kamloops and its surrounds. Learners flourish in this grass roots community with many of our students returning to live and work in this area.
Entrance to the new tower.

Some natural light in the new OR.
A fully equipped OR, ready for a day of operating.
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 Drs. Pascal Bernatchez and Issy Laher, continue to provide opportunities for our students to share their research interests and accomplishments with faculty and students to be exposed to other related research areas from within and outside the university.

Medical Undergraduate Teaching
The pharmacotherapy content in the MD Undergraduate Program curriculum is undergoing revision. One week in the first-year curriculum has been revised to further emphasize pharmacotherapy. In collaboration with the Therapeutics Initiative, we the UBC medical school formulary is being revised to reflect prescribing patterns in BC. Pharmacology-driven educational activities and assessable learning objectives have been incorporated into most weeks of the first- and second-year curricula. Existing Case Based Learning (CBL) cases undergo continual review for opportunities to add further pharmacology content. The clinical experiences in years three and four continue to focus on clinical rotations where pharmacology teaching is integrated into the clinical setting. New modules on the pharmacology of drugs used in anesthesia and pharmacogenomics are being developed. Additional pharmacology teaching is being incorporated into several aspects of the Transition into Professional Practice (TIPP) course. Student shadowing and out-of-province electives were cancelled on account of COVID. All courses and exams were delivered online via Canvas and Zoom. 2021-2022 academic year is likely to return to in-person classes.

Graduate Program
The department offers both Ph.D. and M.Sc. degrees in pharmacology and therapeutics. In 2020-2021, 6 new MSc students joined, and 2 students graduated with a degree. 7 new Ph.D students enrolled; 4 admitted to candidacy, no graduations.
**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 graduates 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. Since there is room for a maximum of 24 students in third year, all those registered in 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.

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.

**Co-op Program**

For the co-op program, in addition to classical laboratory-based university instruction, the students will do 12 to 16 months (i.e., 3 to 4 work-terms) 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. 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 with the mission to provide prescribing physicians and dispensing pharmacists with up-to-date, evidence-based, practical information on prescription drug therapy in British Columbia. It is currently supported by a 5-year grant from the BC Ministry of Health to the University of British Columbia. The grant was first established in 1994 and the current grant ensures funding until March 31, 2023.

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 also 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 TI is composed of 5 working groups that collaborate to assess and disseminate clinical evidence of prescription drugs:

1. **Drug Assessment Working Group (DAWG)**: assesses the clinical evidence of effectiveness and safety of new and existing drug therapies in the province and relate that evidence to the care of individual patients. The DAWG completed the following therapeutic reviews in 2021:
   - Osteoporosis therapeutic class review
   - Lurasidone therapeutic review

   The DAWG provides problem-based learning opportunities regarding critical appraisal of clinical trials. Ten medical and pharmacy student trainees have attended the DAWG meetings by web teleconference this year. They learned to critically appraise systematic reviews with hands-on experience in drug assessment projects, where they presented and discussed the findings with the rest of the team.

2. **PharmacoEpidemiology Group (PEG)**: uses epidemiological methods to analyze linked administrative data to answer population-based questions which have not been adequately addressed in clinical trials. Projects include evaluation of drug policies and educational interventions, monitoring of drug utilization, and analysis of prescription drug safety and effectiveness. The PEG also help design, deliver, and evaluate the Portrait...
program to improve the quality of prescribing in BC. The Portrait provides primary care prescribers with a concise evidence overview, a comparison of their prescribing to peers or evidence-based targets, and advice about possible improvements to their prescribing. In 2021, the PEG assessed the effect of Pharmacare’s new coverage policies for infliximab, etanercept, insulin glargine, rituximab and adalimumab.

The PEG also completed two pharmacoepidemiological studies:

- Antidiabetic medications
- Antihypertensive medications and non-melanoma skin cancer.

The PEG developed and distributed two prescribing portraits to physicians in BC:

- Oral antibiotics for uncomplicated urinary tract infection (UTI)
- Non-opioid pain medications dose response

3. **Education Working Group (EWG):** provides health professionals with up-to-date, evidence based, practical information about rational drug therapy. The EWG held 45 educational attended virtually by over four thousand healthcare professionals, highlights:

- Critical Appraisal Workshop Using Evidence in Shared Decision Making: A Case-based, Critical Appraisal Approach for Busy Clinicians (2-hour virtual event) on March 10, 2021
- Bringing Best Evidence to Clinicians: Annual Therapeutics Initiative Course (4-hour virtual event) on October 16, 2021
- Nurse and Nurse Practitioners of BC - Clinical Corner Presentation Series (February-December 2021)
- Island Health Pharmacotherapy Grand Rounds (April-December 2021)
- Powell River Division of Family Practice (May - June 2021)
- South Peace Division of Family Practice (May - September 2021)
- Best Evidence monthly webinar series on various clinical therapeutics issues
- Methods Speaker monthly webinar series on topics related to systematic reviews, meta-analysis, methods and statistics in evidence synthesis.

The EWG also publishes the Therapeutics Letters that provide brief practical messages on how to deal with problematic therapeutic issues. All issues of the Therapeutics Letter are distributed to physician prescribers across BC and available on the TI website in English and Spanish. The EWG published 6 Therapeutics Letters in 2021:

<table>
<thead>
<tr>
<th>Issue Number / Publication Date</th>
<th>Title</th>
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<tbody>
<tr>
<td>TL 129 / February 2021</td>
<td>Mirtazapine for depression</td>
</tr>
<tr>
<td>TL 130 / March 2021</td>
<td>Evidence for statins in people over 70</td>
</tr>
<tr>
<td>TL 131 / May 2021</td>
<td>Tramadol: Where do we go from here?</td>
</tr>
<tr>
<td>TL 132 / July 2021</td>
<td>Rethinking Medication Adherence</td>
</tr>
<tr>
<td>TL 133 / September 2021</td>
<td>Primary hypertension therapy: after thiazide, an ACEI or an ARB?</td>
</tr>
<tr>
<td>TL 134 / November 2021</td>
<td>Finding the lowest effective dose for non-opioid analgesics</td>
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Despite pandemic restrictions, the EWG continued to provide virtual teaching and training sessions on evidence-based medicine, clinical pharmacology, systematic review, meta-analysis methodology, and critical appraisal of randomized controlled studies for 10 medical, pharmacy and undergraduate students at UBC.

4. **Cochrane Hypertension Group (CHG):** prepares, maintains and promotes systematic reviews of the effects of healthcare interventions for hypertension. The scope of CHG includes randomized controlled trials of interventions evaluating blood pressure and clinical outcomes for the prevention and treatment of essential hypertension. Part of the international Cochrane Collaboration, the CHG published the following Cochrane systematic reviews and protocols in 2021:

5. **Communications and Outreach Group (COG):** was created in 2020 to provide leadership in all aspects of communications to advance the TI strategic priorities. The overarching goal of the COG is to lead strategies to expand and enhance the reputation of the TI as an independent, non-partisan, university-based group providing therapeutics information to support the high quality and safe use of medicines in BC.

In 2021 we completed a major milestone in developing a secure website for Portrait Online that is now accessible to eligible GPs in BC. The secure portal includes the TI Assistant - a new tool that physicians can use for comprehensive searches for therapeutics information from Therapeutics Letters, drug safety advisories, and Pharmacare coverage information. The TI website [www.ti.ubc.ca](http://www.ti.ubc.ca) is updated regularly with evidence-based information, including TI webinars and Therapeutics Letters. In 2021 the TI website received over one million visits, averaging over 80,000 visits per month, or a visit every 25 seconds. Most of the visits originated from Google Search, with over 35 million “impressions” (number of times any page was viewed). The TI is also prominent on social media with a strong presence on Twitter and Facebook. In 2021 the Twitter accounts received over one million Tweet impressions (number of times our tweets were viewed). Among all ISDB members, @Drug_Evidence is second with regard to total followers, only @RevuePrescrire has slightly more followers and we are on track to surpass them in 2022. @CochraneHTN was the top gaining account in 2021 among all the 50 Cochrane review groups worldwide.

**Select TI Publications**


Training Positions
As of December 2021, a total of 68 residents were registered in the 5-year Royal College Physicians & Surgeons program. This continues to be a significant year over year increase. Twelve of these residents are scheduled to complete their residency during the 2021/2022 academic year and will be completing their RCPSC examinations in Anesthesiology in the spring of 2022. The number of CaRMs positions has been increased by 33% for 2022 with an intake to 20 new residents. Seventeen residents joined the program in 2021, 15 from CaRMs and 2 program transfers. We continued to have a large applicant pool of over 130 well qualified students with a large contingent of UBC students applying.

New Graduates
All of the PGY5 residents were successful in the 2021 Royal College specialty examinations in Anesthesiology. Our Exam Seminar Series, led by Dr. Ron Ree and Dr. Jason Wilson, continues to be very successful and a model for Royal College exam preparation. In the upcoming year, leadership will be transitioning to Dr. Katarina Kojic and Dr. Nav Chima. The vast majority of 2021’s graduates have faculty positions at UBC academic hospitals.

Competency by Design
2021 was the final year of the traditional program and the “new competency by design curriculum” is the dominant curriculum. The initial cohort (2017) completed the first part of the new split RCPSC exam in September 2021, with the final applied portion of the exam upcoming in spring of 2022. The residents have progressed well through the Core Stage and are now completing the newly developed Transition to Practice stage. The Resident’s and the faculty remain committed to building and delivering a very high-quality educational product through this transition.

Resident Selection Committee
A very robust and active sub-committee of the Residency Program Committee (RPC) reviewed all applicants. The Selection Committee was chaired by the Associate Program Director, Dr. Sadiq Abdulla, with committee members representing all the major BC teaching hospitals. Resident members are also well represented on the committee. The committee is continuing ongoing work to explore and increase principles of equity, diversity, and inclusion into the selection process which also includes efforts to identify and manage internal bias and hidden curriculum present in the committee.

Resident Wellness
As in all areas of health care, wellness has been a significant concern and focus of ongoing support as the COVID pandemic continues to affect many areas of our lives. The program’s systems of confident faculty and resident advisors, peer mentorship, faculty mentorship, UBC resident wellness office, and program specific resident wellness activities have been ongoing to try and help mitigate ongoing academic and social stressors.

Academic Program
- **COVID** – Through 2021, our residents worked and learned full time in the clinical environment without interruption. The residents continue to demonstrate incredible resilience, determination, and courage during this 2nd year of the pandemic.
- **Academic Day** - The full day academic program involving active participation from each of the teaching hospitals has been very successful. No sessions were cancelled with many sessions being a mix of virtual and in-person learning as required to manage and mitigate ongoing issues with COVID. The feedback on our academic sessions remained positive, with many reporting an appreciation of the convenience of virtual learning (reduced commute times, etc.) although the collegial interaction of in-person sessions continues to be significantly missed.

- The Residency Program Committee continues to support the autonomy of each participating UBC teaching hospital in delivering their contribution to the residents’ educational program.

- **Simulation** - Led by Dr. John Veall, simulation continues to be a mainstay of our residency program. The Royal College CanNASc scenarios, required by the new curriculum, continue to be delivered successfully, recognizing that these sessions demand a large portion of our simulation human resources. Please refer to the simulation report for specific details.

- **Journal Club** - an integral part of the academic program, meetings have continued mostly virtually through the 2021 academic year. Dr. Terri Sun continued in the coordinator role. In spite of everything, 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. Training in both core anesthesiology as well as subspecialty anesthesiology is distributed between the primary teaching sites, as well as many secondary teaching sites. The program continues to work at recruiting new training experiences for residents, with Surrey Memorial Hospital and Kelowna General Hospital increasing their participation in the program. Plans are in place to have residents return to University Hospital of Northern British Columbia in the 2022/2023 academic year. The expansion of clinical training continues to be monitored closely.

**Residency Program Committee (RPC)**
This committee met 4 times in 2021 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.

**Administration**
In February 2021, Ms. Jill Delane left her position of Program Coordinator after 11 years of service. After a process to establish the needs of the program, a new position of Program Manager was established, and Ms. Jay Park was successfully recruited to fill the position. Susan Van Bruggen continues to be an excellent Program Secretary.

**Summary**
With ongoing change and expansion, 2021 was a highly successful year for the UBC Anesthesiology Residency Training Program. This success 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. In addition, the engagement of the resident body in building and improving the program has been beyond expectation. The goodwill and high level of commitment to residency training is a credit to this department.
POST-GRADUATE MEDICAL EDUCATION PROGRAM
FAMILY PRACTICE ANESTHESIA

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. Through 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.

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.
POST-GRADUATE MEDICAL EDUCATION PROGRAM
Pain Medicine Residency Program

Dr. Michael Butterfield MSc, MD, FRCPC (Psychiatry and Pain Medicine)
Program Director

PROGRAM OVERVIEW

A. New residents
The UBC Pain Medicine Program continues to attract excellent applicants from a variety of specialties. Our program continues to be a leader in training residents from specialties not traditionally thought of as pain focused. This year the two positions were filled by individuals whose primary specialty is Emergency Medicine; the first emergency medicine specialists to match to a pain medicine residency program across the country. These residents bring with them a novel skill set to the program and help the program to continue to adapt to the learning needs of each resident.

B. Graduating residents
Dr. Sachin Rathee graduated from the program in June 2022 and will be remaining in British Columbia to start his career in pain medicine. Dr. Rathee will maintain a primarily pain focused practice at the Canadian Pain & Regenerative Institute in Vancouver.
Dr. Bilal Munir graduated from the program in April 2022. He has moved to Ontario to be closer with family and his practice involves a combination of general internal medicine and procedural pain medicine

EDUCATION

A. Competency By Design (CBD)
Pain Medicine is one of the last specialties to transition to CBD and in 2021-2022 we have been preparing for this change and working with the Royal College to develop assessment tools that capture the appropriate breadth and scope of pain medicine. The assessment tools have recently been approved and our program will move forward with CBD implementation in July 2023. We are looking forward to this transition and look forward to the improved the educational experience for our residents.

CLINICAL PROGRAM

A. With the implementation of virtual care across all educational sites, the program has adapted and provided the residents with various learning tools to aid in their education. Despite the change to virtual care in many settings, we have successfully continued to be able to provide the residents with exposure to clinical experiences including procedural pain medicine allowing them to become proficient in a wide range in pain procedures.

B. Residents provide patient care at multiple sites across the lower mainland and the program has further expanded to include not only sites across British Columbia, but also in Alberta with the addition of a focused musculoskeletal interventional pain medicine elective in Edmonton.
FUTURE DIRECTIONS
A. Expand our residents’ role in education to other residents and medical students
B. Develop a dedicated simulation program for managing emergencies that can occur when performing interventional procedures
C. Improve access to various educational experiences for procedural pain medicine including neuromodulation
D. Increase resident engagement in leadership and community advocacy for individuals with chronic pain.
UBC ANESTHESIA RESIDENTS 2021-2022 - PGY 3

<table>
<thead>
<tr>
<th>Serenity Aberdour</th>
<th>Hamish Bodnar</th>
<th>Emitee Chan</th>
<th>Akaljot Grewal</th>
<th>Rachel Guo</th>
</tr>
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<tbody>
<tr>
<td>Vivien Hu</td>
<td>Jack Huang</td>
<td>Jiin Kim</td>
<td>Mario Kovacevic</td>
<td>Vladislav Kovalik</td>
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<tr>
<td>Amir Siddiqui</td>
<td>Kamal Sidhu</td>
<td>Danielle Tinker</td>
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<td>Krasimir Ukalovic</td>
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UBC ANESTHESIA RESIDENTS 2021-2022 - PGY 4

<table>
<thead>
<tr>
<th>Simon Adamson</th>
<th>Colin Archer</th>
<th>Ryan Best</th>
<th>Heather Cadenhead</th>
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<tr>
<td>Alexander Dotto</td>
<td>Naima Kotadia</td>
<td>Jordan Meyers</td>
<td>Stephen Miazga</td>
</tr>
<tr>
<td>Todd Radostits</td>
<td>Michael Van Der Westhuizen</td>
<td>Cole Wong</td>
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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).

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/
Visiting Professor 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.
Anesthesia Simulation Program

Vancouver General Hospital Simulation Centre (VGH SIM)-formerly CESEI

Children's and Women's Health Centre Simulation Centre

Vancouver Island Simulation Program
Airway workshop
Dr John Veall MD FRCPC
Anesthesia Simulation Program Director

The UBC anesthesia simulation program completed another successful year, exceeding pre-pandemic levels in terms of hours delivered. The simulation program at this stage consists of two distinct components: the educational or formative simulation curriculum (the classic simulation experience most would be familiar with) and the summative or assessment type simulation required by the Royal College (all CBD residents must successfully complete 5 scenarios prior to graduation). These scenarios are referred to as the CANNASC (Canadian National Anesthesiology Simulation Curriculum) scenarios.

Key to the delivery of the 30 or so formative simulation sessions were our simulation residents, Drs Serenity Aberdour, Vlad Kovalik, Amir Siddiqui, Vivien Hu, and Dr Parker Jobin, an aspiring anesthesia resident who volunteered with the program and subsequently matched to an Internal Medicine program in Los Angeles. For the delivery of the CANNASC sessions, we were dependent on our group of staff and senior resident volunteers including myself and Drs Ken McDonald, Paula Meyler, Shannon Lockhart, Kristen Kidson, Shelley Tweedle, Hao Chen, Kate Mittermaier, Jimmy Lam, Julia Corey, Rosie Earle, Julena Foglia, Connie Drewbrook, Helen Parker, Clara Gramberg, Nav Chima, Stephanie Heindel, Mark Mathieson, and this coming year, Drs Stephen Miazga, Heather Cadenhead, Naima Kotadia, Cole Wong, Alex Dotto and Mihaela Von Idour (apologies for any omissions or typos).

Our sim bootcamp day for new anesthesia trainees saw an unprecedented 25 participants and scenarios in a single day. Frankly, it was an intense day but with help from Dr Alex Dotto and our new sim residents, Drs Kim Li, David Olmstead, Roberston Venema, Paul Yen, and Nikunj Patel, it went smoothly beyond a catastrophic failure of our primary high fidelity manikin.

On that note, our primary high fidelity manikin, the Human Patient Simulator from CAE, keeps threatening/promising to die only to recover to a greater or lesser degree. The last year alone has seen its software severely corrupted, its internal organs and tubes shattered (someone did very effective CPR - I'll let you guess). It’s taken more creativity and efforts to prolong its lifespan but that era appears to be nearing an end. The sim centre will be transitioning to a new moderate fidelity manikin (SimMan essential) combined with a new high fidelity lung simulator that we’re excited to work with. Our hope is that we can maintain or exceed the prior standards once we’ve spent some time learning the new manikin.

Our high soilage manikin (the Vomikin) has also taken a beaten since it ended up on the trash heap and was repurposed for the education and entertainment of participants in the sim program. Thankfully, a grant has been negotiated with industry reps and they’ll be donating a replacement to the sim centre for a similar role. They’ll also be donating some lightly used videolaryngoscopy equipment that should represent a significant upgrade over what we’ve gotten used to in the sim centre in recent years. This is on top of an educational grant from UBC last year which restored our fibreoptic capacity and purchased a store of ‘single use’ videolaryngoscopes to support resident learning and teaching opportunities (available upon request).

Lastly, it is with great pleasure that I announce that Dr Taren Roughead from the anesthesia department at the Royal Columbian Hospital will be signing on as the CANNASC lead for the program, working with me as we continue to try to facilitate the successful completion of all mandatory scenarios by our residents during their R4 year. We are currently behind relative to prior years to a combination of manikin issues and centre availability but are optimistic we’ll be able to catch up through the winter given strong staff and R5 interest in participating.
DIVISION REPORTS

DIVISION OF CARDIAC ANESTHESIA
Dr. Bobby Lee, Head

In 2021/22, the SARS-CoV-2 pandemic continued to cast its long shadow in the cardiac anesthesia world at UBC. In the context of the ongoing pandemic, everything from increased demands to navigate the growing cardiac surgical waitlists to educating UBC Anesthesiology residents to carrying out robust research, was more challenging. However, my colleagues were more than up to the task.

UBC Anesthesia Residency and Fellowship Training
UBC offers residents a 2 month rotation in cardiac anesthesia at 3 primary sites: Vancouver General (VGH), Royal Columbian (RCH), and St. Paul’s Hospitals (SPH). Residents can also pursue elective educational opportunities in cardiac anesthesia at Kelowna General Hospital and Royal Jubilee Hospital in Victoria. Fellowships are offered at the 3 primary sites and new this year at the Royal Jubilee Hospital is their Cardiac Anesthesia Fellowship affiliated with UBC with their first fellow starting this September.

Each of the sites have their own unique educational opportunities such as endovascular thoracic aortic aneurysm repair, mechanical assist devices, transplants, and transcatheater aortic, mitral, and tricuspid valve repair/replacements outside of the standard experience during such a rotation.

Residents also spend one month in the Cardiac Surgery ICU (CSICU) while fellows complete a 3 month rotation. Given the increasing complexity of cardiac surgery patients, this has resulted in an excellent learning experience in managing complex patients with a variety of mechanical assist devices such as ECMO and LVAD’s as well as challenging medical conditions historically seen in the ICU.

Dr. S. Bruce in the CSICU at St. Paul’s Hospital

An additional one-month TEE/POCUS elective is also offered at two of the sites, Vancouver General and St. Paul’s Hospitals, focusing on both cardiac anesthesia and perioperative medicine.
Site Updates/Highlights

Vancouver General Hospital
New Cardiac Anesthesia Staff in 2021/22
Dr. Simone Schülein
Dr. Sandy Pitfield
Dr. Kali Romano
Dr. Hilary Grocott

Research

Ongoing:
Albumin Utilization for Intravascular Volume Replacement Across Canadian Cardiac Surgical Centres: A Prospective Observational Study. Site Lead: Dr. D. Mullane

COP-AF: Colchicine For The Prevention Of Perioperative Atrial Fibrillation In Patients Undergoing Thoracic Surgery. Site Lead: Dr. S. McLean

Pragmatic Cluster Crossover Randomized Trial: Benzodiazepine-free Cardiac Anesthesia for Reduction of Postoperative Delirium (B-Free). Site leads: Drs Klein, J Atherstone, D Mullane


The Fares Study: A Multicenter, Randomized, Active-Control, Pragmatic, Phase 2 Pilot Study comparing Prothrombin Complex concentrate Versus Frozen Plasma in Bleeding Adult Cardiac Surgical Patients. Site Lead: Dr. B. Hughes

TRICS IV: Transfusion Requirements in Younger Patients Undergoing Cardiac Surgery An international, multi-centre, randomized controlled trial to assess transfusion thresholds in younger patients undergoing cardiac surgery, Site leads: Drs R. Klein, D. Mullane, and J. Atherstone.

Kelowna General Hospital
Research
Ongoing:
TRICS IV: Transfusion Requirements in Younger Patients Undergoing Cardiac Surgery An international, multi-centre, randomized controlled trial to assess transfusion thresholds in younger patients undergoing cardiac surgery, Site lead: Dr. N. Kuzak

DEPOSITION – Decreasing Postoperative Blood Loss by Topical vs. Intravenous Tranexamic Acid in Open Cardiac Surgery
Royal Columbian Hospital
New Cardiac Anesthesia Staff in 2021/22
Dr. Jared McCormick
Dr. Tonia Tauh

Research
Ongoing:
The Fares Study: A Multicenter, Randomized, Active-Control, Pragmatic, Phase 2 Pilot Study comparing Prothrombin Complex concentrate Versus Frozen Plasma in Bleeding Adult Cardiac Surgical Patients.

Pragmatic Cluster Crossover Randomized Trial: Benzodiazepine-free Cardiac Anesthesia for Reduction of Postoperative Delirium (B-Free).

Cognitive Outcomes after Dexmedetomidine Sedation in Cardiac Surgery Patients: CODEX Trial.

St. Paul's Hospital
New Cardiac Anesthesia Staff in 2021/22
Dr. Dmitry Mebel

Research
Ongoing:
Lemborexant for the Prevention of Delirium After Cardiac Surgery: A Randomized Controlled Trial
Principal Investigator: R. Ree
Co-Investigators: T. Sun, E. Wang, A. Flexman

PERIOPERATIVE STROKE SCREENING TOOLS IN CARDIAC SURGERY (PESST-CARDIAC): A PILOT STUDY
PI: A. Flexman, Co-Investigator: T. Sun

QUALITY OF RECOVERY SCORE 15 FOLLOWING CARDIAC SURGERY
PI: T. Sun, Co-Investigator: A. Flexman

Efficacy of pecto-intercostal fascial plane catheters for reduction of sternal pain in cardiac surgery patients with complete median sternotomy: A randomized, placebo-controlled trial
PI: R. Ree; Co-Investigator: T. Jen

Perioperative Stroke Following Implantation of Left Ventricular Assist Device

Right ventricular function following sternotomy versus mini bilateral thoracotomy approach for implantation of left ventricular assist device
PI: T. Sun, Co-Investigators: A. Flexman, J. Bashir

Pragmatic Cluster Crossover Randomized Trial: Benzodiazepine-free Cardiac Anesthesia for Reduction of Postoperative Delirium (B-Free). Site lead: Dr. Raja Rajamohan

Cognitive Outcomes after Dexmedetomidine Sedation in Cardiac Surgery Patients: CODEX Trial.
Site PI: R. Rajamohan
Division of Neuroanesthesia
Co-Head, Dr Alexandra Kisilevsky MD PhD FRCPC
Co-Head, Dr William Rieley MBChB FRCA FRCPC
Former Head, Dr. Cynthia Henderson MD FRCPC

2021 members:
Dr Cynthia Henderson
Dr Jon McEwen
Dr Bali Dhaliwal
Dr Henrik Huttunen
Dr Jason Wilson
Dr Sandy Kisilevsky
Dr Joshua Bennitz
Dr Kelly Mason
Dr Lynn Martin
Dr Yvonne Peng
Dr William Rieley

Division Highlights:
A formal search for a new UBC neuroanesthesiology division head was undertaken by the department in 2021. The successful applicants, Drs Sandy Kisilevsky and William Rieley, officially took over the post from Dr Cynthia Henderson in March. As co-division heads, Drs Kisilevsky and Rieley share a common vision of promoting ongoing clinical excellence, providing high quality education to residents, fellows and faculty, and supporting research and QI activities within our subspecialty.

Resident Education:
Dr Kisilevsky continued in the position of the Neuroanesthesia Resident Subspecialty Coordinator. UBC anesthesia residents spend 3 weeks each (as part of their VGH subspecialty block) in neuroanesthesiology and spine surgery. During this time, each resident completes a unique neuroanesthesia specific “Question of the Month”. Resident write-ups can be found at https://www.vghanes.com/neuro-questions-of-the-month. There was no neuroanesthesia resident journal club in 2021. The next JC is anticipated in the 2022-2023 academic year.

Fellowship Training:
Dr Rieley continued in the position of the Neuroanesthesia Fellowship Program Director. The fellowship program retains its International Council of Perioperative Neuroscience Training (ICPNT) accreditation through 2025. Dr Andrew Lindberg completed the fellowship in January 2021 and has the distinction of the first fellow to graduate since ICPNT accreditation. He returned to Australia to take a position as Anaesthetist Visiting Medical Officer at Royal North Shore Hospital, Sydney. The subsequent neuroanesthesiology fellow, Dr Lillian Lukoko, arrived from Kenya in October 2021 following immigration delays during the COVID-19 pandemic. She anticipates completing fellowship in October 2022 and returning to Kenya to take a position with Aga Khan University hospital in Nairobi. Under the supervision of Dr Rieley, Dr Lukoko is working on a research project investigating the use of aprepitant for PONV in posterior fossa craniotomy cases.

Multi-disciplinary rounds:
Combined neuroanesthesia-epilepsy neurology rounds took place in October 2021. Discussion focused on perioperative patient management during electrocorticography (ECOG) monitoring as
well as the implementation of a new protocol using etomidate for speech and memory testing (eSAM). The new eSAM protocol will involve a neuroanesthesiologist in all instances.

Publications:


Presentations

DIVISION OF PAIN MANAGEMENT
Dr. Aaron MacInnes
Head

With another year behind us, it appears that we are moving towards normalcy after the last few years. Within the Division of Pain Management we have continued to see growing activities as well as ongoing interest both provincially and nationally in the arena of chronic pain and pain medicine.

Federally, the Canadian Pain Task Force, which has been meeting over the last three years, has come forward with its third and final report. Several keys recommendations for advancing chronic pain and pain care throughout our country have been proposed within each of the three reports. From the most recent report the task force has provided the following guidance to “...provide recommendations on priority actions that ensure people with pain are recognized and supported and that pain is understood, prevented, and effectively treated throughout Canada. The report also provides direction for supporting future change to better meet the needs of people living with chronic pain. As with other complex and large-scale public health challenges, addressing chronic pain will require multiple and diverse approaches to change. Health Canada will continue to work with partners to explore how best to move recommendations into action.” For more information please see: https://www.canada.ca/en/health-canada/corporate/about-health-canada/public-engagement/external-advisory-bodies/canadian-pain-task-force.html

Within our province, despite ongoing funding challenges and a lack of resources, each of the health authorities continues to provide multidisciplinary pain care in an academic setting to the 1 in 5 British Columbians who suffer from chronic pain. We are still awaiting further direction and organization from the Ministry of Health to develop and implement a strategy for the development of more accessible and comprehensive pain care services for all those in our province. There does appear to be renewed interest and optimism that we will try to address some of these issues in the coming year.

As far as educational opportunities the BC Echo Program which continues to provide multidisciplinary case-based education for all health care providers in the area of pain management. The program is funded through a Shared Care grant and the regularly scheduled meetings are organized through PainBC and are available free virtually. For further information and to access prior topics please see the following: https://painbc.ca/health-professionals/education/echo.

UBC continues to participate as an academic site for the CIHR Chronic Pain Clinical Research Network. The initial six year network grant has completed and the network is now transitioning to support for researchers throughout Canada in chronic pain. UBC has participated in several studies both nationally and locally to advance the areas of pain research and knowledge building. We look forward to future research to help build on the current body of work to assist those living with chronic pain.
DIVISION OF REGIONAL ANESTHESIA
Dr. Alexander Wong
Head

Clinical Report:
With the ongoing COVID-19 pandemic, 2021 continued to have unique challenges for our hospitals. Despite these issues, we have carried on delivering high standard of care utilizing regional anesthesia techniques in the perioperative management of our patients.

St. Paul’s Hospital continued on with its well established block room program with a high volume of both upper and lower limb nerve blocks. In addition, the breast program at Mount St. Joseph’s Hospital continued to provide paravertebral blocks for various oncological breast procedures. For many of these procedures, patients were able to forgo a general anesthetic and have the surgery done under sedation supplemented with surgically administered local anesthetic infiltration.

At VGH, the implementation of a hip fracture protocol and a rib fracture protocol has been well received. With improvement in the ability to better staff the Perioperative Anesthesia Intervention Service (PAIS), hip fracture patients have had the opportunity to receive nerve blocks for better pain control and to optimize perioperative care for this often frail population. Such blocks include the pericapsular nerve group (PENG) block, superficial fascia iliaca (SIFI) block, and femoral nerve block. After previously completing a regional anesthesia fellowship in Ottawa, Dr. Peter Rose helped implement a rib fracture protocol in which the Perioperative Pain Service (POPS) would be consulted on patients with higher risk for pulmonary complications. Based on the Ottawa protocol and in collaboration with the VGH Trauma Service, these high risk patients would often receive serratus anterior plane (SAP) nerve block catheters, erector spinae plane (ESP) block catheters, or thoracic epidurals as deemed appropriate.

In the era of climate change, ongoing PACU nursing shortages, and emphasis of multimodal analgesia, regional anesthesia continues to have a prominent role going forward for all sites in providing high quality of care in a system with finite resources.

Academic Report:
Training of Residents:
Anesthesia residents continue to go through St. Paul’s Hospital for their core regional rotation. Due to the ongoing pandemic restrictions, the traditional resident regional anesthesia day at the VGH Simulation Centre was canceled. Fortunately, Lead Resident, Dr. Michael Jew was able to organize a separate Workshop session at SPH with appropriate COVID precautions. Residents continue to also obtain regional anesthesia experience at other UBC teaching sites around BC, such as Surrey Memorial Hospital, Burnaby Hospital, and Lions Gate Hospital. As the residency program looks to expand in the coming years, more formalized training at these sites outside of SPH will likely become increasingly important.

Training of Fellows:
Dr. Amber Galbraith completed her regional anesthesia fellowship at SPH and returned to VGH in 2021. With her experience at the MSJ breast program, she will be looking to increase the usage of paravertebral blocks to improve perioperative management of breast surgery patients coming through VGH and UBCH.

Conferences:
Typically, UBC is well represented at local, national and international conferences but many of these events were disrupted due to COVID-19. The Whistler Anesthesia Summit (WAS) normally has regional workshops with organizers and instructors from various UBC-affiliated sites. With the pandemic, the WAS was held virtually this year but looks to return in 2022 with in-person workshops.

**Research Report:**
UBC faculty has continued to work with the residents and fellows in publishing articles in the area of regional anesthesia and continues to do high quality research. For example, at VGH, Drs. Beau Klaibert and Jason Wilson are currently working with other colleagues on publishing research on the use of ESP blocks in the setting of VATS wedge resection surgery.
**DIVISION OF THORACIC ANESTHESIA**

Co-head Dr. Chris Durkin  
Co-Head Dr. Travis Schisler

**Membership**

In 2021, there were 9 members in the Division of Thoracic Anesthesia at Vancouver Acute - Dr. Chris Durkin, Dr Gord Finlayson, Dr Brett Fitzmaurice, Dr. Patrick Hecht, Dr Bevan Hughes, Dr Jens Lohser, Dr. Sean McLean, Dr. Kali Romano, and Dr. Travis Schisler. Departures in 2021 included Dr. Paul Kapnoudhis and Dr. Hamed Umeda. We thank them for all their contributions and leadership in thoracic and lung transplant anesthesia. The division looks forward to welcoming Dr. Sandy Pitfield who is returning from a cardiothoracic fellowship at St. Paul’s Hospital and Toronto General Hospital.

**Education**

The UBC anesthesia residents complete a three-week rotation at Vancouver General Hospital where they gain experience primarily in anesthesia for video assisted and open lung resection surgery. Further exposure is gained at Surrey Memorial Hospital, Kelowna General Hospital and Victoria General Hospital. Emphasis is placed on the preoperative assessment for lung resection surgery and understanding bronchoscopic anatomy to inform lung isolation strategies and ultimately develop a plan that is safe, patient-centered and considers the risk and benefits of all approaches. Evidence based one-lung ventilation strategies are discussed as are approaches to the less common scenarios of anterior mediastinal masses and pulmonary hemorrhage. Residents also gain exposure to several different approaches to esophagectomy including MIS, Ivor Lewis and transhiatal. Opportunities are plenty to acquire skill in thoracic epidural, paravertebral catheter, and serratus anterior catheter placement. The division remains engaged with leading the thoracic themed academic days as well as providing mentorship for a UBC wide thoracic journal club (held virtually in 2021).

**Research**

The division continues to remain active in both local and international research projects. Dr. Sean McLean has been the site lead for the international COP-AF trial looking at the prevention of perioperative atrial fibrillation in patients undergoing thoracic surgery. In 2021 Cohen’s Comprehensive Thoracic Anesthesia textbook was published. Dr. Jens Lohser and Dr. Travis Schisler contributed a chapter to this comprehensive review and update on thoracic anesthesia. The division continues to contribute to the “Thoracic Year in Review” published annually in the Journal of Cardiothoracic and Vascular Anesthesia. Drs Lohser, Romano and Durkin published a review paper on the significance of hypoxemia during one lung ventilation in Current Anesthesiology Reports. The division is collaborating in quality improvement work alongside thoracic surgery to discover best practices for pain management after VATS lobectomy surgery.

**Lung Transplantation**

The lung transplant program continues to expand in frequency and complexity. In 2022, 66 double lung transplants were completed with excellent outcomes.
Dr. Donald Griesdale
Clinical Research Director (Anesthesiology)

The UBC Department of Anesthesiology, Pharmacology and Therapeutics is the largest in western Canada with over 480 Faculty. The Department’s strategic plan promotes translational research through excellence, collaboration, creativity and diversity across our four academic domains – Research, Education, Clinical Practice, Patient Safety and Knowledge Translation.

Our faculty members are advancing our understanding through drug development, pharmaco-epidemiology, basic sciences, technological advancement and clinical sciences in the following 11 research themes, which are conducted at 13 UBC Research Centers across 4 healthcare authorities in BC:

- Acute and chronic pain management
- Cardiopulmonary sciences and anesthesiology
- Clinical outcomes and patient safety
- Equity in Medicine
- Evidence-based medicine and knowledge translation
- Intensive care, transplant & transfusion medicine
- Neuro sciences & anesthesiology
- Obstetric and pediatric anesthesiology
- Perioperative technology integration
- Pharmacoepidemiology
- Regional anesthesiology

Since 2010, we have had a continual increase in the number of publications generated by our integrated Department. For the last two years on average over 250 publications have been generated by research and collaborations of our 20 academic and 430 clinical faculty.
2021 Publication  
(Please refer to Appendix for details)

Figure 3, demonstrates the research funding that is held within the Department divided by salary, peer-reviewed operating, non-peer-reviewed operating, infrastructure and trainee awards. It is important to note that faculty with the Department that are based at UBC research centres (majority of all faculty) also hold funding within their research institutions and this is not reflected in this financial report from UBC central. Investigator funding sources are derived from CIHR, NSERC, CFI, several foundations, grand challenges Canada, NIH and provincial government funding. (data supplied by Dr. Tillie Hackett)
Welcome to the Dr. Jean Templeton Hugill Chair in Anesthesia section of our Department’s 2021/22 Annual Report! As always, I am delighted to summarize below some of the highlights and activities that took place under the aegis of the Chairship. My principal priority was to continue to foster the interdisciplinary team-based laboratory research in the Hugill Anesthesia Research Centre (HARC) while at the same time supporting clinical research at St. Paul’s Hospital.

Regarding the latter, I am pleased to announce the joining of a new graduate student, Jaycee Farmer, who is jointly supported by the Department of Anesthesia at St. Paul’s Hospital and HARC and co-supervised by Dr. Alana Flexman and myself, working on a project related to the important topic of perioperative brain health.

Another highlight was the fruitful work of a new interdisciplinary research group dedicated to the intersection of perioperative medicine with BC’s worsening opioid crisis and created in 2020. Together with faculty colleagues, Drs. Malcolm Maclure, Anton Chau, and Michael Krausz (Addiction Psychiatry) as well as numerous students, we completed two extensive projects to study postoperative opioid prescription patterns and trends in BC, the results of which were accepted for publication as two full-length manuscripts in the top-quartile peer-reviewed literature. Overall, and despite the challenges imposed by the COVID-19 pandemic, results from our various research avenues again appeared in numerous national and international abstract and poster presentations as well as full-length peer-reviewed manuscripts, listed in the APT Annual Report’s Publications section.

The period of 2021/22 also marked the early phase of my tenure as the new Editor-in-Chief the Canadian Journal of Anesthesia/Journal canadien d’anesthésie, a national leadership position which I commenced effective January 1, 2021 and undoubtedly represents the greatest privilege of my career. I feel deeply honoured and humbled to be able to pursue this prestigious portfolio here at UBC as our Department’s Dr. Jean Templeton Hugill Chair in Anesthesia and am immensely grateful for my university and clinical departments for their invaluable support.

As those who know me are aware, it has always been a priority of mine to utilize the Hugill Chair position to continue to build bridges between Anesthesiology and Pharmacology & Therapeutics; as a reflection of this spirit, an important goal was to once again bring in a high-profile speaker for our Department’s annual Hugill Lecture who could help accomplish just that. Supported by the Hugill Endowment and honoring Dr. Hugill’s spirit and intent to celebrate and promote research, we again held the annual Hugill Lecture concomitantly with the Annual APT Research Day as keynote presentation. Dr. Phil Jones from The University of Western Ontario was invited Guest Lecturer at the 15th Annual (2nd Virtual) Research Day on May 25, 2021, on the topic “False Discoveries in Biomedical Research — A Problem We Need to Tackle”.

Some of the other activities as Hugill Chair included service as an invited presenter and panellist at the 17th World Congress of Anaesthesiologists (virtual; September 2, 2021: Workshop “Scientific Writing for Beginners”) and the 2021 Annual Congress of the European Society of
Anaesthesiology and Intensive Care (Euroanesthesia 2021; virtual; December 17, 2021: Avoid these five reasons why your manuscript might get rejected). I also was invited to serve as Visiting Professor on the occasion of World Anesthesia Day 2021 at the Department of Anesthesia & Perioperative Medicine, Schulich School of Medicine & Dentistry, Western University, London, ON (virtual; October 20, 2021) where I presented Citywide Grand Rounds on “Accepting the baton at the CJA in the times of COVID: a vision for the future and taking a moment to celebrate successes, science, and diversity” and gave a Resident and Fellow Lecture on “Publishing in anesthesia 101: how to write an abstract, prepare a poster, and approach the editor’s response letter.”

It has been an immense privilege to serve to honour and spread Dr. Jean Hugill’s spirit and vision, and I look forward to another exciting academic year!
APPENDIX

Consolidated List of Publications – 2021


226. Wood MD, Boyd JG, Wood N, Frank J, Girard TD, Ross-White A, Chopra A, Foster D, Griesdale DE. The Use of Near-Infrared Spectroscopy and/or Transcranial Doppler as Non-Invasive Markers of Cerebral Perfusion in Adult Sepsis Patients With Delirium: A


