



The Morpheus Reporter

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Chair's Message

Welcome to this 8th edition of The Morpheus Reporter! The major thrust of the university's department activities for the last several months has been honing the departmental strategic plan. I would like to take this opportunity to update all of our members on the state of play. The strategic planning for the Department is currently being discussed at each of the hospital departments by the chair and the hospital's Anesthesiologist-in-Chief. This is the final process following a careful series of consultations among the executive, faculty, all members of the department and a presentation in December of last year to the Dean's executive in the Faculty of Medicine. The department's vision and mission statements are in many ways the driver for the strategic plan. The departmental vision is: **"The provision of safe and innovative anesthesia as a perioperative and critical care medicine"**; the mission statement is: **"The delivery and promotion of preeminent peri-operative care through continued vigilance, innovation and scholarship"**. Both the vision and mission statements are entirely consistent and emphasize the importance of imagination, rigor and intellect in developing new knowledge (research), imparting that knowledge to all members of the anesthesia care team (education), and advocating in all areas for the benefits of our patients.

The strategic plan follows closely with the Faculty of Medicine's articulated values (<http://www.facmed.utoronto.ca/about/dean/strategic.htm>) and our plan focuses on:

1. Advancement;
2. Productivity measurement and accountability;
3. Facilitating educators so that we have the best possible teaching;
4. Facilitating learners so that we recruit and educate the best trainees at the resident, fellow and graduate student level;
5. Research -- so that we can develop new knowledge;
6. Development of a vigorous alumnus program;
7. A strategic for advocacy, leadership, and communication of why anesthesia matters and why it is important to continually improve scientific base and its dissemination.

After discussion with all of the hospital departments the plan will go to print and much of the hard work involved in its development will be continued in implementing it. This will require ongoing effort on the part of all department members and promises to be a very fulfilling phase in the life of the departments of anesthesia at the university and hospitals.

Thank you for your participation in this process!

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Dr. Salvatore Spadafora, Vice Dean, Post Graduate Medical Education

Associate Professor, UT Department of Anesthesia

I am delighted to announce that our Academic Board has approved the appointment of Dr. Salvatore (Sal) Spadafora as Vice Dean, Post Graduate Medical Education, for a five year term commencing January 1, 2010. The month of January will be a transition period for Dr. Spadafora into his new role. He currently serves as Associate Dean, Postgraduate Medical Education at the Schulich School of Medicine and Dentistry at the University of Western Ontario, and is an Anesthesiologist at the London Health Sciences Centre and St. Joseph's Health Centre in London.



A graduate of the University of Toronto, Faculty of Medicine, Dr. Spadafora has distinguished himself as a leader in medical education. He also completed his Masters in Health Professions Education at the University of Illinois Department of Medical Education. He has served as the Program Director for the University of Western Ontario's (UWO) Anesthesia and Family Medicine Anesthesia residency programs; and, nationally as a member of important leadership committees of the Canadian Anesthesiologists' Society and the Royal College of Physicians and Surgeons of Canada. Dr. Spadafora has advocated effectively and tirelessly for medical education to benefit Canadian patients and patient populations with respect to fiscal and human resources, education methodology and technology, and the social mission of medical education including developing strategies to integrate education among urban and small community sites. He has developed models of inter-professional education and assessment and integration of international medical graduates provincially. Dr. Spadafora is the recipient of numerous prestigious education awards, recognized by national organizations, his peers and, most importantly, his students and trainees. He is highly respected by health care educators and scholars nationally for his high scholarly and ethical standards, exceptional capacity for work, and consensus building and common sense approaches to solving difficult problems.

Please join me in warmly welcoming Dr. Spadafora to his new role at the Faculty of Medicine, University of Toronto.

Catharine Whiteside, Dean, Faculty of Medicine

Vice Provost, Relations with Health Care Institutions

New: Director, Faculty Development - Dr. Martin van der Vyver

Submitted by: Dr. Brian Kavanagh

I am very pleased to announce the appointment of Dr. Martin van der Vyver to the position of Director, Faculty Development, UT Department of Anesthesia for a two-year term commencing in July. In this new position, Dr. van der Vyver will be responsible for organizing and implementing various initiatives related to the department's new strategic plan (platform 3: Facilitating Educators) including organization and implementation of the Annual Faculty Development Day event; development and implementation of a comprehensive first-year experience program for new faculty members; and faculty development (e.g., faculty development/teaching remediation; needs assessments, awards database, and communications).



Dr. van der Vyver is a staff anesthesiologist at the Sunnybrook Health Sciences Centre. He completed his medical degree at the University of Stellenbosch in South Africa in 1988, and after working in several community hospitals, he returned to the academic hospital setting, completing of his residency in Anesthesia in 1999. He followed this with a fellowship in obstetric anesthesia at Women's College Hospital, and after a short return to Cape Town for 2 years he took up a position as a staff anesthetist at Women's College Hospital in 2003. He passed the Royal College of Physicians and Surgeons of Canada exam in Anesthesia in 2005, and completed the Education Scholars Program (an advanced faculty development program offered by the Centre for Faculty Development, University of Toronto) in 2008. He has filled educational roles in undergraduate and continuing education, and is currently the chair of the Continuing Professional Development committee of the Canadian Anesthesiology Society.

MARK YOUR CALENDARS!

The **Annual Shields Research Day 2010** will take place on Friday, May 7, 2010 at the Bahen Centre, University of Toronto.

The **Annual Faculty Development Day 2010** will take place on November 11, 2010 at the 89 Chestnut Residence and Conference Centre, University of Toronto.

Together with Dr. Peter Slinger, Dr. van der Vyver planned and organized a very successful Faculty Development Day in November 2009. The (truly outstanding) evaluations for this event can be found on our internal website ["Staff Login", "Events", "Evaluations"]. Please join us in welcoming Dr. van der Vyver to this new position.

New Faculty Hires

Please join us in welcoming the following new faculty members to the University of Toronto, Department of Anesthesia:

Full-Time Faculty:

- Dr. Brian Cuthbertson, Professor, Sunnybrook Health Sciences Centre (see Featured Researcher profile on page 5)
- Dr. Salvatore Spadafora, Associate Professor, UHN-Mount Sinai Hospital (see announcement - above)
- Dr. Sheila Riazzi, Assistant Professor, UHN-Toronto Western Hospital

Part-Time Faculty:

- Dr. Felix Bassoon, Lecturer, Humber River Regional Hospital
- Dr. Steven Bernstein, Lecturer, Humber River Regional Hospital
- Dr. Michael Friedland, Lecturer, Trillium Health Centre
- Dr. Sujata Sikka, Lecturer, Trillium Health Centre

New Faculty Hires, Promotions and Academic Rank

Recently, important questions were posed about how the academic rank of new faculty members is determined, as well as about the process of promotion from the rank of Lecturer to Assistant Professor. These issues were addressed in a letter by Dr. David McKnight, Chair of the Departmental Appointments Committee, to Dr. Kavanagh. A copy of this letter can be found on the department's internal website under "Promotions". The following (*italics*) is an excerpt from Dr. McKnight's letter:

The DAC uses the Guidelines of the Faculty of Medicine Faculty Appointments Advisory Committee (FAAC) as set out in Appendix 1 and 2 of its June 2007 document. [http://www.facmed.utoronto.ca/Assets/HR/Terms+of+Reference\\$!5b2\\$!5d.doc?method=1](http://www.facmed.utoronto.ca/Assets/HR/Terms+of+Reference$!5b2$!5d.doc?method=1)

Initial Appointments

Appendix 1 Guidelines Used for Initial Appointment as Assistant Professor rank

This rank is appropriate IF the faculty member has completed a recognized graduate program (or an advanced training experience deemed to be equivalent to a Master's level program. ..."). This guideline has been used by the DAC to recommend initial appointment as assistant professors if the candidate has completed a Master's degree.

Promotion

"Appendix 2 Guidelines for Promotion from Lecturer to Assistant Professor

There are two circumstances that may be applied.

*1) **Advanced Degree:** If the faculty member who holds a lecturer appointment, completes a recognized graduate program, ...*

Or

*2) **Sustained commitment to academic mission:** If a faculty member demonstrates a sustained commitment to teaching, research and/or creative professional activity over a period of time as a Lecturer, he/she may be considered for appointment at the Assistant Professor rank. ..." The DAC uses this guideline and also keeps in mind the current working rule of the FAAC that those faculty members promoted to Assistant Professor ought to have at least one peer-reviewed publication. (Personal communication from Dr John Bohnen, Vice Dean, Clinical Affairs.) The DAC has interpreted this to mean a relevant paper published during training or practice. We have not considered as relevant papers published prior to the individual's enrolment in a residency program.*

This then leaves the DAC to deliberate on what constitutes "sustained commitment to academic mission." Each application is considered on its own merits. There is no faculty guideline on how long "sustained" ought to be, and the DAC has not established one either. In reaching our decisions, when a faculty member is applying after just a few years (< 5), the DAC has looked for evidence of new program development or educational innovation. Even those who have been faculty longer than five years will need significant accomplishments to convince the FAAC to waive its one-paper rule.

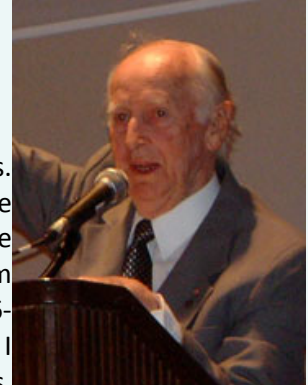
Members of the Department of Anesthesia may find that this procedure is a departure from the past when promotion from Lecturer to Assistant Professor was almost automatic. This is indeed the case. There has been a decision on the part of the Faculty to demand more of such promotions.

Finally, it is important to point out that although the DAC does its best to make fair decisions, there may be times when it misses something or errs in other ways. As for all committees and panels in the Faculty of Medicine, decisions of the DAC are appealable; in this case I believe appeals would be through the Chair.

In Memory of Dr. John ‘Desi’ Desmond

Submitted by: Dr. Gerald O’Leary

Dr. John ‘Desi’ Desmond passed away on December 11, 2009 at UHN. Desi was on staff at TGH for decades. Not only was he a really good anesthesiologist but he was a lot of fun to be around. I think this is one of the reasons why he was such an exceptional teacher beloved by clerks, residents and staff, quite simply he made learning fun. He was the recipient of numerous teaching awards and has an award named after him presented annually at Shields Day. Desi was also a clinical scientist with a string of publications from 1956-1986 that effected change in clinical practice. I was fortunate to work with Desi from 1987 onwards. I remember him as a really nice man who cared for the welfare of his patients, his students and his colleagues. Perhaps this is best illustrated by some of Desi’s 29 “Commandments of Anesthesia”:



1. The golden rule of anesthesia - be kind and considerate.
2. Endotracheal intubation at induction—when in doubt take it out, at the end of the procedure—when in doubt leave it in.
6. You can always give more medication but you can’t take it back.
8. Always check your machine before drawing up your drugs.
14. If it is worth doing, do it well.
15. Before you start, make sure that you have a full vaporizer and an empty bladder.
29. A new breed of anesthetists are now being trained. You will be the one who sets the standards for the 21st Century. Look back over the past century and see how much we have progressed. It’s been because “some men squandered their lives for a good cause”. Do the same with your life.

His life was not squandered. We have all benefited enormously from it. Thank you old friend. Sleep well.

UT Anesthesia Teaching and Research Awards

Submitted by: Dr. Brian Kavanagh

Until last year, the UT Anesthesia teaching and research awards were typically presented at the Annual Shields Research Day. With the implementation of the Annual Faculty Development Day in November 2009 (a key component in the department’s overall strategic plan), and following the Faculty Recognition Event on October 30, 2009, it was decided that the awards would be presented as follows in 2010 and beyond:

- **Research-related Awards** will be presented at the Annual Shields Research Day in May of each year; and,
- **Teaching Awards** (e.g., Desmond, Edelist, Fear awards) will be presented at the Annual Faculty Development Day event in November of each year. This event is now the premiere teaching-related meeting for all of our faculty and fellows.

Announcements with the relevant application submission dates will continue to be circulated widely via email, and posted on the UT Anesthesia website.

Canadian Anesthesia Research Foundation

Submitted by: Dr. Doreen Yee, Chair, CARF Board

The Canadian Anesthesia Research Foundation (CARF) was founded in 1979 to administer research funds, and to provide support to researchers in anesthesia who are members of the Canadian Anesthesiologists’ Society. The funding framework allowed the CAS to launch the Society’s Research Grants Program in 1985. It is the only organization dedicated specifically to funding anesthesia research in Canada. The first Toronto based CAS Research Award was granted in 1987 to Dr. David Mazer (to this day Dr. Mazer says this was one of the deciding factors that attracted him back to practice in Canada).



Today, the Program administers over \$200,000 annually in the following target areas:

- Operating Grants (New Investigator, Open Awards, and Subspecialty Awards)
- Career Scientist Awards (Two Salary Awards to support the investigator's non-clinical research time)
- Resident Research Award

The Awards are administered annually, based upon a peer-review process and recommendations of the CAS Research Committee.

2010-2011: The Year of the Double Cohort

Submitted by: *Isabella Devito*



After many years of discussion, the Medical School at the University of Toronto will be embarking on a new and exciting curriculum.

Major changes include curriculum mapping of content in the Preclerkship and Clerkship programs, as well as a new and improved Clerkship. Major changes to the Clerkship include all core rotations occurring prior to CaRMS and a set elective time between September and November of fourth year. After CaRMS, a novel 12 week rotation called "Transition to Residency" is being developed. This will include selectives and community experience.

This is great news for the Anesthesia clerkship rotation! We will finally be a two- week, third year rotation. All medical students will now have the opportunity to experience Anesthesia prior to their CaRMS application. I remember fondly Dr. Christina Benedict actively trying to make this change fifteen years ago. We're finally there!!

There are of course some challenges involved. As a result of these changes, we will have a double cohort in academic year 2010-2011. This means we will have *both* 3rd year (new curriculum) and 4th year (old curriculum) students concurrently. In terms of actual numbers, we normally have 224 students rotating from August to March. In the double cohort year, we will have 448 students rotating through the core Anesthesia rotation from August to August. We will also accept elective students.

In anticipation, we have been approaching community hospitals with a known academic interest to assist with our increased medical student numbers. To date, Trillium and St. Joseph's Hospital have graciously offered to help. As well, the TEGH is continuing in their stellar commitment to our undergraduate program. Discussion is ongoing with three other major community hospitals with a known history of excellence in teaching. This is an extremely exciting time for our department.

For our faculty, it will be important to remember that we will have two levels of students in 2010-2011. Those in third year may not have completed their core medicine and surgery rotations prior to their Anesthesia experience. As a result, they will not have the level of medical knowledge that we are accustomed to. As well, it is unlikely that they will be familiar with the operating room environment. On a final note, I would like to extend thanks to our entire teaching faculty who have provided countless hours of high level teaching to all our medical students.



Featured Investigator: Dr. Brian Cuthbertson, MB CHB, MD, FRCA

Chief, Department of Critical Care Medicine, Sunnybrook Health Sciences Centre; Professor, Department of Anesthesia, University of Toronto; Senior Scientist, Trauma, Emergency and Critical Care Program, Sunnybrook Research Institute; and, Honorary Professor, University of Aberdeen, Scotland.

Dr. Brian Cuthbertson joined the UofT and Sunnybrook Health Sciences Centre this fall, after moving to Toronto from the University of Aberdeen in Scotland with his family (wife, Susan, and their two young daughters, Sally, 10 and Lucy, 7).

An anesthesiologist and critical care medicine specialist by training, the nature of the Canadian health care system and the nature of his new position required that Dr. Cuthbertson focus on one area in

Toronto: critical care medicine. In the following article, Dr. Cuthbertson talks about his move to Toronto, his research interests, and the major difference between the UK and Canadian health care systems.

What are your initial impressions of Toronto, Canada?

Great! I was pretty thrilled about the chance to come over and work here.

What are your major research themes?

I have two major themes. The first focuses on improving the outcomes after major surgery. I have done a lot of work on looking at various biomarkers and cardiopulmonary exercise (prior to major surgery) to try to predict outcomes. My second focus is on improving outcomes following critical care using various rehabilitation strategies.

What do you see as the major similarities in critical care in Canada vs. the UK?

In critical care, it's really quite similar. Both systems are publicly funded health services, both are a little strapped for cash at times, and neither has quiet enough critical care beds for the demand. When I came to Canada, I guess I was hoping to find a system that was a little better funded than in the UK!

What do you see as being the major differences?

One of the big differences I see is the hospital set up. In the UK, the National Health Service is all-inclusive and as a result, pretty well all your healthcare needs are met free at the point of usage. In Toronto, there are aspects of healthcare which need to be either paid for separately or covered by insurance. It is also interesting to note that major developments within the hospitals in Canada are often funded by public subscription and other forms of fundraising, whereas in the UK, all these things would be covered by the government and the National Health Service.

Also, research is primarily university based in the UK, whereas over here, the hospitals are far more influential and have a far bigger share of research funding. In the UK, that funding would more commonly go to the university medical schools attached to hospitals.

Finally, in the UK, physicians are *employees* of either a university or a hospital. There are several advantages and disadvantages of this; one advantage is that you are on a fixed salary scale, and so you are not dependent on each item of clinical work that you do. Filling in all the billing cards over here is something that I have never done, and don't really enjoy having to do!

Would you advise our trainees or young faculty to consider going to the UK for training?

Yes. Although the duration of training and the number of hours that trainees can work has been reduced, the UK continues to produce high quality clinical trainees. From an academic perspective, academic anesthesia in the UK has suffered a lot over the last ten or so years. The funding, and therefore the outputs of academic anesthesia have been reduced throughout the UK. Although there are small research groups that are productive, there are not a large number of researchers or a large output comparative to the size of the UK. Interestingly, the new research funding models have been problematic for anesthesia, whereas critical care medicine in the UK has done well.

Are there any developments in clinical practice that you would you like to see take place during your time here?

I very much came to this job with the intention of trying to both develop excellence in clinical care, as well as a strong academic output. Clinically, I'm doing a lot to try and improve the quality of care we are delivering here through a variety of mechanisms such as quality improvement plus educational and research endeavors. We have already started a couple of major efforts. My first target was hand hygiene and infection control, and we have already implemented new policies around infection control within critical care. We are waiting to see how our infection rates have been impacted. We are also working on a variety of interventions around process and outcomes measures in intensive care including ventilator-associated pneumonia rates, catheter-related blood stream infections and, indeed a key interest of mine is, effective information handling within the intensive care unit. This is vital as it allows the complexity of a patient's case to be readily accessible so that key information is not missed in their intensive care management.

What was the major draw for you to come to Toronto and to Sunnybrook in particular?

There were quite a few different things, really. Professionally, I was looking forward to a chance to lead a big intensive care unit and to work in a city that contained so many high-caliber academics in both anesthesia and intensive care. The academic environment in Toronto is really very vibrant and I was looking forward to being a part of it. Socially, it was just a chance to take the family somewhere different and live in a big cosmopolitan city with all its advantages!

Selected Publications

Sprung CL, Annane D, Keh D, Moreno R, Singer M, Sorenson F, Weiss YG, Benbenishty J, Kalenka A, Forst H, Laterre PF, Reinhart K, **Cuthbertson BH**, Payen D, Briegel J for the Corticus Study Group. The CORTICUS randomized, double-blind, placebo-controlled study of hydrocortisone therapy in patients with septic shock. *New Engl J Med* 2008; 358: 111-124.

Croal BL, Hillis GS, Gibson G, Fazal M, El-Shafei H, Jeffrey RR, Buchan KG, West D, **Cuthbertson BH**. The relationship between post-operative cardiac troponin I levels and outcome from cardiac surgery. *Circulation* 2006; 114: 1468-75.

Hillis GS, Croal BL, Buchan KG, E-Shaffei H, Gibson G, Jeffrey RR, Millar CG, **Cuthbertson BH**. The relationship between renal function and outcome from coronary artery bypass grafting. **Leading article-** *Circulation* 2006; 113: 1056-62.

Gibson PH, Croal BL, **Cuthbertson BH**, Small GR, Ifezulike AI, Gibson G, Jeffrey RR, Buchan KG, El-Shafei H, Hillis GS. Preoperative neutrophil-lymphocyte ratio and outcome from coronary artery bypass grafting. *Am Heart J* 2007; 154: 995-1002.

Selected Research Studies:

The OSCAR study- A multi-centre randomised trial of HFOV in ARDS

This study looked at high frequency oscillation ventilation in ARDS.

The TRACman study- A multi-centre randomised trial of tracheostomy in ICU patients

This is a UK national randomised controlled study of the effect of early tracheostomy on outcome from critical illness.

Early warning scoring systems and validation of outreach critical care in the critically ill

Quality of life studies

We have recently published a paper on long-term quality of life in a cohort of patients whom underwent ICU care.

The FOCCUS study- A multi-centre randomised study of levels of dependency and fluid optimisation in high-risk surgery

I am the Chief Investigator for a multi-centre randomised controlled study of high dependency versus intensive care and pre-operative fluid loading in high-risk surgical patients undergoing major elective surgery. Final results will be available very soon.

Biomarkers and the prediction of outcome in high risk surgery and critical illness

We have done a number of large and original work on biomarkers in prediction of risk in high-risk surgery.

What were the challenges and joys of bringing your family to Toronto at a senior stage in your career?

It is a bit nerve racking really! I was more worried about my family than I was about myself, but much to my pleasure, my children have done unbelievably well. My wife gave-up work as a teacher in the UK, but she is now doing voluntary teaching work here. Things really have turned out well for us.

What do you like to do in your spare time?

I enjoy spending time with my family. My family – wife Susan, and daughters Lucy and Sally are my pride and joys. I am a big rugby fan, and I enjoy eating and socializing! One of the greatest attractions of Toronto to me is the very wide variety of restaurants and cuisines that are available. I used to play in a band in the UK, and I would describe my musical style as “bad, poor quality music from the late 70s and early 80s”. British punk music, like the Stranglers.

Thank you Dr. Cuthbertson!

CAS-IEF Rwanda Anesthesia Residency Training Partnership

Submitted by: Dr. Robert Kriz, PGY5 Resident

In September 2009 I had the opportunity to volunteer in Rwanda alongside Dr. Peter Slinger as part of a mission sponsored by the Canadian Anesthesia Society International Education Fund (CAS-IEF). The main objectives of the mission are largely twofold: to create a self-sustainable residency-training program based solely in Rwanda, and to serve as a blueprint that other subspecialty surgical and medical programs can follow as they develop their own residency programs to address nationwide physician shortages and improve patient care. At present, the joint partnership between CAS-IEF and the American Society of Anaesthesiologists’ Overseas Teaching Program (ASA-OTP) is the only external physician-led venture supporting post-graduate medical education in Rwanda.

Rwanda has 3 teaching hospitals and approximately 40 district hospitals for its 8.2 million people. Healthcare in Rwanda is made possible through mutual health insurance (MHI) or private health insurance. MHI is an alternative mechanism for community funding based on anticipated payment and risk pooling that serves to benefit those groups living on low and irregular income, the majority of whom are in the rural areas. Physicians are salaried in both private and public health care sectors, with the private sector physicians earning roughly three times the salary.

In the wake of the genocide of 1994, the country was left with only one Rwandan anesthetist (Dr. Jeanne d’Arc). By 1996, 3 anesthesiologists from Burundi, Uganda, and South Africa had immigrated to help with the workload in Kigali and Butare, Rwanda’s two major cities. In 1997, as a result of mounting pressure to deal with the shortage of trained anesthesiologists, the ministry of health created a nurse anesthesia training program at the Kigali Health Institute (KHI) that saw its first graduates in 2001. These graduates began delivering anesthetics essentially independently with little supervision. Dr. Jeanne d’Arc, with help from the National University of Rwanda and an expatriate anesthesiologist in Belgium were able to devise a long-term plan to address this shortage. By 2002, medical graduates from the National University were being trained in anesthesia and intensive care abroad in France and in Tunisia. Three graduates have since returned to work in Rwanda, bringing the total number of



[Dr. Rob Kriz (R) and colleagues]

anesthesiologists in the country to 8, or roughly 1 staff person for every 1 million people. When compared with Ontario where there is approximately 1 anesthesiologist for every 10,000 people, this amounts to a 100-fold difference!

Contact between CASIEF and Rwanda began as far back as 1999, although it was not until April 2004 that a formal request for assistance from the Rector of the National University of Rwanda was made. The program officially started in January 2006 with monthly volunteers from Canada and the United States. By December 2009, a total of 26 staff anesthesiologists, 12 residents, 3 nurses and 1 anesthesia assistant will have made the trip, with some staff going more than once. Most of the volunteers come from Dalhousie or McGill, as these universities are more heavily involved in the program. This marks the first time that anyone has volunteered from the University of Toronto.

The current program in Rwanda is 4 years in length. Residents spend the 3½ years rotating between anesthesia and intensive care at the three teaching hospitals. Obstetrical anesthesia is mostly covered in the 3rd year, whereas ICU is largely covered in the final year. When on call, residents are responsible for emergency cases, ICU admissions, and maternity. Call is usually 24 hours every four days, and the fourth year residents cover call completely on their own. It is hoped that the final 6 months of residency training will be spent at Canadian hospitals affiliated with Dalhousie University to expose the residents to a broader range of anesthetic techniques and procedures. Upon completion of the program, residents sit a final exam written by the CASIEF team, and are then assigned a staff position in one of the teaching hospitals based on immediate need. There are currently 9 Rwandan residents: five PGY-1's, two PGY-3's, and two PGY-4 residents. The program is set to graduate its first two in July 2010. The hope is to maintain an enrollment in the program of 5 residents a year, and by 2020 to have 55 staff anesthesiologists nationwide with at least one anesthesiologist in every district hospital.

While in Rwanda, we taught the residents mostly about thoracic anesthesia. Every Wednesday was dedicated to didactic lectures. The Rwandan residents would start the day with a presentation on an anesthesia topic. Time was then spent discussing some of the more interesting cases of the week in a trouble-rounds format, which we found very useful. Afternoons were spent covering key topics in thoracic anesthesia, as well as selected topics on respiratory physiology and anesthetic equipment. The residents completed a thoracic anesthesia written exam on the final day, with results being uniformly positive. We were very impressed with the amount of work and organization the residents put into their Wednesday morning presentations. Unfortunately, many times they had limited clinical context to bring to their presentations, such as discussing pulmonary function testing when there is none available in Rwanda. We tried to add the clinical context whenever possible. CASIEF plays an essential role in these academic days, which are integral in maintaining the quality of the residency training program.



[Dr. Peter Slinger, UHN, in the OR]

The rest of our time was spent clinically in the operating rooms supervising and working alongside the residents. Four days were spent at the Central University Hospital of Butare (CHUB), while the remaining days were spent alternating between the Central Hospital of Kigali (CHK) and King Faisal Hospitals (KFH). Although the National University and its medical school are located in Butare, the teaching program is located in Kigali because of its larger population and volume of work. King Faisal Hospital has a thoracic program, and we were able to do several decortications for TB empyema using our own double-lumen tubes for lung isolation. We were also involved in a neonatal TEF repair. Unfortunately, many of the thoracic cases that we had anticipated were cancelled due to a lack of patient funds, which is a major problem in the private sector. Some of the other interesting cases we managed during our stay included: repair of imperforate anus, pyloric stenosis, an infant laparotomy for acute abdomen, craniotomy for SDH, chest tube insertion in a neonate with a large spontaneous pneumothorax, and a meningomyelocele repair. Interestingly, CHK uses draw-over vaporizer technology, while KFH and CHUB use circle systems and Mapleson F circuits for pediatric cases. Thiopental, succinylcholine, halothane and vecuronium are the staples of most anesthetics given in Rwanda, although ketamine and pancuronium are also used frequently, propofol less so. Phenylephrine, epimorph and preservative-free local anesthetics were hard to come by. Materials and medications are opened sparingly, only when absolutely needed, and only two teaching hospitals have pipeline oxygen. The post-anesthesia care units may have 1 nurse covering 20 patients with no



oxygen. Many times, patients stay overnight in the PACU when there are no beds available on the floor. The amount of support that can be provided is limited. Patients who are resuscitated in the private hospital and who cannot pay are quickly transferred to the local public hospital. The district hospitals only provide basic, essential services and transfer higher acuity patients to the teaching hospitals in the big cities. Many patients arrive in extremis after many hours of traveling with minimal transport care.

Some of the many obstacles the program faces include:

- The lack of intraoperative monitoring standards. Many of the operating rooms lack essential monitors including pulse oximetry, ECG, NIBP, and temperature monitors for small children. The suction often does not work, and residents fall into the bad habit of thinking this is acceptable anesthesia practice
- The relative lack of supervision of junior residents in Kigali
- The limited availability of essential medications including resuscitation drugs, which leads to the cancellation of many elective cases
- The lack of defined roles of OR personnel, including both nurse anesthetists and anesthesia residents, which complicates the management of intraoperative crises
- The lack of appropriate care of patients in the PACU due to a lack of monitors, and a limited supply of oxygen and nurses
- Inappropriate use of cellular devices in the operating theatre by OR personnel
- A lack of financial incentives from the MOH that would foster OR efficiency and keep new graduates from leaving for better paying jobs in other countries (brain drain).
- The relative lack of senior resident experience in technical skills. This may be due to a lack of opportunity, competition for procedures from the anesthesia nurses, limited hands-on teaching due to limited supervision, a lack of supplies (both medications and sterile equipment), limited circulating nurse assistance, and issues regarding post-op care of invasive devices (central lines, epidurals). The use of a resident logbook would prove useful in detecting a specific lack of experience early.

On a good note, the Rwandan residents are very keen to learn and are very thankful for our assistance. Based on our time in Rwanda, we have noticed an improvement in the level of training at CHUB. Junior residents there work in rooms without nurse anesthetists, and with close staff supervision. These residents are clearly superior in preoperative planning, room preparation, and at managing intraoperative complications. Things appear to be moving in the right direction.

Apart from the educational experience, we were able to visit two of the three national parks during our stay. We first visited the Hirwa band of gorillas in the Virunga Mountains and then went chimpanzee and monkey trekking in Nyungwe National Park. We also traveled to Gisenyi, Lake Kivu and went on a spectacular waterfall hike in Gisakura. Needless to say, all these trips are highly recommended!

I would like to conclude by thanking the residents and anesthesia staff in Kigali and Butare for their hospitality. I would also like to thank all the volunteers who have preceded us, who by sorting out all the minor issues of accommodation and providing pre-trip advice have allowed us to have an excellent experience in Rwanda. We could not have been better informed. Most of all, I would like to thank the Department of Anesthesia at the University of Toronto, especially Drs. Peter Slinger, Mark Levine and Brian Kavanagh, for making this trip possible. I believe that third world experiences not only expose residents to older medications, different medical illnesses and alternative anesthetic techniques, but more importantly provide vital opportunities in teaching, managing, collaboration, and health advocacy. These attributes are consistent with the CanMEDS framework of essential abilities physicians need for optimal patient outcomes. In the future, I would hope that educational opportunities like this one will become available for more residents in our training program. Of note, Dr. Greg Silverman from Mount Sinai Hospital will be working in Antigua and Guatemala for Medicos en Accion, which is a charitable group based out of Kamloops, BC. The focus of the mission is to provide medical, surgical and dental care to people in developing countries, as well as to provide teaching to local hospital staff. Dr. Silverman has also been working with the Dhalla Lana Centre for Public Health, the Peter A. Silverman Centre in International Health, and the UT Department of Anesthesia to see how our department can become engaged in the various global health activities occurring across the University. Ideally, these projects would help initiate the development of international research and education collaborations, and in doing so would create appropriate educational opportunities for interested residents and fellows.

If there is any staff person who is interested in contributing to the CASIEF effort in Rwanda, please contact Dr. Franco Carli, who is a professor of anesthesia at McGill University and current chair of CASIEF.

OMA Section on Anesthesiology Referendum Results

Submitted by: Dr. Eric Goldszmidt, Tariff Chair, OMA Section on Anesthesiology



The OMA Section on Anesthesiology recently held a referendum from October 30 to November 12, 2009 regarding the new anesthesia fee template, the 'Grid-Model'. The referendum was conducted by the OMA Economics Department who issued 1,038 ballots to all primary and secondary section members. All votes that were cast were authenticated by checking the OMA numbers of the voters against the list of section members. 40% of the ballots were returned. Support for the new template was 68%. The Section Executive met on November 20th to review the results. The Executive felt that the turnout was good and was similar to the turnouts for other OMA referenda held over the years. They also felt that greater than 66% support represented a strong majority. Given those facts, the Executive voted unanimously to accept the results of the referendum and directed the Tariff Chair to work towards implementing the new fee template as soon as feasible.

Realistically, it is expected to take at least 2, and possibly 3 years to implement. In the short-term, the Executive would like to give one final opportunity to the membership to review the new fee template and submit feedback before it is finalized.

The Grid Model Described

The grid-model is best understood in tabular form, and the two tables to refer to, follow this verbal description. Table 1 shows the grid model itself and Table 2 shows the new point values attached to the premiums. All fees are based on a single unit, X, which is billed every 5 minutes. All fees are multipliers of X, and it is this methodology that allows us to better design and maintain relativity. The system also allows us to alter relativity quite easily by altering the multipliers if necessary. The multipliers were derived to provide the type of relativity that our membership surveys suggested that you expect. For instance, the model provides for a predictable 3% volume premium/case for cases of similar complexity. For a rapid turnover list with 15 cases, this represents a 45% premium over a much longer but similar complexity case. The spread between normal and high complexity is about 50% (as opposed to up to 100% currently). Supportive care (our lowest complexity service) is paid as a straight hourly rate, with a 5-minute time unit paid at 0.83X and with no allowable premiums (other than after-hours).

There are no longer any double or triple time units. Every case has a small part of its fee paid upfront (the startup) which is the same for all cases, regardless of complexity level. This startup is 3.33 units. This upfront fee provides the volume reward.

All operative services are assigned to 1 of 4 complexity levels based on anesthetic complexity. These levels are shown in the first two columns. Patient factors (premiums) are shown in Table 2 and have point values assigned to them. Again, this is a relativity scale and is modifiable in the future should need arise. The total number of premium points is added up per case and the total is cross referenced across the top of the table. Depending on how many points are accumulated, there may be an increase in the case complexity level which increases the value of the unit modifier and thus increases the fee. Once the starting complexity level and premium points have been determined, a final complexity level is determined and it is this modifier that will be used to calculate the final fee billed. To accommodate different combinations, additional levels were required over and above the 4 levels needed to accommodate the case complexity, which explains the need for 8 levels. The unnamed levels are never the starting point. They simply exist to accommodate combinations of premiums. Because premiums are paid hourly instead of totally upfront, this system allows premiums to increase the hourly rate in a much more predictable and balanced fashion. Our working group has concluded that the current premium system has conditioned us to expect too much from premiums at the cost of the basic anesthetic fees. As case complexity and hourly rate increase, you will notice that it takes more premium points to rise in level as some of the patient complexity is already taken into account by the surgical complexity. Again, this was deliberately done to strike a fair balance between hourly rates. After-hours premiums, special visit premiums, assessments, consults, invasive lines and nerve blocks will still be billable in the usual manner and in addition to the 8 possible case codes.

For example, an inguinal hernia would be classified as complexity level 1 (normal). An ASA 3 82 year-old would add 3 premium points, bringing the final anesthetic complexity up to level 3. Only the fee code for complexity level 3 would be billed using the appropriate number of time units to calculate the final anesthetic fee.

Table 1: Grid Model:

				Anesthetic Complexity Level (in red)				
				Premium Points (in black)				
Case Complexity	Complexity level	Start-up fee (\$)	Relative Unit Value per 5 min	0	1-2	3-4	5-6	>6
Normal	1	3.33X	X	1	2	3	4	5
	2	3.33X	1.125X	2				
Intermed	3	3.33X	1.25X	3	4	5	6	7
	4	3.33X	1.375X	4				
High	5	3.33X	1.5X	5	5	5	6	7
	6	3.33X	1.625X	6				
Extreme	7	3.33X	1.75X	7	7	7	8	8
	8	3.33X	1.875X	8				

Note: X = the new unit value;

Table 2: Premium Point Values:

Fee Code	Descriptor	New Point Value
E022C	ASA 3	1
E017C	ASA 4	3
E016C	ASA 5	6
E020C	ASA E	1
E021C	< 37 wk GA	4
E014C	NB to 28 day	3
E009C	29 day to 1 yr	3
E019C	1 to 8 yr	2
E007C	70-79 yr	1
E018C	>= 80 yr	2
E010C	BMI	2
E011C	Prone position	1
ExxxC	Sitting position	1
E012C	MH	1
EzzzC	Off-pump cardiac surgery	3
EyyyC	Duration greater than 8 hours (applies only to complexity 2-5)	2

We would be grateful for any feedback you may have. All feedback should be submitted by e-mail to admin@ontariosanesthesiologists.ca with the subject heading 'fee template feedback'. You may also consult our website, www.ontariosanesthesiologists.ca for supporting documentation.

College of Physicians and Surgeons of Ontario (CPSO)

Submitted by: Dr. Matt Kurrek

Bill 179

The medical profession's self-regulation authority is a privilege granted by the government through the Regulated Health Professions Act, 1991 and governed through the College of Physicians and Surgeons of Ontario. Bill 179, which has already passed third reading contains controversial provisions (which were introduced without consulting the CPSO) which could grant a supervisor "the exclusive right to exercise all the powers of a Council and every person employed, retained or appointed for the purposes of the



administration of this Act.” Similar legislation has already been passed in Alberta (following public concerns about infection control practices in private offices) as well as in the United Kingdom. The CPSO has expressed considerable concern about the province’s attempt to grant itself such significant regulatory powers.

Out-of-Hospital Premises Inspection Program (OHPIP)

Note: This program was previously referred to as OHF (out-of hospital facility) program.

A growing number of physicians are providing a wide variety of services to patients in many different settings and the CPSO Council had in 2007 approved a 4 point plan to address this area of medical practice, including peer assessing physicians who perform cosmetic procedures, revising the College’s Change in Scope of Practice policy and reviewing alternative regulatory models for cosmetic surgery (i.e., those used by the College of Physicians and Surgeons of Alberta).

Bill 141, an Act to amend the Regulated Health Professions Act, 1991 was introduced and passed in the legislature in April 2009 and gives the College the authority to proceed with development of a regulation that will include observation of members in premises.

The draft regulation has been created for the now called Out-of-Hospital Premises Inspection Program (OHPIP) including definitions for procedures, premises, timelines for inspections-assessments and mandatory 60 day notification required by members. CPSO Council passed the draft regulation on November 20th and it is expected to receive final approval by the Government in January 2010.

Under current draft regulation, procedures include any act under the administration of 1.) general anesthesia 2.) parenteral sedation 3.) regional anesthesia (except for a digital nerve block) and 4.) local anesthetic (including tumescent procedures, surgical excisions or injections for cosmetic procedures, nerve blocks for chronic pain). Note that surgical excisions of lesions for a clinical purpose or minor dermatological procedures are not included. The definition of Out-of-Hospital Premises (OHPs) includes various settings (but not premises that are regulated by the Public or Private Hospital Act or the Independent Facilities Act).

Following enactment of regulation by the Government, members will be required within 60 days to provide notice to the CPSO that they are performing procedures as specified by the regulation (the CPSO is expected to post a notice form on the website, including space for information about the types of procedures and details about the premise locations). The OHP assessments will include both an inspection of the premise (to ensure that it is a safe environment) as well an assessment of the physician who performs procedures (similar to other quality management programs by the CPSO).

The Premises Inspection Committee will review the inspection – assessment and either provide a pass, pass with conditions or fail and/or make referrals to other CPSO processes if there are concerns identified.

Vancouver 2010 Olympics: CTV Science Coverage

Submitted by: Dr. Greg Wells

Happy New Year! I thought I'd let you know about a very fun opportunity that I've been given this year. In addition to the research and teaching that we all do as academics, occasionally other exciting opportunities arise for getting involved in the community. I am a pretty huge sports fan, so I am incredibly lucky that I am going to Vancouver as the Sport Science and Sport Medicine consultant for CTV and TSN during the 2010 Olympics. As part of my role with CTV, I will be providing on-camera analysis of key sport moments including any gold medals won by Canadians and any injuries that occur. I will also provide a daily sport science update during the Olympic Morning show on CTV and is the host for the pre-filmed "Superbodies" segments that will air during the games. These short segments will use computer generated imagery to depict what happens inside the human body during 12 of the Olympic sports. One will air during the opening Ceremonies which is pretty exciting. During the games I'll be posting blog updates on [CTVOlympics.ca \(www.ctvolympics.ca\)](http://www.ctvolympics.ca) on various sport science and sport medicine topics. You can read the first one here:

<http://www.ctvolympics.ca/health/news/newsid=26721.html#just+when+think+theyre+training+harder>

I'd also like to encourage you to follow my twitter updates from the games also: www.twitter.com/drgregwells.



2009 Mount Sinai Hospital OB Anesthesia Conference & Workshop

The ever-popular Mount Sinai Hospital OB Anesthesia Conference returned for the 7th year with an exciting new, expanded program.

Use of Ultrasound in Obstetric Anesthesia, a Workshop for physicians and anesthesia assistants, was held on Friday afternoon, October 23rd, the day before the Conference. It featured lectures, as well opportunities for 'hands on' practice using phantoms and live models.

Mount Sinai Hospital OB Anesthesia Workshop, October 23, 2009 – Dr. Mrinalini Balki demonstrates the use of ultrasound to visualize vertebral interspaces.



[Above: Dr. Mrinalini Balki demonstrates the use of ultrasound to visualize vertebral interspaces.]

As in previous years, the Saturday program offered a full day of lectures on up-to-the-minute topics programmed to appeal to all the members of the Labour & Delivery team — obstetricians, nurses, respiratory technicians, anesthesia assistants, midwives and, of course, anesthesiologists. Included in this year's Faculty were two leading experts familiar to many from their frequent media appearances: **Dr. Allison McGeer**, Director of Infection Control at MSH, and **Dr. Gideon Koren**, Director of Motherisk programs and a senior scientist at the Hospital for Sick Children Research Institute.

Judging by the evaluation sheets, the Conference easily met the high standard that participants have come to expect from previous years. Over 99% of the respondents indicated that they plan to attend again next year. That was all the organizers needed to hear to start planning...the next OB Anesthesia Conference and Workshop will take place on September 24-25, 2010.

Upcoming CME Courses

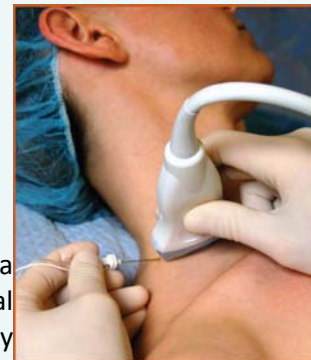
Submitted by: Dr. Peter Slinger

Course	Dates	Contact
Tremblant Anesthesia Meeting – Fairmont Hotel, Mt. Tremblant	February 12-15, 2010	Allison Ho/Jeff Churchill: cme@nygh.on.ca
Annual Marshall Lecture – UT/Toronto Western Hospital	February 18, 2010	anesthesia@utoronto.ca
Ski and Scan – Lake Louise, Alberta	March 29-24, 2010	Allison Ho: cme@nygh.on.ca
Toronto Anesthesia Symposium, "Anesthesia and Outcomes" - Chestnut Residence U of T	April 17-18, 2010	Rusty Stewart: rusty.stewart@uhn.on.ca
31 st Annual Shields Research Day	May 7, 2010	anesthesia@utoronto.ca
MAC 2010: 8 th International Conference on Mechanisms of Anesthesia	June 15-18, 2010	mac2010@utoronto.ca
Introductory Workshops for Ultrasound Guided Nerve Blocks	November 5-7, 2010	christine.drane@uhn.on.ca
Obstetric Anesthesia Conference and Workshop	September 24-25, 2010	obanesthesia@mtsinai.on.ca
Critical Care Canada Forum	November 7-10, 2010	www.criticalcarecanada.com
Perioperative Transesophageal Echocardiography Symposium	November 6-7, 2010	Julie Nigro: julie.nigro@uhn.on.ca
2 nd Annual Anesthesia Faculty Development Day	November 11, 2010	anesthesia@utoronto.ca
Obstetric Anesthesia Day (Women's College)	November 26, 2010	Pamela Angle: pamela.angle@wchospital.ca
Mendelsohn Lecture – Mount Sinai Hospital	November 26, 2010	Allison Ho: cme@nygh.on.ca
Toronto Anesthesia Practice	November 27-28, 2010	Allison Ho: cme@nygh.on.ca
Advanced Workshop for Ultrasound Guided Nerve Blocks	December 3-4, 2010	christine.drane@uhn.on.ca

Book Review: An Introductory Guide to Ultrasound-Guided Regional Anesthesia: A Learner's Guide

Reviewed By: Megan Hayter, PGY5 Resident

An Introductory Guide for Ultrasound-Guided Regional Anesthesia: A learner's guide
Brian A. Pollard and Vincent W.S. Chan
Toronto, Canada: University of Toronto Press, 2009



The following book review is presented from the perspective of a current trainee in the Anesthesia residency program at the University of Toronto and a relative novice to ultrasound guided regional anesthesia. Although, no conflict of interest is declared I have had the opportunity to be supervised by both of the authors.

This introductory curriculum to ultrasound-guided regional anesthesia presents a comprehensive well designed, beautifully illustrated curriculum for both the novice and experienced clinicians. The authors present the material in a progressive approach. Beginning with an introduction of the physics of ultrasound and the fundamentals of ultrasound guided-needle techniques, the curriculum then logically moves to illustrate single-shot nerve blocks, ultrasound-guided continuous catheter placement, and finally ultrasound-guided neuraxial techniques. The content is presented through models, diagrams and illustrations. The authors succeed in producing an educational curriculum that provides the reader with the foundations necessary to become a proficient self-directed learner in the field of ultrasound-guided regional anesthesia.

Numerous original illustrations, ultrasound images, photographs, and magnetic resonance images accompany a concise and well written text. The images are beautifully drawn and well situated within the descriptive text so it becomes easy for the learner to assimilate the curriculum. The goal of the authors was to provide anesthesiologists of all skill levels with an educational tool to integrate ultrasound-guided techniques into their regional anesthesia practices. The authors succeed in providing the necessary curriculum for clinicians to become proficient in their ultrasound-guided regional anesthesia practice.

This book is a valuable tool for the anesthesia resident who is beginning on their journey of ultrasound-guided regional anesthesia.

Recent Publications

Submitted by: Dr. David Mazer

Chin KJ, Chan VW, Ramlogan R, Perlas A.

Real-time ultrasound-guided spinal anesthesia in patients with a challenging spinal anatomy: two case reports.

Acta Anaesthesiol Scand. 2010 Feb;54(2):252-5.

Jerath A, Srinivas C, Vegas A, Brister S.

The successful management of severe protamine-induced pulmonary hypertension using inhaled prostacyclin.

Anesth Analg. 2010 Feb;110(2):365-9.

Peng PW, Wiley MJ, Liang J, Bellingham GA.

Ultrasound-guided suprascapular nerve block: a correlation with fluoroscopic and cadaveric findings.

Can J Anaesth. 2010 Feb;57(2):143-8.

Margarido CB, Arzola C, Balki M, Carvalho JC.

Anesthesiologists' learning curves for ultrasound assessment of the lumbar spine.

Can J Anaesth. 2010 Feb;57(2):120-6.

Ngiam N, Peltekova V, Engelberts D, Otulakowski G, Post M, Kavanagh BP.

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Neuropharmacology. 2010 Jan 26. [Epub ahead of print]

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Eur J Echocardiogr. 2010 Jan 22. [Epub ahead of print]

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Clinicopathologic and therapeutic risk factors for perioperative complications and prolonged hospital stay in free flap reconstruction of the head and neck.

Head Neck. 2010 Jan. [Epub ahead of print].

Kurrek MM, Twersky RS.

Office-based anesthesia.

Can J Anaesth. 2010 Jan 15. [Epub ahead of print]

Grobler C, Callum J, McCluskey SA.

Reversal of vitamin K antagonists prior to urgent surgery.

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The clinical use of right-sided double-lumen tubes.

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Speckle Tracking for the Intraoperative Assessment of Right Ventricular Function: A Feasibility Study.

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Ultrasound Med. 2010 Jan;29(1):79-85.

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Improving the diagnosis of acute heart failure using a validated prediction model.

J Am Coll Cardiol. 2009 Oct 13;54(16):1515-21.

Locum Opportunity!

Submitted by: Dr. Pam Morgan

Moose Factory is looking for locum anesthetists for varying periods of time. Travel and accommodation will be covered (possibly for partners too) as well as a \$1,500 per diem (which may be increasing).

The website is below as well as the contact information for the head of anesthesia. Please contact him if you are interested in this opportunity.

Website: www.wha.on.ca. The head of anesthesia is John Epps. His e-mail is: jdepps@pemreghos.orgapart

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