



President's Message

Anesthesia Drug Shortages

In August, Canadian Health Minister Leona Aglukkaq asked a working group of industry members and medical organizations what they were planning to do to address the drug shortage issue. They responded in September with a pledge to post information about drug shortages online and establish a national monitoring system accessible to Canadians. National-level information will be posted on the existing web-sites of the Saskatchewan Drug Information Service and Vendredi PM.

Dr Rick Hall from Halifax is to conduct a survey on drug shortages of all members prior to the New Year. Funding was provided by the CAS. This is in anticipation of a House of Commons Standing Committee on Health hearing on the subject. Despite lobbying by myself and others, no decision as to a date for such a hearing has been made.

NIBP Monitoring

The "Display of Non-Invasive Blood Pressure (NIBP) Readings during Anesthesia" report, brought forward at the 2011 CIG meeting (in Chicago) by AAGBI, had been reviewed by the Chairs of the CAS Patient Safety Committee and the CAS Standards Committee. Both Chairs recommended endorsement in a joint statement and distribution to members and manufacturers. The Board has authorized the President to sign this statement on behalf of CAS. Until the necessary software/hardware changes could be made, the statement would not be introduced into the Guidelines.

The report recommends purchasing monitoring equipment with an automatic cycling mode by default; when they are set to manual mode, or automatic mode with measurement intervals longer than five minutes, the numeric values remain displayed for only five minutes, after which they should "blink", i.e., appear intermittently, or disappear altogether. Manufacturers are encouraged to invest in making this important safety update to their equipment.

Clinical Registries and Incident Reporting

A few years ago, the ASA launched their Anesthesia Quality Institute under the direction of Dr Richard Dutton. The mandate is to ensure quality in anesthesia patient care with the collection and dissemination of clinical practice data. At Anesthesiology 2011 in Chicago, some CAS members approached me about CAS initiating a similar endeavour in Canada. I have communicated with Dr Dutton and he has indicated to me that collaboration with AQI is one possibility.

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2012 CAS Annual Meeting: Quebec City Awaits You!

June 15 – 18, 2012



We Listened and We Acted

Member Feedback Drives Changes to the 2012 Annual Meeting

Based on feedback from members who attended the 2011 CAS Annual Meeting, CAS carefully reviewed comments and suggestions in order to determine how enhancements can be made in planning future annual meetings. Two key messages from members were to look for ways to save members money and to streamline the on-site conference program. All suggestions were explored and considered, and we're happy to report that several positive changes will be implemented in 2012.

Details are being worked out and more information will be available to members in the new year. Here are the changes we can report:

- **Saving members time:** the conference will be one-half day shorter in duration (i.e., from 3½ days down to 3 days), ending Monday evening with the President's Dinner.
- **Streamlining the program:** all programming and events will now be within the three-day timeframe, including Residents' Day, which will be moved to a track during the meeting
- **Simplified the schedule:** members' favourite presentations will continue to be there. Workshops and breakout sessions will be concurrently scheduled to help delegates avoid either insufficient or unnecessary time between sessions
- **Introducing pre-registration for breakout sessions:** to facilitate planning for meeting room requirements for the sessions, delegates must

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pre-register for sessions, although no tickets will be required to enter them (outside of the specified ticketed events).

**Members should also note the revised dates:
June 15 – 18, 2012.**

Quebec City: A Rich Heritage and Beautiful Surroundings

In 2012, the CAS Annual Meeting will be held in Quebec City from June 15 – 18 at the Quebec City Convention Centre, Hilton Quebec, Courtyard by Marriott and Palace Royal. Don't miss out on this important annual event!

Quebec City is positioned on the bluffs overlooking the St Lawrence River and beckons with 400+ years of history. The walls of Old Quebec (a UNESCO world heritage site), the star-shaped Citadel (a showcase of Quebec's military history) and the Plains of Abraham are wonderfully complemented by the 21st century city and where the old and the new extend a sincere welcome to visitors.

Culture abounds in Quebec City. Feel free to let your senses guide you and you'll be inspired in many ways by the people and your surroundings.

Discover the many choices that Quebec cuisine offers. From 18th century surroundings and local specialties at famous eateries to small European-style bistros and friendly sidewalk cafes, it's a treat for the tastebuds. Quebec City is also home to some of Canada's top chefs.

When you register for the 2012 CAS Annual Meeting, you'll experience more than learning and networking. Get ready for an exciting experience in Quebec City and warm memories for years to come.

Stay tuned for more information about the 2012 Annual Meeting.



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Editor-in-Chief	Dr Salvatore Spadafora
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Reminder:

CAS members are invited to propose nominees for Vice President by December 31, 2011 via email at director@cas.ca

Inaugural Dr Angela Enright Lecture

At the final session on Monday afternoon at the CAS 2012 Annual Meeting in Quebec City, Dr Angela Enright will deliver the inaugural Dr Angela Enright Lecture on the topic of *Global Challenges in Anesthesia*. She will discuss some of the issues facing anesthesiologists around the world, especially those in low and middle income countries, and describe some of the work being done by organizations such as the World Federation of Societies of Anaesthesiologists to improve anesthesia care and patient safety.

A former president of the CAS, Dr Enright has received numerous awards, the most recent being an Officer of the Order of Canada in 2010. She is also the current president of the World Federation of Societies of Anaesthesiologists. As a board member of the Canadian Anesthesiologists' Society International Education Foundation (CAS IEF), she has worked on several anesthesia initiatives in different countries. The most recent project is leadership of the CAS IEF Lifebox project, raising funds to support the pulse oximetry educational project in Rwanda.

From 2012 – 2016, the keynote lecture (formerly known as the Royal College Lecture) at the CAS Annual Meeting will be known as the **Dr Angela Enright Lecture**.



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The CAS will, at this time, explore the development of a clinical registry in Canada.

Health Care Transformation

The CMA document "Principles to Guide Health Care Transformation in Canada" has been endorsed by CAS.

SmartTots

"Strategies for Mitigating Anesthesia-Related Neurotoxicity in Tots" is collaboration between IARS and the US FDA. Its purpose is to investigate whether anesthetics/sedatives are neurotoxic and/or impede the normal development of the human brain.

CAS is exploring options to become involved with this project. There are opportunities for research grants. Also this is a subject of potentially great importance to any members who anesthetize children.

Global Oximetry Project

Currently, a campaign is underway among Canadian anesthesiologists to raise awareness of our commitment through CAS IEF to fund approximately 250 oximetry kits for Rwanda. CAS has funded 20 kits and approximately 200 kits have been donated through CAS IEF.

BC Update

The situation in BC continues to evolve. The Engen survey showed that British Columbia has not improved in terms of human resources in anesthesia since the previous survey in 2002. This is in contrast to the rest of the country. Mr Mandarich and I met at the CMA General Council in August with Dr John Haggie, CMA President, and a senior CMA administrator. We shared with them the Engen data. We asked for details from the National Physician Survey comparing anesthesia to other specialties in BC. They were unable to analyse the data to produce this information. They did how-

ever share with us that the 2007 NPS data on hours of work indicate that BC anesthesiologists worked longer hours than their peers in the rest of Canada. The 2008 – 2009 CIHI data on gross wage payments indicates that BC anesthesiologists earn somewhat less than their counterparts elsewhere in Canada.

A letter has been sent to BC Premier Clark outlining CAS's knowledge of and concerns about the situation in BC. Her response was courteous, thanking me for making my concerns known. In November, the president of the BCAS resigned as there has been no movement on the part of government or BCMA to resolve this situation.

Practice Eligibility Route B

Previously I reported that CAS and ACUDA were to discuss with the RCPSC their proposed Practice Eligibility Route (PER) B. This would enable certification without examination. The Royal College has acknowledged that the examination in anesthesiology is comprehensive and necessary for all who seek certification in our specialty.

For all PER candidates in the seven major specialties (including anesthesia), only Route A will be available in 2012. However, because of the significant concerns expressed about Route B by the anesthesia community, the Credentials Unit at the College will be writing directly, within the next week, to all anesthesiologists in our PER file who have expressed an interest in the PER. They will be advised that for the foreseeable future only Route A will be offered for anesthesia PER candidates.



Dr Rick Chisholm, FRCPC

CAS and CAS IEF Launch “Lifebox” In Canada

Lifebox Appeal Now Underway

An initiative of the World Health Organization (WHO) and the World Federation of Societies of Anaesthesiologists (WFSA), the Lifebox global oximetry educational project has been launched in Canada by CAS and CAS IEF.

An appeal is now underway: Canadian anesthesiologists, staff and Residents are asked to help collect sufficient funds to purchase oximeters for all operating rooms, recovery areas and birthing centres in Rwanda. This vital piece of equipment is compact, durable and costs around \$250. Most importantly, it can save lives!

Help us Reach our Target

Every donation matters and edges us closer to our goal. Take a look at the numbers:

Goal:	250 oximeters
Achieved to date:	177 oximeters
	40 oximeters (20 each paid for by CAS and CAS IEF)
	217 oximeters

There's more work to be done. Small or large contributions all make a difference in someone's life. With each financial commitment, we are one step closer to our goal.

Many of our donors have been very generous (and sometimes very creative) in helping with the oximeter fundraising efforts:

- Thirty oximeters have been donated by the Department of Anesthesia of St Michael's Hospital, Toronto, in memory of Dr Vincent Hughes.
- Sixteen oximeters have been donated by the Department of Anesthesia of the Montreal General Hospital.

- Dr James Kim, BC Division board representative, has proposed a challenge to BC hospitals to donate one pulse oximeters for each OR in their hospital.
- Dr David Campbell of the University of Saskatchewan has proposed a \$2,000 donation from the membership at its upcoming meeting.
- Thirty oximeters have been promised by Queen's University's Department of Anesthesiology.
- As of November 30, 2011, Dr Angela Enright has personally donated \$1,250. Dr Andrew Chan, Dr Rick Chisholm and Dr M Heather Smith have each personally donated \$1,000.
- The Association of Victoria Anesthesiologists donated four oximeters in memory of Dr David Dunlop, a former CAS member.
- The Memorial University of Newfoundland Anesthesia Department has donated one oximeter.

Don't hesitate. Give today and start helping right away.

Please consider a personal donation or rallying your team or department to raise funds for this important cause. We are still well short of our target and our colleagues in Rwanda are counting on us.

Donate to the Oximetry Project

Instructions about donating can be found on the CAS website at: <http://www.cas.ca/English/Donate>.

Donating as a group? Please read the following instructions first: <http://www.cas.ca/English/oximetry-donors>. You can then donate at: <http://www.cas.ca/English/Donate>.

For the full list of donors as of November 30, 2011, go to: <http://www.cas.ca/English/oximetry-donors>.

BMJ Chooses Lifebox As 2011 Christmas Appeal Charity

The *British Medical Journal (BMJ)* has chosen Lifebox as its Christmas Appeal charity in 2011.

In an interview with Dr Atul Gawande, best-selling author of *The Checklist Manifesto* and the lead advisor and authoritative face of WHO's Safe Surgery Saves Lives campaign, he explains how people can help. Along with world leaders in anesthesia, Dr Gawande is also the driving force behind the newly formed evidence-based charity that has made it possible to deliver a robust pulse oximeter to a hospital in a poor or middle income country for \$250.

"The answer is smaller than most people realise," says Dr Gawande. "Just \$250 is the cost of a Lifebox pulse oximeter, a virtually unbreakable, operating room quality version of the small non-invasive device that is commonplace in hospitals throughout the West. But until now, it has been an impossible extravagance in poor and middle income countries, available, if at all, at an extortionate price with little back up or spare parts. That's what the *BMJ* Christmas appeal this year aims to change. Lifebox is the extra factor that makes safe surgery a global reality."

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In under a year, Lifebox has already distributed nearly 1,500 oximeters to hospitals in poor and middle income countries, including 1,150 devices to Smile Train, the charity that operates globally on children with cleft palates.

"I am grateful for the *BMJ*'s Christmas Appeal," says Dr Gawande. "It is the first time we have been able to go outside

the operating theatre and ask the larger medical world to donate to Lifebox. By donating the whole or part cost of a pulse oximeter, *BMJ* readers can help Lifebox save lives with safer surgery in poorer nations."

Eligibility Of International CME For Reimbursement

WCA 2012 Accredited for CME Activity

The 15th World Congress of Anaesthesiologists (WCA), to be held March 25 – 30 in Buenos Aires, is accredited by the European Accreditation Council for Continuing Medical Education (EACCME) to provide CME activity for medical specialists and designated for a maximum of (or "for up to") 27 hours of European external CME credits.

As such, the Royal College of Physicians and Surgeons of Canada (RCPSC) accepts the WCA as accredited.

Through the Ontario Medical Association's (OMA) Continuing Medical Education (CME) program, OMA members may be eligible for reimbursement of expenses for eligible courses, products and services related to CME courses recognized by the Royal College. For more information, visit <https://www.oma.org/Benefits/Pages/CMELandingPage.aspx>

Four Weeks in Rwanda

By Dr Justin Greenberg, PGY-4 Anesthesia Resident, McGill University



Rwanda is a developing country. Its teaching hospitals are poor and, within the anesthesia department, there is a lack of equipment, drugs and staff anesthesiologists. These are the facts and they are irrefutable. Beyond the statistics and spreadsheets, however, lies another truth; Rwanda is a nation rich in the fabric of its people, and nowhere in the country is this more evident than at the teaching hospitals in Butare and Kigali. The commitment displayed by the members of the anesthetic teams is truly exemplary.

"... the extraordinary work that CAS IEF has done ..."

This was my first visit and my time spent in Rwanda was brief. I had the honour of working with Dr Jennifer Szerb, a staff anesthesiologist from Halifax, who had been there on a previous mission two years ago. Her input gave me greater insight into how the program has progressed with CAS IEF's guidance. While both departments retain their African flavour, they smack of North American influence. The Rwandan staff is diligent, knowledgeable and hard-working but their numbers are just too few to accommodate the demands placed upon them. It is this void that makes CAS IEF's role so vital.

The residents are the future in Rwanda and this is no mere cliché; only one pre-genocide staff is still working at the teaching hospitals. They are responsible for the operating rooms, intensive care units, maternal emergencies and are often called to the emergency room and internal medicine ward as well. Most are married and have children who also require their attention. There are a myriad of reasons for the residents to become complacent with their training and one could not blame them. However, this is far from reality. Each day, they present themselves with a renewed vigour to become better clinicians and improve their skill-set as well as that of those around them. CAS IEF has enabled them to pursue their education by providing them with a curriculum and the medical experts to teach it.

In Butare, late on a Friday afternoon after a day rife with teaching, Dr Isaac Nshimiyimana, a second-year anesthesia resident, thanked us for our time and then said, "I will have courage": the courage to endure the hardships of a residency fraught with obstacles and the courage to help transform a fledgling anesthesia program into an accredited centre of learning. CAS IEF's volunteer program has been instrumental in giving him the tools with which to achieve these goals. I am grateful for the opportunity to have experienced firsthand the extraordinary work that CAS IEF has done and will hopefully provide for many more years to come.



Thank you to our donors



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Pain Management in Low and Middle Income Countries: Just Put Up With It?

Dr Roger Goucke
Perth, Western Australia

Dr Wayne Morriss
Christchurch, New Zealand

Over the last couple of years, we have had the privilege of travelling to and working in a number of resource-poor countries exploring pain attitudes, knowledge and treatment options. In this article, we will present our perspective on pain in these countries and give an overview of a pain management course we have developed, which uses a framework we have called **RAT (Recognise, Assess, Treat)**.

The physiological processes of acute nociception from the periphery to the brain are the same in all humans, irrespective of where they live. The causes of pain are varied:

- Pain from multi-trauma following a motor vehicle crash (an increasing drain on medical services in many countries).
- Post-operative pain following a laparotomy for a perforated duodenal ulcer.
- Lumbar spine pain from a pathological vertebral fracture in a woman with carcinoma of the cervix.
- The first dressing change in a three-year-old child following extensive burns from a cooking fire.
- Labour pain in a teenager struggling through her first delivery.

Apart from the humanitarian aspects of treating acute pain and decreasing the stress response, the benefits of early mobilisation, ability to self care and quicker hospital discharge would seem to be of value in resource-poor countries.

Cancer is a common cause of chronic or acute on chronic pain in LMIC. According to the WHO, a disproportionately high number of new cases occur in the developing world with 80% being incurable at the time of diagnosis. Extrapolating from Australian data, it is probable that at least 75 percent of these cases will experience moderate to severe pain during the course of their illness. This is a very strong argument for the development of palliative care services, including effective pain management.

On the surface, it appears that many people in LMIC accept pain as an unavoidable part of life. Patients may have little or no knowledge that certain treatments are available. Nursing and medical staff, for a variety of reasons, may not offer treatment, reinforcing patient and societal low expectations about pain relief.

Stoicism appears to reign supreme, and individuals appear never to complain because there seems to be no point. It is often difficult to tease out the role that cultural factors play in the way patients express their pain – pain and suffering

may be seen as a test of faith, while some societies will be fatalistic about pain.

Doctors' and nurses' attitudes and knowledge about pain seem to suggest that pain is a symptom of a disease process that they either can or cannot do something about, rather than a symptom that can be treated. For example, there is still a strong belief that treating acute abdominal pain will obscure the diagnosis; therefore the pain is frequently left untreated⁽¹⁾.

Addressing the Problem

There has been significant effort by the WHO to prevent cancer and address cancer pain treatment. There have also been huge international efforts to prevent and treat HIV/AIDS and this has had some spin-off benefits for palliative care and pain management of other terminal diseases.

Morphine was included on the WHO's Essential Medicines List back in 1977. Then, in a major advance for cancer pain management, the WHO introduced the Three Step Analgesic Ladder in 1986. Unfortunately however, there are still many places in the world where oral morphine is not available. This is despite its vital role in the treatment of cancer pain, its low cost and ease of preparation. A number of organizations have campaigned for the global availability of morphine and a good overview of some of the issues relating to the unavailability of morphine was recently published in the *BMJ*⁽²⁾.

Improving Pain Knowledge

Staff knowledge and attitudes are important factors when it comes to recognising pain and treating it effectively. We strongly believe that education plays a vital role in improving pain management and we appear to be lagging in our efforts to provide effective pain management to our global patients.

Consequently, we developed a one-day workshop called Essential Pain Management (EPM). The course emphasizes low-cost management strategies and how quality of life can often be markedly improved with very simple treatments and the course structure is modelled on the successful Primary Trauma Care (PTC) course. It comprises a one-day (8 hour) interactive course and a half-day (4 hours) teach-the-teacher course for "local champions" identified during the initial one-day course. Identification of local enthusiasts to continue the educational programme is an essential component of the model – it encourages local ownership of issues and promotes a culture of continuing education and teamwork.

References

- ⁽¹⁾ Int J Emerg Med 2009;2:211-215
- ⁽²⁾ BMJ 2010;341:c3800

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“Decades Of Lessons” At The Global Outreach Course

By Dr Eric Franck

It was last April, and I was hunting for a job. I'd been enjoying some R&R after completing a mid-career pediatric anesthesia fellowship when I came across this real gem. It wasn't a no-stress, big-money, all-the-surgeons-are-friendly anesthesia position; however, it was the wonderful anesthesia course, *Global Outreach Anesthesia in Challenging Environments*, and a reason for my first visit to Halifax and Dalhousie University.

While I am by nature attracted to the romantic notion of finding fulfillment delivering care in austere environments, I figured that learning some tricks of limited resource anesthesia would make me a better clinician even if I were never to give an anesthetic to disaster victims from a suitcase.

With my VISA card in one hand, checking flights with the other, I called Jane Bolivar, program coordinator for the *Global Outreach* course at Dalhousie University. “Oh”... no surprise, the course was already full. Another too-good-to-be-true was not meant to be. Or so it seemed.

As if only to tease me, the next day Jane phoned with great news: a participant had cancelled, and I had my chance. For a bargain \$1,800, I quickly secured my spot at what would be the finest anesthesia course I've ever attended – a program that embodies what I most love about medicine.

From the syllabus, I expected lots of new things to expand my world view: how to use ether, how to *make* ether, why it's important, draw-over circuits, oxygenators, OMs, EMOs, sterilization, disinfection tricks, cross-matching blood and fashioning cell-saver in the field, how to care for yourself, malaria and the like. But the course was better – so much better – than that.

The presenters and participants I met at the *Global Outreach* course are the amazing people you sometimes read about in news accounts – all too infrequently: the kind of good souls you'd like to be around all the time – whom you hope will rub off on you; a line-up of professionals who've lived lives of service for years, who've exported their skills to the



The 2011 Class of *Global Outreach*

impoverished and suffering all over the globe in places like Uganda, Rwanda, Palestine, and that “Supermarket of Disasters,” Indonesia. There were decades of lessons, all to be shared and passed along.

In fairness, sure, there were some topics not covered in the course: methods to maximize profit, the latest in nausea prophylaxis. Still, I count myself fortunate – blessed indeed – to have received that call from Jane Bolivar in April.

You can bet I look forward to attending the *Global Outreach* course again. Which reminds me, I'd better reserve my spot for the next session – before this review comes out.



Eric Franck and Facing Futures Foundation volunteers in Ho Chi Minh City, Vietnam

Eric Franck practices adult, pediatric and regional anesthesia in Milwaukee, Wisconsin, where he enjoys time with his wife and two boys.

Course Announcement: *Global Outreach: Anesthesia in Challenging Environments*

CAS IEF/Dalhousie *Global Outreach*
May 19 – 22, 2012

Global Outreach: Anesthesia in Challenging Environments is an annual course that focuses on novel techniques and equipment for delivering anesthesia care in under-served environments.

With a mix of experiential and skill-based presentations, the program tackles the questions of how to work with equipment designed for difficult environments and fix it when it

breaks, and how to manage without reliable electricity or access to necessary medication. It aims to better equip anesthesiologists to transfer their knowledge and build capacity when undertaking global missions.

For more information, go to: <http://nsanesthesia.ca/s/globaloutreach>

Stuart Vandewater Summer Studentship in Anesthesiology Research

Dr Stuart Vandewater, who passed away in May 2011, was a former President of the Canadian Anesthesiologists' Society and left behind a considerable legacy in advancing the field of anesthesiology in Canada.

Prior to his death, Dr Vandewater donated a large sum to initiate an endowment that would provide opportunities for medical students to be exposed to the field of academic anesthesiology by means of an annual summer studentship in anesthesiology research. The members of the Department of Anesthesiology and Perioperative Medicine at Queen's – of which Dr Vandewater was Chair from 1960-1970 – have pledged substantial funds to increase this endowment.

The Stuart Vandewater Summer Studentship in Anesthesiology Research will now be Dr Vandewater's legacy: to continue to advance the field of academic anesthesiology by attracting promising medical students to our specialty and to facilitate research in our field.

Established and aspiring anesthesiologists who are interested in learning more about Stuart Vandewater's endowment can contact Dr Joel Parlow at the Department of Anesthesiology and Perioperative Medicine, Queen's University or by email at parlowj@KGH.KARI.NET



News From Cardiovascular And Thoracic Section

Submitted by Dr André Denault, Chair, Cardiovascular and Thoracic (CVT) Section

The 2011 British Medical Association's (BMA) Medical Book Awards recognized *Transesophageal Echocardiography Multimedia Manual: A Perioperative Transdisciplinary Approach, Second Edition* as "highly commended" in the cardiology category. Under the direction of Dr André Denault and Dr Pierre Couture (Montreal), Dr Annette Vegas (Toronto) and two cardiologists, Dr Jean Buithieu and Dr Jean-Claude Tardif, as well as several Canadian anesthesiologists from across Canada, the Award encourages and rewards excellence in medical publishing.

Prizes are awarded in several categories, with an overall BMA Medical Book of the Year Award chosen from the category winners and the BMA Patient Information Awards.



2012 Abstracts Submission Deadline: Monday, January 16, 2012

Applicants are invited to submit their Abstract and/or Case Reports/Series to the Canadian Anesthesiologists' Society's 2012 Annual Meeting. The meeting will be held from June 15 – 18, 2012 in Quebec City at the Société du Centre des congrès de Québec.

Please note: the submission deadline is **Monday, January 16, 2012** at 16:00 EST.

To read CAS' Guidelines and Conditions, click [here](#) to view the document.



CJA Abstracts Supplement Now Available

If you are already a CAS member,
log in first and then click on:
<http://www.springerlink.com/content/0832-610x/58/s1/>

The Self Assessment Program from the *Canadian Journal of Anesthesia* — CPD Online

NEW CPD MODULE: Airway management in the patient with potential cervical spine instability (**DECEMBER 2011**)

ALSO AVAILABLE

- Anesthetic management of patients with an anterior mediastinal mass (**September 2011**)
- Assessment and treatment of preoperative anemia (**June 2011**)
- Perioperative glucose control: living in uncertain times (**March 2011**)
- Locating the epidural space in obstetric patients: ultrasound a useful tool (**December 2010**)
- Management of sleep apnea in adults - functional algorithms for the perioperative period (**September 2010**)
- Anesthetic management for pediatric strabismus surgery (**June 2010**)
- Ultrasound guidance for internal jugular vein cannulation (**May 2010**)

HOW TO ACCESS THE MODULES

Instructions can be found on the Canadian Anesthesiologists' Society website at: <http://cas.ca/Members/CPD-Online>

Successful completion of each module of the self-assessment program will entitle readers to claim four hours of continuing professional development (CPD) under section 3 of CPD options, for a total of 12 maintenance of certification credits. Section 3 hours are not limited to a maximum number of credits per five-year period.

Publication of these modules is made possible through unrestricted educational grants from the following industry partners:





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CAS Research Program Deadline – Until January 6, 2012

The online submission website of the CAS 2012 Research Program, Operating Grants and Career Scientist Award will soon close. All applications must be submitted using the CAS Online Submission website and the deadline for submissions is **Friday, January 6, 2012**.

Research Grants and Awards

New Investigator Operating Grants:

Abbott Laboratories New Investigator Award in Anesthesia
Baxter Corporation Canadian Research Award in Anesthesia
Canadian Anesthesiologists' Society Research Award

Subspecialty Operating Grants:

Dr Earl Wynands/Fresenius Kabi Research Award
CAS Research Award in Neuroanesthesia *in memory of Adrienne Cheng*

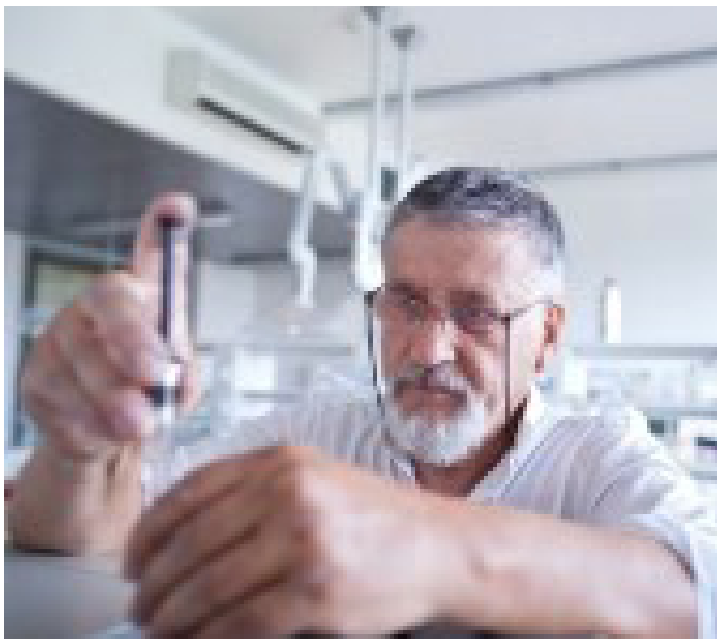
Open Operating Grants:

Dr R A Gordon Research Award

Residents' Research Grant:

CAS/LMA-Vitaid Residents' Research Grant Competition

For more information, go to: www.cas.ca/English/Awards-and-Grants



Manuscript Accepted for Publication In *Proceedings of the National Academy of Sciences*

Dr Gregory Hare is the recipient of numerous CAS research awards. Since 2000, he has received the following awards:

2007: Dr Early Wynands Research Award in Cardiovascular Anesthesia and/or Peri-operative Blood Conservation (\$30,000)

Does Beta-1 adrenergic antagonism increase tissue hypoxia following acute hemodilution?

2005: Bristol-Myers Squibb Canada/CAS Career Scientist Award in Anesthesia and Peri-operative Medicine (\$270,000)

Mechanisms of Cerebral Protection and Injury during Acute Hemodilutional Anemia

2003: Canadian Anesthesiologists' Society Research Award (\$30,000)

Characterization of Cerebral Gene Expression Following Hemodilutional Anemia Utilizing Microarray

2000: Canadian Anesthesiologists' Society Research Award

Anemia Induced Cerebral Injury

In a recent communication, Dr Hare wrote:

I am very pleased to report that our manuscript entitled "Priming of Hypoxia Inducible Factor by Neuronal Nitric Oxide Synthase is Essential for Adaptive Responses to Severe Anemia" has been accepted for publication in the Proceedings of the *National Academy of Sciences*.

Albert K.Y. Tsui, Philip A. Marsden, C. David Mazer S. Lee Adamson, R. Mark Henkelman, J.J. David Ho, David F. Wilson, Scott P. Heximer, Kim A. Connelly, Steffen-Sebastian Bolz, Darcy Lidington, Mostafa H. El-Beheiry, Neil D. Dattani, Kevin M. Chen, Gregory M.T. Hare

Our anemia research was initiated with support from CAS research awards (2000, 2004). However, invaluable and direct support for the research in this manuscript was provided by the Bristol-Myers Squibb - CAS Career Scientist Award in Anesthesia and Peri-operative Medicine "Mechanisms of cerebral protection and injury during acute hemodilutional anemia" (2005-2008), as acknowledged in the manuscript.

I would like to express my deepest appreciation to the current and past Chair of the CAS Research Advisory Committee, and CAS and CARF for their invaluable and longstanding support of our research.

Sincerely and with much appreciation,
Dr Gregory Hare, FRCPC

News From Research: Progress Report

**Dr Marcin Wasowicz,
Toronto General Hospital,
Toronto, Ontario**



2010 CAS/Abbott Laboratories Ltd. Career Scientist Award in Anesthesia

Expanding the role of the anesthesiologist beyond the operating room:

1. The association between platelet inhibition and major adverse cardiac events in patients undergoing non-cardiac surgery after previous percutaneous coronary intervention
2. Use of volatile anesthetics within ICU settings. Comparison of volatile anesthesia and post-operative sedation versus intravenous anesthesia and post-operative sedation in cardiac surgical patients.

The CAS/Abbott Laboratories Ltd. Career Scientist Award provides financial support for 2-3 days a week of research/academic time to conduct 2 prospective studies. The Department of Anesthesia of Toronto General Hospital and the Department of Anesthesia of the University of Toronto provide the matching funds.

The first study is coordinated by the receiver of the Award and initially involved 3 Canadian Centers, which currently are recruiting patients. Starting from January, the study was expanded to another center (Toronto General Hospital). To date, we recruited 84 patients and 71 patients had already undergone surgery. Our recruitment is progressing slower than anticipated; therefore, we analyzed the causes of delay and undertook several steps to improve our process. I also applied to the Anesthesia Patient Safety Foundation for a one-year of extension (end of 2012).

Toronto General Hospital

During preparation of the grant application (2009), analysis of our prospectively collected database indicated that our institution performs yearly over 220 non-cardiac surgeries on patients who previously had PCI. Unfortunately, in 2010 this number significantly dropped and we operated on 97 patients after previous PCI (within the specified inclusion time period). Additionally, our recruitment success was lower than expected (estimated recruitment rate was 50% of eligible patients and we managed to recruit 24 patients in 2010). To improve our recruitment, we expanded our study to our sister site, Toronto Western Hospital, which

belongs to the University Health Network (Toronto General Hospital, Toronto Western Hospital and Princess Margaret Hospital) and shares the same Research Ethics Board (REB). We are also planning to expand to Mount Sinai Hospital, in which perioperative care is provided by the same group of anesthesiologists.

Hamilton General Hospital

Our study was “competing” with studies with similar inclusion criteria: POISE II, Vision and Enigmall. We held several meetings with Dr PJ Devereaux and, since the number of patients eligible for our study is much lower than the number of patients eligible for POISE II, Vision or the Enigma study, Dr Devereaux, the PI of POISE II, has tentatively agreed to “share” recruiting personnel. Additionally, we are planning to expand recruitment to Juravinsky Health Centre in Hamilton. Similar to the University Health Network, Juravinsky Health Centre and Hamilton General Hospital are under jurisdiction of the same REB.

London Health Sciences Centre

Even though London Health Sciences Centre is one of the biggest referral academic centers in Ontario, we encountered a low number of patients eligible for the study. Initial conversations with Dr Neal Badner (based in this hospital) will initiate the process of potential expansion of the study to Victoria Hospital and hopefully augment our recruitment.

The steps undertaken to improve our recruitment will allow us to finish our study. Each of the additional sites is associated with the original sites included in the study protocol and is a part of the same health networks. It is now our opinion that we will complete the study by December 2012.

More than 21% of patients developed post-operative complications in the form of major adverse cardiac event (MACE). We have noticed that in several patients who were not taking clopidogrel, Platelet Mapping Assay indicated inhibition of ADP pathway. Therefore, we decided to initiate a sub-study, which is comparing platelet testing with the use of 2 methods: Platelet Mapping Assay and Platelet-Works. The analysis of the association between inadequate platelet inhibition and MACE will be conducted at the end of the study.

The second study compares combined volatile-based anesthesia and post-operative sedations to intravenous anesthesia and post-operative sedation in cardiac surgical patients. The design of this prospective, randomized trial allows us

to investigate the potential benefit of clinical use of volatile induced pre- and post-conditioning. It is also the first North American study investigating the use of volatile-based sedation within ICU settings. Up to date, we have recruited 143 patients. One hundred and fifteen patients had already undergone surgery, 11 patients were excluded from the study and 20 patients are still waiting for surgery. We are planning to randomize 150 patients and finish the recruitment process by the end of 2011. Preliminary results were presented during the last ASA meeting in San Diego (October 2010), during the Canadian Critical Care Forum held in Toronto (November 2010), and to the Society of Critical Care Medicine in San Diego (January 2011) and the Society of Cardiac Anesthesiologists (Savannah, May 2011). The Abstract presented in Toronto by one of the Research Fellows was chosen among the best six research studies submitted for the Forum. The results of sub-studies related to the project were presented during the Canadian Anesthesiologists' Society's annual meeting in Toronto (Dr Rafeek Mikhael and Dr Thomas Pickworth).

Additionally, the concept of volatile-based sedation developed in our institution gained some interest in Canada and outside of the country. It resulted in invitations to present lectures during conferences and as a visiting professor:

1. Ontario Anesthesia Meeting, Toronto, October 3, 2010
2. Second International Cardiology Conference, Shanghai, December 7-9, 2010.
3. Department of Anesthesia and Critical Care, Jikei University, Tokyo, December 11
4. Department of Anesthesia, Tokyo Women's Medical University, Tokyo, December 13
5. Department of Anesthesia and Critical Care, Medical Faculty of Oita University, December 15
6. Department of Anesthesia and Critical Care, Kielce Regional Hospital, Poland, (January 2011)
7. Department Of Anesthesia, Southlake Hospital, Newmarket (March 2011)

The award received from CAS also allowed me to further investigate how we, as anesthesiologists, can expand our role beyond the operating theater. I have established research cooperation with the Department of Chemistry at the University of Waterloo. Starting in December 2010, I was

also cross-appointed as Adjunct Professor at the University of Waterloo. Our cooperation is aiming at introducing solid phase extraction (SPME) into the field of clinical medicine. SPME is a widely used technique within the fields of food technology, environmental and biological analysis. However, SPME use in clinical medicine has been poorly studied.

The potential advantages of SPME over the currently used analytical techniques include: simple sample preparation, rapid analysis of multiple substances, drugs and drug metabolites using a minimal sample volume. These features allow "in vivo" measurements not possible in the past. Among them, the most important are: rapid turnaround time, extraction of unstable metabolites with ultra-short half-time and bedside analysis (2-3h) permitting individually tailored drug dosing and simultaneous measurement of multiple substances. To further explore the clinical potential of SPME we are currently conducting a series of studies within the different sub-specialties of medicine. This project will allow us to investigate the advantages of SPME over the currently used standard methods and focus on applications that have not been previously explored. Their objectives are presented below.

- a) To measure levels of tranexamic acid in cardiac surgical patients with different degrees of kidney dysfunction and in liver transplant recipients. Degree of kidney injury will be defined according criteria developed by the American Society of Nephrology.
- b) To formulate the pharmacokinetic model of tranexamic acid dosing in cardiac patients with kidney dysfunction and liver transplant recipients.
- c) To validate the use of SPME as an analytical tool measuring levels of tranexamic acid, rocuronium bromide and the metabolomic profile of cardiac surgical patients and liver transplant recipients.
- d) To use SPME measurements of rocuronium bromide (solely metabolized by hepatic enzymes) as a monitoring tool to assess function of newly transplanted liver. Differences between different grafts will be analyzed (livers obtained from young versus old donors, living related donors versus cadaveric donors). Introducing SPME into medical practice may help to promote safety and improve our practices. At the very least, this study will familiarize clinicians working in different sub-specialties with novel techniques with vast potential for future studies.

In Memoriam

The Canadian Anesthesiologists' Society was saddened to learn the loss of **Dr David A E Shephard**, a Member Emeritus and former Archivist and Historian. He had lived in Thunder Bay, ON and was the author of *Watching Closely Those Who Sleep*, a history of CAS from 1943 to 1993. He was honoured at the 2005 CAS Awards Ceremony for his outstanding contributions to preserve the Society's history for future generations to enjoy and appreciate. An obituary will appear in a future issue of *CJA*.

Board Update

Drug Shortages

CAS received a proposal from Dr Richard Hall and Capital District Health Authority in Halifax, on behalf of the Perioperative Anesthesia Clinical Trials Group (PACT), to conduct a study entitled "Drug Shortages in Anesthesia – A National Survey". A Memorandum of Understanding has now been signed to undertake the survey with CAS members and report the results at a future Parliamentary hearing.

Endorsements

CAS has endorsed "The Display of Non-Invasive Blood Pressure (NIBP) Readings during Anesthesia" report developed by AAGBI. The Australian Society of Anaesthetists has also endorsed it, and the report remains under review by the American Society of Anesthesiologists. It will be issued as a joint statement and released to members and manufacturers. However, the CAS Guidelines will not be updated to reflect the recommendations at this time.

At the request of the CMA, CAS has endorsed the "Principles to Guide Health Care Transformation in Canada". CAS has also endorsed the Canadian Patient Safety Institute's "Canadian Disclosure Guidelines" in principle.

Anesthesia Assistants

The Board received concerns that Anesthesia Assistants in Manitoba are working outside the scope of practice defined in the CAS Guidelines. A motion was passed directing the CAS President to contact the Chair of the Anesthesia Department at the University of Manitoba to obtain information regarding the scope of practice of their Anesthesia Assistants.

Website Committee

The Board approved Terms of Reference for a new Website Committee. Each Division Representative has been asked

to identify a member to join the Committee from their province.

Annual Meeting Committee

The Board approved a series of recommendations to improve the logistical organization of the Annual Meeting. Many changes will take effect in 2012, with Executive Committee approval required prior to implementing changes with financial implications. The Board also approved a motion authorizing up to two complimentary technical booths at each Annual Meeting.

Ethics Committee

The Board reviewed a number of recommendations from the Ethics Committee, to be formally submitted at a later meeting. However, CAS will act immediately upon the recommendation to eliminate all sponsorships of social events at the Annual Meeting. Among other events, this will impact the Residents' Reception and the President's Dinner.

Clinical Registries

The Board will be examining the Clinical Registries and Incident Reporting system being led by Dr Richard Dutton at the Anesthesia Quality Institute to determine if CAS should participate in this US initiative.

SmartTots

CAS had previously agreed to participate in the SmartTots program, being led by IARS. The next step is to examine the feasibility of creating a research grant, funded by CARE, to make surgery safer for infants and young children.

CAS Guidelines to the Practice of Anesthesia

The Guidelines to the Practice of Anesthesia will be published in the January 2012 issue of the *Canadian Journal of Anesthesia*. In addition, the Guidelines will be posted to the CAS website with a redesign of the appendices to make them easier to locate. The CAS office will print and mail a copy of the 2012 Guidelines to any member who so requests via email to memberservices@cas.ca.