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Innovative leadership and excellence in anesthesia, perioperative care, and patient safety



Canadian Anesthesiologists' Society

ANESTHESIA NEWS

PRESIDENT'S MESSAGE



In my first communication as President to all CAS members, I would like to introduce myself as a long-time member and one who shares the same commitment and dedication to our patients as do all of you.

I look forward to connecting with as many members as possible during my presidency and, regardless of where you come from, who you are, how long you have been an anesthesiologist or what your ideas and opinions are, I always welcome the opportunity for open discussion. CAS is *our* Society.

The CAS 2014 Annual Meeting in St John's is still on many members' minds and I was inspired by the delegates and guests I met from across Canada and beyond. I know that the local people of Newfoundland and Labrador were thrilled to host the event and to showcase their province.

To introduce myself, I am a Newfoundlander. I went to medical school and did my residency at Memorial University of Newfoundland in St John's and, 20 years later, I work in the "downtown" hospital where I have a general anesthesia practice. I am also involved in medical education and residency training at Memorial University's Faculty of Medicine. My husband, Tim, and I live in Outer Cove, a rural community just outside of St John's, and we have two young adult children, Rebecca and Liam.

What I bring to the CAS presidency is both my professional expertise and knowledge as an anesthesiologist and experience in working on various CAS committees, task forces and projects, as well as serving on the Executive Committee. I have a good understanding of the challenges facing our members in today's practice environment and the broader health care landscape in Canada. Moving forward, I will continue to build on the solid work and accomplishments of others.

One theme that you will hear from me is the impact of research and science on the everyday practice of anesthesia and how research studies can affect the anesthesia care of the patient. I would like to elevate the profile of research beyond the university setting and into all practice environments. Stay tuned!

Communicating effectively to and with CAS members is a significant priority for me. We all know there are many tools available to use—from the CAS website, emails and our quarterly newsletter to social media such as

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Facebook and Twitter. I encourage members to be vocal and I will work hard to keep the lines of communication open and transparent. Please watch for communication from CAS about opportunities to provide feedback and input on specific topics because what's on your mind is very important in helping me to represent the voice of members across Canada.

Special Thanks

I would like to say a special "thank you" to the Executive Committee members—Dr Patricia Houston, Dr Douglas DuVal, Dr Salvatore Spadafora and one other individual who has been around CAS for a long time: Dr Rick Chisholm. In fact, Rick and I "go way back" and we share a story about being on the winning team for the Glottis Cup competition when it was a tug-of-war in Ottawa years ago. Neither of us was the anchor. Yes, the real champions were the others on the team... which just shows that all of us have to pull our weight.

"You must be the change you wish to see in the world."
– Mahatma Gandhi (1869 – 1948)

Dr Susan O'Leary

President

IN APPRECIATION

CAS expresses its appreciation to the many individuals who helped to make the 2014 Annual Meeting such a success: members of the Annual Meeting Planning Committee, presenters and moderators, exhibitors and sponsors. Thank you!

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Canadian Anesthesiologists' Society

www.cas.ca

2014 CAS ANNUAL MEETING: AN ALL-ROUND EXPERIENCE

There was plenty to interest delegates in St John's during the CAS Annual Meeting, not the least of which is something you would not normally find at such an event. You would expect interesting and thought-provoking educational sessions, plenty of networking and social events and opportunities to explore Newfoundland.

But would you have expected that the appearance of a large iceberg near the harbour would have generated the buzz it did? Yes, it was the talk of St John's and encouraged many people to walk to Signal Hill for a spectacular view against a backdrop of blue skies and sunshine.

No one, however, is more thrilled than Dr Susan O'Leary, co-Chair of the Annual Meeting Working Group (AMWG). "As a Newfoundlander, I was delighted to welcome people to my province and to hear about their positive learning and other experiences in a unique setting. Thanks to the efforts of Dr Daniel Bainbridge and the Annual Meeting Committee, and Dr Angela Ridi and the members of the Local Arrangements Committee, this year's Annual Meeting surpassed all expectations."

OPPORTUNITIES FOR NETWORKING

Responding to delegate feedback from previous years, the 2014 Scientific Program was streamlined (with less concurrent sessions) to enable delegates to more easily plan their personal schedule. The result was attending the sessions of choice and finding more time for "catching up" and socializing with colleagues and fellow delegates—all important components of our members' professional development activities.

EDUCATION: CONTINUAL IMPROVEMENT

From a learning perspective, the AMWG worked diligently to implement tangible improvements, including the methods by which education is delivered and

strengthening the various communications channels between CAS and delegates. Overall, feedback has been positive and constructive.

Here's a sampling of the enhancements this year:

- Use of timing lights to facilitate the start and finish times for sessions
- Additional pre-Annual Meeting guidance and support for speakers and moderators in preparing their presentations
- The ability for attendees to earn Category 3 credits for workshops and interactive sessions
- Conference-wide WiFi
- Enhanced use of technology such as iClickers and the app—which, in fact, was a key benefit for many delegates

The momentum will continue. In 2015, delegates can expect more enhancements to the scientific program and educational sessions. Increased training with moderators and speakers is planned. New and improved technological advancements are being assessed, as well as a comprehensive review of a gradual transition away from paper-based systems. Some of the traditional components of the Annual Meeting such as the abstract submission process and poster displays are also under review.

EXPLORING, RELAXING AND HAVING FUN

The word is that many delegates enjoy the pre- and post-meeting opportunities around the CAS Annual Meeting. It's a good way to see Canada: bring your family, and plan to arrive a few days before or stay a few days after.

This year, Newfoundland and Labrador provided wonderful backdrop to varying sojourns in and around St John's and throughout the province. Everyone was excited by all that there was to see and do, and hiking in Gros Morne National Park and touring the coastal villages by car were two popular outings.

MARK YOUR CALENDAR FOR JUNE 19 – 22, 2015

"Next year, Ottawa will host the CAS Annual Meeting. Steeped in history, the city is known for its natural beauty, outdoor activities and proximity to other interesting places to visit in Ontario," said Dr O'Leary. "I am confident we are in for an exciting experience so mark your calendar for June 19 – 22 and stay tuned!"



Photo by Dr Richard Chisholm

CONGRATULATIONS TO CAS AWARD WINNERS

The CAS Awards Ceremony at the Annual Meeting recognizes the accomplishments and talents of members across research grants, oral competitions, best papers and other categories. Congratulations to all!

HONOUR AWARDS



**THE EMERITUS
MEMBERSHIP AWARD**
Dr René Martin
Sherbrooke, QC

CAS MEDICAL STUDENT PRIZES



**1ST PRIZE – 2014 MEDICAL
STUDENT PAPER**
Douglas Cheung
University of Alberta, Edmonton, AB
"Medicine Meets Real World"



**2ND PRIZE – 2014 MEDICAL
STUDENT PAPER**
Marissa Tsoi
University of Alberta, Edmonton, AB
*"The Remarkable Reids: Canada's
Groundbreaking Women of Medicine"*



**3RD PRIZE – 2014 MEDICAL
STUDENT PAPER**
Adrianna Woolsey
University of Calgary, Calgary, AB
*"Assessing Human Error in Anesthesia: Is
Physician Mental Health Affecting Patient
Outcomes?"*

ANNUAL MEETING COMPETITIONS AND AWARDS

ORAL COMPETITIONS



**RICHARD KNILL RESEARCH
ORAL COMPETITION**
Dr Daniel McIsaac
University of Ottawa, Ottawa, ON

*"Weekend Elective Surgery: A Population
Study of 30-day Mortality"*

RESIDENTS' ORAL COMPETITION



1ST PLACE WINNER
Dr Florin Costescu
McGill University, Montreal, QC

*"Effect of Dexamethasone on Cortisol and
Inflammation Post Laparotomy"*



2ND PLACE WINNER
Dr Elizabeth Miller
University of Ottawa, Ottawa, ON

*"Impact of a Hysterectomy Enhanced
Recovery Pathway on Discharge Time"*



3RD PLACE WINNER
Dr David MacDonald
Dalhousie University, Halifax, NS

*"A Comparative Study of the Glidescope
and McGrath MAC Video Laryngoscopes
for Intubation in Cadavers with Simulated
Oropharyngeal Bleeding"*

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BEST PAPER AWARDS



CVT RAYMOND MARTINEAU PRIZE

Dr Debashis Roy

University of Toronto, Toronto, ON

"Individualized Blood Management in Cardiac Surgery Using a Point-of-Care Based Transfusion Algorithm"



OBSTETRIC ANESTHESIA

Dr Ramesh Vedagiri Sai

Western University, London, ON

"Systematic Review of Tranexamic Acid for Bleeding in Cesarean Section"



REGIONAL ANESTHESIA AND ACUTE PAIN

Dr Ariane Boivin

Laval University, Laval, QC

"Ultrasound-guided Single Injection Infraclavicular Block vs. Ultrasound-guided Double Injection Axillary Block: A Non-inferiority Randomized Trial"



EDUCATION AND SIMULATION IN ANESTHESIA

Dr Gianni Lorello

University of Toronto, Toronto, ON

"Diagnosing Murmurs and Designing Learning"



PEDIATRIC ANESTHESIA

Dr Victor Neira

University of Ottawa
Children's Hospital of Eastern Ontario,
Ottawa, ON

"Impact of Trendelenburg Position on Respiratory Mechanics in Pediatric"



PERIOPERATIVE

Dr Daniel McIsaac

University of Ottawa, Ottawa, ON

"Obstructive Sleep Apnea and 30-day Postoperative Mortality"



NEUROANESTHESIA

Dr Lakshmi Kumar Venkat Raghavan

University of Toronto
Toronto Western Hospital, Toronto, ON

"Effect of General Anesthesia on Microelectrode Recordings"



CHRONIC PAIN

Dr Jennifer Nelli

University of Ottawa
The Ottawa Hospital, Ottawa, ON

"Understanding Chronic Pain in the Emergency Department"

IAN WHITE PATIENT SAFETY AWARD



Andrew Syrett

McMaster University, Hamilton, ON

"Does the Trendelenburg Position Actually Increase Airway Pressures?"

IN SEARCH OF

EXCELLENCE

Gold Medal Award

The Gold Medal is the highest award of the Canadian Anesthesiologists' Society. It is a personal award consisting of an inscribed gold medal given in recognition of excellence in matters related to anesthesia.

Eligibility

The medal may be awarded to any individual, ordinarily a Canadian:

- who has made a significant contribution to anesthesia in Canada through teaching, research, professional practice, or related administration and personal leadership;
- who may be active or retired from his/her field of interest.

Nomination and Selection

- Nominations shall be made in the form of a written, confidential submission.

Research Recognition Award

The Research Recognition Award will be presented by the Canadian Anesthesiologists' Society to honour a senior investigator who has made major contributions to anesthesia research in Canada.

Nomination and Selection

- Nominations, consisting of letters from at least three sponsors, plus one copy of the current curriculum vitae of the nominee must be submitted by the deadline to the attention of the *Chair of the CAS Research Advisory Committee*.
- Nominations shall be referred to the Research Advisory Committee for consideration.

Attention:

Chair of the CAS Research Advisory Committee

Nominations must be received by
October 24, 2014

Canadian Anesthesiologists' Society
1 Eglinton Ave East, Suite 208
Toronto, Ontario M4P 3A1
Fax: (416) 480-0320
E-mail: membership@cas.ca

Nomination and Selection information

Unless otherwise specified, the following applies to all awards:

- Nominations shall be made in the form of a written, confidential submission by two Active members (unless otherwise specified) to the Chair of the Membership Services Committee.
- Nominations shall contain extensive supporting documentation, which should include the nominee's curriculum vitae.
- Nominations shall be referred to the Membership Services Committee for consideration, with the addition of a Resident member for selection of the Clinical Teacher Award.
- Each nomination shall be held for a period of not less than **five** years and shall be reviewed annually. At the end of five years, a nomination will become inactive. Nominations may be resubmitted.
- Recommendations from the Committee shall be made to the President and presented to the Board for its approval. A two-thirds majority vote is required for approval.
- The recipient shall not be a member of the Board of the Society.
- The award need not be awarded annually.



IN SEARCH OF

EXCELLENCE

Clinical Teacher Award

To recognize excellence in the teaching of clinical anesthesia.

Eligibility

The award shall be made to a member of the CAS who has made a significant contribution to the teaching of anesthesia in Canada.

Clinical Practitioner Award

To recognize excellence in clinical anesthesia practice.

Eligibility

The award shall be given to a member of the CAS who has made a significant contribution to the practice of clinical anesthesia in Canada.

Refer to **Nomination and Selection information** on previous page

John Bradley Young Educator Award

To recognize excellence and effectiveness in education in anesthesia.

Eligibility

The award shall be given to an Active member of the CAS within his/her first 10 years of practice who has made significant contributions to the education of students and residents in anesthesia in Canada.

Emeritus Membership Award

To recognize retired individuals who during their long-standing practice made a significant contribution to anesthesia.

Eligibility

The recipient will be a current member of the CAS who has been a member of the Society for 25 years or more.

Nomination and Selection

- This nomination must also be supported by the nominee's division, with letters of support submitted by the division.
- Each nomination shall be held **indefinitely**.

Medical Student Prize

To increase awareness among undergraduate medical students of the specialty of anesthesia and the role of anesthesiologists in healthcare. A first, second and third prize will be awarded.

Eligibility

Full-time medical students in any Canadian medical school.

Format

- Written submission: 1000 to 1500 words.
- Topics related to anesthesia preferred. Alternatives can be discussed with your local undergraduate education director.
- Anesthesia undergraduate education directors at each university oversee the submission process and assist with topic selection.
- Microsoft Word is preferred, but other formats, except pdf are accepted.

Selection Process

- Initial review process at each university with maximum of two essays forwarded to national review committee.

For further information

Please contact the anesthesia department in your university for deadlines and local submission information.

A final decision will be made by the national review committee in **April 2015**.

MEDICINE MEETS REAL WORLD



DOUGLAS CHEUNG
University of Alberta
MD/MBA Candidate

The idea of “Business” in Medicine is not foreign (but it may as well be). Scanning the latest stream of media headlines, it is abundantly clear that the worrisome state of our healthcare finances is not sustainable. The closer you look, the more you realize that healthcare is intrinsically dependent on the realities of finance, supply chain management, innovation, and resource mobilization. However, despite a clear connection between the two, why does it seem that Business always takes a backseat to the ‘academic’ aspects of Medicine?

In truth, we have become desensitized to the very notion of healthcare fiscal responsibility. For most, healthcare economics extends little further than the next paycheck. Unfortunately, this is simply not sustainable—a systems perspective necessitates that physicians consider the larger picture of how our society spends healthcare dollars to deliver healthcare outcomes. The reality of healthcare as a closed system where the inputs (funding, resources) are moving linearly while the outputs (demands on the system) are expanding exponentially is frankly alarming. Eventually, this will create an expectation to either stretch the same dollar further or risk reaching a critical disequilibrium.

Tracing this back to medical admissions, one needs only scan the prerequisites courses to realize that, at its roots, this is not a Business-friendly science. Unfortunately, medical school admissions criteria omit these valuable skills right from the beginning. While Medicine does an excellent job selecting logical thinkers and high academic achievers, it is much less adept at identifying sharp business minds. The skills that make for excellent businessmen (namely, creativity, sociability, and heaven forbid, risk appetite) are the very same that are discouraged in medicine.

Viewed from another perspective, the connection between electron pushing in organic chemistry or the subtleties

of sublimation and everyday human physiology is tenuous at best. If medical school criteria reflect markers of strong physicians, we need to consider not only what will make great doctors in the short term, but who will make excellent stewards of our healthcare resources and system in the long term. Similarly, students who are sharp and astute from a medical perspective may remain ignorant about managing an effective practice in the real world. Even the best medical doctors will be limited by the resources that they are able to mobilize for their patients’ wellbeing.

Furthermore, following admission to medical school, these qualities are not cultured through practice and preparation. Simply, this is because our medical system does not call for this knowledge and our training reflects this mentality: relying primarily on the hard sciences, Medicine leaves little room or time for healthcare economics. In the same way that medical technique and fluency demands repetition, so does business acumen.

In fact, it seems that the opposite is happening: the startling absence of healthcare training accentuates the fact that Business is neglected in medical practice. We would much rather shield our students, dedicating little to no lecture hours or curriculum objectives to the study of business management

despite this being the cornerstone to family practices countrywide and crucial to the continued survival of our healthcare system.

The result is a whole generation of physicians where micro- and macro-economics remain foreign concepts. This does not imply that all students are poor financial managers, but without the formal training, it is akin to a mechanic without his toolbox or a doctor who has never been taught how to do a physical exam. Many will stumble around, possibly causing damage to themselves or others, and some will get it “right” on occasion, but without the underlying theory, it will remain a hit-and-miss for most physicians.

This paucity in our education does not go unnoticed: every medical student in the country will undoubtedly feel the effects of Business. On an individual scale, doctors making the jump to residency and then onto

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MEDICINE MEETS REAL WORLD

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junior staff positions rapidly move from a student's salary to straddling the upper middle class, an exponential leap in earnings potential. Yet, with a mountain of debt, many students poorly manage their finances (infamously so) such that they are unable to fully take advantage of their new financial situation. Stories of purchasing new cars or going on extravagant vacations under the promise of wages to come are still relatively commonplace. Time and again, the transition is not smooth and demonstrates a terminal lack of financial foresight.

Aggregated onto a systems perspective, things are not much rosier. Gross disparity between the amount of funding available and the rate of consumption of healthcare resources point to the failed stewardship of these resources. Again, there are many physicians who are pillars of financial responsibility, but while these represent the exceptions, the books will never be balanced. Of course, countless administrators and politicians will also play a pivotal role, but as recent provincial battles have demonstrated, this has degraded into high-stakes game of scapegoating. Senior management and politicians blame physicians for inflating wages and benefits above population rates while the same mudslinging is found from the physician camp, blaming management for gross negligence and misattribution of resources. Granted, the issue is multifactorial and a recent technical

report from the Canadian Institute for Health Information pointed to technology, population demographics, and physician spending all as important drivers of healthcare costs;¹ but ultimately, who is at fault is not the debate that we should be having. If we accept that the current situation and end results are unsustainable, physicians can start facilitating communication and action by incorporating responsible business ideas and practices into their everyday work in the same way that they seek continuing medical education.

Piece by piece, physicians and trainees can take control of their medical education. Simple understandings of cost, whether it is a simple lab test, a drug being administered, or a surgical suite, are all around us when we stop to look. Once grounded, further education in lean management and financial judgment can then be built upon these foundations. Excitingly, the Saskatchewan provincial health ministry is proving to be a leader in this type of forward thinking. In a recent press announcement, family physicians will be trained in Kaizen management, a form of lean business, in a province-wide administration initiative.² Looking to their example, as future surgeons, anesthesiologists, internal medicine specialists, and family physicians, it is equally unrealistic for medical trainees to brush these concepts aside. Healthcare is handily one of the country's largest businesses with spending expected to top \$211 billion this year (\$5,988 per capita).³ As a responsibility to our

patients of today and the health of our medical system tomorrow, this is a critical issue that we cannot afford to ignore any longer.

Ultimately, if we want all of our electronic medical records and fancy equipment, the status quo is unacceptable: medical school criteria and subsequent curriculum need to evolve to reflect the changing requirements of the medical landscape. It is no longer enough to be a capable medical professional in the 21st century as punctuated by the public's increasing frustration with ballooning healthcare costs. A compelling argument must be made to redefine doctor roles from a byword for the academic superfluous to a renaissance embodiment of empathy, leadership, healthcare expertise, and increasingly, business acumen. Unfortunately, as it stands, Business has become Medicine's mistress: intimately involved but oft ignored.

¹ Canadian Institute for Health Information, *Health Care Cost Drivers: Technical report* Available from: http://www.cihi.ca/CIHI-ext-portal/pdf/internet/HEALTH_COSTDRIVER_PHYS_TECH_EN

² Saskatoon StarPhoenix Newspaper. *Family Doctors to be Trained as Lean Leaders*. <http://www2.canada.com/saskatoonstarphoenix/news/local/story.html?id=4772b1a8-ba35-4679-a035-4cdf7b7f2f64>

³ Canadian Institute for Health Information, *Spending and Health Workforce*. Available from: <http://www.cihi.ca/CIHI-ext-portal/internet/EN/SubTheme/spending+and+health+workforce/spending/cihi015954>

CANADIAN PATIENT SAFETY INSTITUTE LAUNCHES NEW EDITION OF **SURGICAL SITE INFECTION GETTING STARTED KIT**

The Surgical Site Infection intervention team, led by Dr Claude LaFlamme, Director of Cardiac Anesthesia at Sunnybrook Health Sciences Centre in Toronto, is putting the finishing touches on a revised version of the Surgical Site Infection Getting Started Kit. The goal of the intervention is to prevent surgical site infection and deaths by reliably implementing ideal perioperative care for all surgical patients.

The updated literature for surgical site infection prevention focuses on new practice guidelines for skin decontamination, appropriate antibiotic prophylaxis and core temperature. A thorough literature search has been completed and the faculty and working groups will support the development of the

updated guidelines. Key elements for percutaneous intervention and pediatric antibiotics will be added, as well as a section on the health economics of patient safety to ensure that when choices are made in the best interest of the patient, they are also made to ensure sustainability of the healthcare system.

The voice of the patient will also be incorporated into the updated Kit. "The patient perspective makes it so real and takes what you are trying to disseminate to a human level," says Dr LaFlamme.

Dr LaFlamme and the Surgical Site Infection team are holding a national call on September 18, 2014 at 12:00ET to officially launch the updated Kit. Both the call and the updated Kit are offered free of charge. The call will be recorded and subsequently available online.

To learn more about the Kit or to join the national call on September 18, visit www.saferhealthcarenow.ca.

safer healthcare
now!



PREVENT SURGICAL
SITE INFECTION



DR STEVEN DAIN RECEIVES AWARD OF MERIT

Congratulations to Dr Steven Dain on receiving the Canadian Standards

Association's (CSA) 2014 Award of Merit at a special awards ceremony held during the CSA Group Annual Conference in Charlottetown, Prince Edward Island. The award was created in 1979 to honour and recognize leadership in voluntary standards development.

Dr Dain was recognized for exemplary leadership, dedicated involvement and passionate support for health care safety and standards related to anesthesia and critical care. An Associate Professor of Anesthesia and Perioperative Medicine at the Schulich School of Medicine and Dentistry at the University of Western Ontario, Dr Dain also practices clinical anesthesia at Woodstock Hospital in Woodstock, Ontario.

FEEDBACK SOUGHT FOR **INTERNATIONAL SURVEY ON PEDIATRIC ANESTHESIA**

PROFESSOR BRITTA REGLI-VON UNGERN-STERNBERG

Chair of Pediatric Anesthesia
School of Medicine and Pharmacology
The University of Western Australia

We are performing a large international survey on frequently debated topics in pediatric anesthesia and have already gathered well over 900 replies from the international pediatric community. However, we are also interested in hearing from pediatric anesthesiologists and would like to hear from you. The feedback will enable us to understand worldwide practices and to get one step closer to finding a consensus on what should be "best practice" for a particular scenario. Please click on the following link or copy it into your browser: <https://www.surveymonkey.com/s/PaedsAnaesthesiaControversies>

We would like to express our sincere gratitude for your time in answering this survey. Any questions/comments can be directed to britta.regli-vonungern@health.wa.gov.au or yusmereza@yahoo.com

THE ANESTHESIOLOGY™ ANNUAL MEETING

experience



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OCTOBER 24-28, 2015
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OCTOBER 22-26, 2016
CHICAGO, IL



OCTOBER 21-25, 2017
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A special discount is available to CAS active members who attend the 2014 CAS Annual Meeting in St. John's, Newfoundland and Labrador. Please contact CAS before registering to obtain the discount code.

Join us
goanesthesiology.org



DR J ROGER MALTBY, FRCPC

Professor Emeritus of Anesthesiology
University of Calgary

The following article is graciously shared by Dr Roger Maltby who made a presentation at the "Remembering the Past – History of Anesthesia and the Role Played by Canadians" Symposium at this year's CAS Annual Meeting in St John's, Newfoundland and Labrador. This article is based on Dr Maltby's presentation. Fasting guidelines prior to surgery were totally impractical and had not changed for more than 100 years until Dr Maltby's outstanding research on this topic in the 1980s.

PREOPERATIVE FASTING GUIDELINES: COMMON SENSE, DUBIOUS DOGMA, MODERN EVIDENCE

During my anesthesia residency in England in the late 1960s, most patients for elective surgery were admitted the day before surgery. Those scheduled for surgery at 12:00 or later were allowed a "theatre breakfast" of tea and toast at 07:00. When I joined the Foothills Medical Centre in Calgary in 1970, the routine order of "NPO after midnight" (nothing by mouth) was applied to clear liquids as well as solid food, irrespective of the scheduled time of surgery. This order was justified as "easy for us to write, easy for patients to understand, and easy for nurses to enforce."

FASTING GUIDELINES

In 1858, John Snow fasting guidelines were that, to avoid vomiting, the best time for an operation was before breakfast or when the patient would be ready for another meal. In 1883, the surgeon Joseph Lister made the distinction between solid food and clear liquids; no solid matter in the stomach but a cup of tea or beef-tea 2 hours preoperatively was beneficial. Textbooks for the next 80 – 100 years recommended a 4 – 6 hour fast for meals and 2 – 4 hours for clear liquids. During the 1960s and 1970s, most text books applied "NPO after midnight" to clear liquids as well as solids.

GASTRIC PHYSIOLOGY STUDIES

In 1832, William Beaumont observed digestion and gastric emptying through the musket-wound gastrostomy in a Canadian fur trapper. Easily digested food emptied in 3 – 3.5 hours, whereas, "Water, ardent spirits, and most other fluids are not affected by gastric juice, but pass from the stomach soon after they have been received." By the 1980s, the dual isotope technique demonstrated that clear liquids and emptied exponentially, 90 per cent within 1 hour and virtually all within 2 hours, whereas easily digested solids emptied in 3 – 5 hours. Clear liquids pass easily through the pylorus, while digestible solids (bread, lean meat, boiled potatoes) must be broken down to particles < 2 mm before they can pass.

PULMONARY ASPIRATION

Snow did not record death from aspiration of gastric contents in more than 4,000 of his own chloroform anesthetics, nor from his extensive reading of medical journals. Curtis Mendelson, a New York obstetrician, reviewed case records of 66 of 44,016 mothers between 1932 – 1945 who aspirated stomach contents. Five mothers inhaled vomited food

and two of them died. Forty inhaled liquid, developed an asthma-like syndrome, but none of them died. Risk factors for fatal aspiration in all types of surgery in the 1960s included esophageal and gastric disease, emergency surgery, obesity and neurological conditions. Statistics for non-fatal as well as fatal aspiration in all types of surgery were reported by Dr Gunnar Olsson in a computer-aided study of 185,358 anaesthetics between 1967 and 1986 at the Karolinska Institute, Stockholm, Sweden. Non-fatal aspiration with x-ray confirmation occurred 1:4,521 patients, and fatal aspiration 1:46,340. Contributing factors were emergency surgery, particularly trauma, obstetrics and abdominal surgery, especially if tracheal intubation was also difficult.

MODERN FASTING GUIDELINES

In 1985, we began a series of randomized clinical trials in the Foothills Medical Centre, Calgary to determine whether preoperative clear liquids empty in 2 – 3 hours before elective surgery, as they do in physiology volunteer studies. Patients who drank water 150 mL 2 – 3 hours preoperatively had lower residual gastric fluid volumes (RGV) at induction of anesthesia than in those who fasted > 8 hours. Further studies confirmed tea, coffee, apple and pulp-free orange juice also empty with 2 – 3 hours before elective surgery. Similar results followed from centres in Britain, India, United States, France, Hong Kong and Norway confirmed these results. In 1996, the Canadian Anesthesiologists' Society's (CAS) fasting guidelines were modified to read,

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“No solid food should be eaten on the day of surgery but clear fluids may be taken by mouth up to 3 hours before surgery.” The American Society of Anesthesiologists (ASA) task force on fasting guidelines reviewed 232 articles with relationships between preoperative fasting, pharmacological prophylaxis and pulmonary aspiration. In 1999, it recommended 2 hours for clear liquids, 4 hours for breast

milk, and 6 hours for infant formula, non-human milk and a light meal. The CAS adopted similar guidelines in 2000.

Further reading:

Maltby JR. “Fasting from midnight—the history behind the dogma”. *Best Practice and Research Clinical Anaesthesiology* 2006; 20:363-378. available online at <http://www.sciencedirect.com/science/article/pii/S1521689606000188>

“TOP MARKS” FROM ROYAL COLLEGE

CAS receives top marks from the Royal College as a Continuing Professional Development (CPD) provider.

As an accredited CPD provider the CAS is required to carry out several educational functions. These include conducting regular assessments of Canadian anesthesiologists’ perceived and unperceived learning needs, continuously updating standards and procedures for maintaining best practices in CEPD, and providing Royal College Section 1 and 3 credits.

Section 1 credits are awarded for participation in face-to-face activities such as rounds, conferences, journal clubs or on-line courses. Section 3 credits are awarded for participation in programs that provide either knowledge or performance assessment and feedback to individual learners, and are worth three times the number of Section 1 credits. Examples include self-assessment programs, the on-line CPD program provided by the *Canadian Journal of Anesthesia* and skill-based workshops such as those provided at the recent 2014 CAS Annual Meeting in St John’s. The CAS also approves applications from other anesthesiology groups for Royal College Maintenance of Certification (MOC) Section 1 and Section 3 credits.

There are three reasons why it is important for CAS to be an accredited provider:

- 1. It greatly enhances the anesthesiology specialty’s credibility by having its national speciality society accredited.
- 2. It is a strong statement guaranteeing that CAS maintains high standards or best practices in education.

- 3. It means CAS can provide a valuable program accreditation service to anesthesiologists across Canada.

In order to be approved as an accredited CPD provider, an organization is required to demonstrate how well it meets 20 criteria. The criteria include items such as an adequate CPD mission statement, administrative structures and policies established in support of CPD activities, as well as maintaining high educational standards in areas such as learning needs assessment, establishing learning objectives, interactive learning, and inclusion of Can Meds roles beyond the medical expert and evaluation procedures.

The last reaccreditation application was approved in 2009. At that time, CAS did quite well. In 2014, we did even better—as the following diagram illustrates:

Results out of 20 criteria:

2009	2014
1 non-adherent	0 non-adherent
5 partially adherent	1 partially adherent
11 adherent	13 adherent
3 exemplary	6 exemplary

WHERE DO WE EXCEL?

In its review, the Royal College noted that CAS excels in the following areas:

- Provision of expertise in adult education

- Establishing systems for determining perceived and unperceived learning needs
- Development of sound learning objectives and learning formats that are consistent with identified needs and objectives
- Provision of on-line learning opportunities through the *Canadian Journal of Anesthesia* CPD on line program.

NEED MORE WORK ON ...

The RC recommended that CAS further develops its current policy provided to speakers and program planners on detection and management of conflict of interest.

NEXT STEPS

While we have taken a little while to rest on our laurels, we still have a long way to go.

Some members may have noticed the initiatives introduced at this year’s Annual Meeting, including provision of Section 3 credits for the workshops and the increased use of I-clickers. CAS speakers and presenters were also offered peer observation and coaching services to support them in continually upgrading their skills. This is all due to the hard work of the CAS CEPD Committee in collaboration with the Annual Meeting Working Group. CAS and the CEPD Committee are committed to a continuous improvement approach to its anesthesiology education portfolio.

THE SELF ASSESSMENT PROGRAM FROM THE **CANADIAN JOURNAL OF ANESTHESIA**—CPD ONLINE

CPD MODULE: Bedside clinical and ultrasound-based approaches to the management of hemodynamic instability – Part I: focus on the clinical approach

September 2014

ALSO AVAILABLE

- Cesarean delivery under general anesthesia
May 2014
- Impact of anesthesia for cancer surgery
December 2013
- Perioperative considerations for neurosurgical procedures in the gravid patient
November 2013
- Airway management and oxygenation in obese patients
September 2013
- Residual paralysis: a real problem or did we invent a new disease?
July 2013
- Ultrasound-guided regional anesthesia for upper limb surgery
March 2013
- Massive transfusion in the trauma patient
December 2012

HOW TO ACCESS THE MODULES

Instructions can be found on the Canadian Anesthesiologists' Society website at:

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 education grants from the following industry partners:



COVIDIEN

THE CHALLENGE IS ON!

CANADIAN ANESTHESIA RESEARCH FOUNDATION FUNDRAISER WITH A NEWFOUNDLAND THEME

Dr Roanne Preston (University of British Columbia) and Dr Dolores McKeen (Dalhousie University) are throwing out a challenge to see who can raise the most funds. They have each committed \$100 and want their colleagues to match or surpass this.

Make a gift* by December 31, 2014, get a hat... and then send in your selfie with your OR hat on to Bruce Craig at carf@rogers.com. Your name will be put in a draw for a ticket to the President's Dinner at the 2015 CAS Annual Meeting in Ottawa.

To make a gift, please send a cheque payable to "Canadian Anesthesia Research Foundation", enter "CARF" or "HAT" on the memo line and mail it to: CARF, c/o Canadian Anesthesiologists' Society, 1 Eglinton Avenue East, Suite 208, Toronto, ON M4P 3A1

For more information, contact Bruce Craig at: carf@rogers.com]

*Pursuant to the Canadian *Income Tax Act*, donations made to the hat challenge are not eligible for a tax receipt.

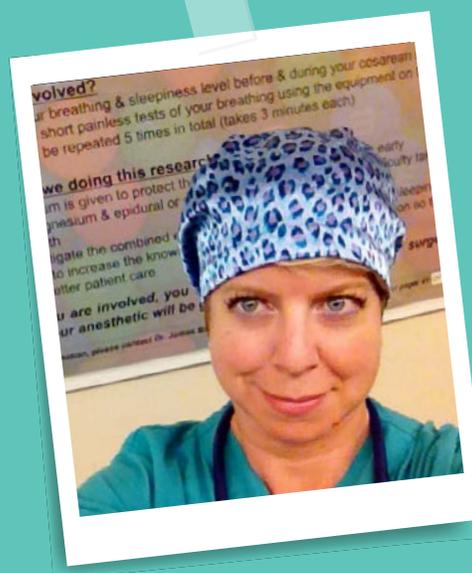


Canadian Anesthesia Research Foundation



Dr Dolores McKeen, FRCPC

Is ye a Newfie Anesthesiologist? Indeed I is! And now you can become one too!! Here is your chance... by getting your very own Newfoundland OR HAT. You will also be contributing to a great charity, CARF, and supporting Canadian anesthesia research!!! Win, Win and Win!



Dr Roanne Preston, FRCPC

Invest in your future—donate to CARF and up your OR wardrobe with a stylish OR hat! We have started the challenge from coast to coast. Please join Dolores and I in supporting our colleagues who are looking for answers to our questions!

WATERPROOF YOUR HOME FROM POTENTIAL **WATER DAMAGE.**



Find out what **additional water damage protection** you qualify for on top of our basic plan.

Get a home insurance quote.

1-888-476-8737

thepersonal.com/cas



The right fit.

ANESTHESIA FOR GLOBAL OUTREACH COURSE: KEEN PARTICIPANTS AND AN INTERNATIONAL FACULTY

BY: DR RON GEORGE, FRCPC

The 7th annual Anesthesia for Global Outreach course took place from May 29 to June 1, 2014 in Halifax, Nova Scotia at Dalhousie University. We were fortunate to have an extremely keen group of participants and a world-renowned international faculty. Our low student-teacher ratio—an intentional aspect of the course—makes it both an appealing and a valuable networking experience.

Primarily hosted in a beautiful, state-of-the-art building on Dalhousie's campus, participants learned about equipment and techniques used for delivering safe anesthesia care in austere environments, but also heard about the importance of being cognizant and respectful of cultural differences. Both didactic and hands-on sessions kept everyone engaged and provided for stimulating conversation and real-life experience.

Faculty and participants were given ample time through breaks in the schedule and various social events to network and share their experiences, which provided a great forum for ongoing education. This included an enlightening and exclusive visit to The Citadel, our National Historic site in the heart of Halifax. As one participant noted: *"The presence of international faculty, the ability to mingle with faculty at so many times throughout the conference, the faculty to participant ratio, the excellent combination of didactic as well as hands on sessions—this course was fantastic."*

The varied topics presented at the course—from airway management and vapourizer structure and function to trip

preparation and safety and security precautions to ethics and adaptation—make this an essential course for anyone interested in pursuing global health activities. We would like to take this opportunity to thank our amazing and dedicated faculty members who continuously strive to make the course better every year. And, of course, to thank our wonderful participants who made this year's course truly memorable. As one participant reflected: *"Absolutely excellent course. The effort you made into organizing the course, making it technologically up-to-date, populating it with exceptional faculty produced one of the best courses I have ever taken."*

The 2015 Anesthesia for Global Outreach Course is scheduled to run from May 28 to 31. For more information visit www.anesthesiaglobaloutreach.com, contact us at info@anesthesiaglobaloutreach.com and follow us on Twitter: @Anesth_GO.

Dr Ron George is Associate Professor, Department of Anesthesia, Pain Management, and Perioperative Medicine, Dalhousie University.



Special guest faculty member, Dr Wayne Morriss from Christchurch, New Zealand, shares his expertise with draw-over ventilation, a common form of volatile delivery in austere environments.



Our knowledgeable and entertaining Citadel tour guide, dressed in uniform, shows our guests the highlights of this amazing National Historic site.



Our attendees were a diverse group of physicians and residents (...and not all anesthesiologists) from all over North America.

'ONCE IN A LIFETIME' OPPORTUNITY: AN UNFORGETTABLE EXPERIENCE IN RWANDA

BY: DR YUQI GU

Through the Canadian Anesthesiologists' Society International Education Foundation (CAS IEF), I was recently given the opportunity to travel to Rwanda for a one-month international elective. This elective came strongly recommended by many residents who have previously visited Rwanda. The common theme I heard from all these residents is that the elective is an unforgettable experience, which has changed their practice of anesthesia, approach to medical education, and in many ways, their outlook on life. Since completing this elective, I could not agree more with all the comments I had heard.

A large part of this elective involved teaching, which was conducted in different settings (classroom, simulation center and operating room), and various audiences (Rwandan anesthesia residents and anesthesia technicians).

We taught the Rwandan anesthesia residents in clinical and non-clinical settings. In the classroom, we made interactive and engaging classroom-based teaching sessions each week. The residency teaching curriculum was developed in collaboration between CAS IEF and local experts. Despite being a senior resident during this elective, I was seen as the "expert", so I felt a strong sense of responsibility to ensure that the information was both correctly presented and in the proper clinical context. In addition, we also created and ran simulation scenarios in their new Simulation and Skills Center (established by Dr Patty Livingston and colleagues, and funded by Grand Challenges Canada), which is something Canadian residents are rarely involved in. We found that all the Rwandan anesthesia residents were very knowledgeable, eager to learn, and a pleasure to teach.

Although it was a lot of work and effort in preparing the teaching sessions, it was truly rewarding to see the growth in knowledge and skills the residents displayed during our brief month in Rwanda. In the clinical setting, I was surprised to see that the Rwandan residents were often left alone with minimal supervision

from very early stages of their training. They were responsible for efficiently and safely facilitating a surgical list, while simultaneously trying to learn anesthesia, a feat any resident would find challenging. Thus, many of the residents already had a basic foundation in their clinical skills, and our role was to fill in the missing gaps. In fact, I often felt I was learning more than the Rwandan residents because I found myself constantly brushing up on the pharmacology of unfamiliar anesthetics, troubleshooting unreliable equipment, triaging limited resources, and dealing with pathology uncommon in Canada.

Our teaching was not just limited to the Rwandan anesthesia residents. During our month, in collaboration with the local Rwandan anesthesiologists we also ran the Safer Anesthesia For Education (SAFE) course, designed to teach safe obstetrical anesthesia practices. The three-day course was an innovative curriculum taught again at the Simulation and Skills Center, focusing on both technical and non-technical skills. In Rwanda, there continues to be an unacceptably high maternal mortality rate, which has been estimated to be 540 per 100,000 live births¹ (7 per 100,000 live births in Canada). Given that the majority of anesthesia providers in Rwanda work in isolated areas with minimal support, the SAFE course is an important educational program designed to reduce maternal morbidity and mortality.

Since 2010 and through one of CAS IEF's many initiatives, seven Rwandan anesthesia residents have completed a six-month anesthesia elective between Dalhousie and Queen's University. I first met Isaac, a senior Rwandan anesthesia resident, in Halifax during his elective in 2012. Fortunately, we would meet Isaac again during our visit to a hospital in Butare, Rwanda. He was in his final year of residency, and demonstrated to us that he will undoubtedly be a strong anesthesiologist, a caring physician, patient advocate, educator, and leader amongst his peers. I feel very honoured to be part of an institution and educational program that has contributed to his success. His story was not unique, as many other former Rwandan anesthesia residents have also become exceptional anesthesiologists. CAS IEF's philosophy of "train the trainer" —helping anesthesia providers in developing countries create their own self-sustaining programs appropriate to their country's specific needs—is alive and well in Rwanda.

This elective can at times be emotionally challenging. I sometimes would feel helpless and frustrated with the level of care patients received. However, you soon realize that the anesthesia consultants are simply doing the best they can in the face of limited resources and a developing health care system. To provide great care in Rwanda requires a closer

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'ONCE IN A LIFETIME' OPPORTUNITY: AN UNFORGETTABLE EXPERIENCE IN RWANDA

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anesthesiologist-patient relationship than I have experienced in Canada. For example, in the absence of sophisticated diagnostic tools, one's history taking and physical examination skills are vital to capture a patient's functional assessment, or a finger on a warm extremity feeling the patient's pulse replaced a whole spectrum of monitors. It was very encouraging to witness, however, that through initiatives set out by CAS IEF, medical education, perioperative care, and patient advocacy are consistently improving.

Outside of clinical work, we were given the opportunity to explore Rwanda's rich culture, unsettling history, and lush countryside. A few highlights included a trip to the Kigali Genocide Memorial Center, which was a heartbreaking glimpse of what Rwanda once was, and the tremendous strides the country has made since 1994. Another unforgettable experience was sitting side by side with a family of wild mountain gorillas within the dense Rwandan jungle. But the most memorable experience has to be sitting at a local pub with Dr Ron George, Dr Fiona Turpie, and the local Rwandese people, eating fish brochettes and watching the evening Championship league soccer game.

This elective is a rare opportunity not to be missed. Despite spending only one month in Rwanda, I have gained an enormous amount of skills in medical education—creating and leading interactive teaching session, running simulation scenarios, and clinical teaching in the OR—not easily acquired during residency in Canada. I was able to work with anesthetics and equipment not commonly used in Canada. I traveled within a culturally rich and beautiful country and met some wonderful people who have



The CAS team from Dalhousie University: Drs Fiona Turpie (front row, left), and Ron George, Yuqi Gu (back row) Rwandan residents: Drs Françoise Nize, Christine Niyibogora, Egide Buregeya and Edouard Uwamahoro.

now become close friends. But most importantly, it is clear our work and continued efforts through CAS IEF will continue to improve medical education, health care advocacy, and ultimately, patient care in Rwanda.

I returned to Canada with both a greater appreciation and sense of humility towards our medical education and health care system. I believe this "once in a lifetime" opportunity has made me a better resident and, eventually, staff anesthesiologist. Like all the former Canadian anesthesia residents who have had the privilege of visiting Rwanda, I would not hesitate to recommend this life-changing elective to any anesthesia resident.

References:

1. World Health Organization, UNICEF, UNFPA & World Bank. (2010). Trends in maternal mortality 1990 – 2008.

Dr Yuqi Gu is a resident at Dalhousie University's Department of Anesthesia, Pain Management and Perioperative Medicine.



Dr Yuqi Gu facilitates a discussion of neurosurgical anesthesia to Rwandan residents.



"Bwenge", a silverback mountain gorilla who is head of the Bwenge family in Volcanoes National Park in Rwanda.



Drs Ron George (left) and Yuqi Gu after a long and challenging hike in Volcanoes National Park to visit the Bwenge family of gorillas.



DR ERIC JACOBSON, FRCPC
 Professor of Anesthesiology
 Department of Anesthesiology
 University of Manitoba



ALEX VILAFRANCA
 Research Associate
 Department of Anesthesiology
 University of Manitoba

BY: DR ERIC JACOBSON, FRCPC AND ALEX VILAFRANCA

Teamwork is crucial in assuring patient safety in the operating room. Teamwork and good communication have been shown to be important predictors of surgical outcomes. They are also recognized as essential skills in promoting a culture of safety in the operating room. According to a root cause analysis of sentinel events done by the Joint Commission for Accreditation of Hospital Organizations (JCAHO), greater than two-thirds of these events involved communication problems. Similarly, prospective observational studies have shown that as the quality of intraoperative teamwork and communication decreases, there is an associated increase in postoperative morbidity and mortality. In addition, survey research has found that healthcare providers perceive an association between interpersonal behaviours that undermine teamwork and communication (negative behaviours) and adverse perioperative outcomes.

However, much of the previous survey research on negative behaviours has involved limited methodologies. These surveys have used instruments with under-tested psychometric properties. The targeting of a limited number of perioperative professions (i.e., almost exclusively nursing) has resulted in a biased coverage on the problem. Further, it has often been assumed that the perpetrators of negative behaviours are physicians and management, with victims assumed to be nurses. Finally, survey sample sizes have been relatively small and not multi-centered. Because of the identified limitations of previous survey research, we established an international collaborative of researchers interested in elucidating the issue of negative behaviours in the perioperative period. The research collaboration consists of researchers from Canadian and US universities, with collaboration and support from perioperative specialty organizations.

Of note, the Canadian Anesthesiologists' Society (CAS), the Association of Canadian University Departments of Anesthesia (ACUDA), the Operating Room Nurses Association of Canada (ORNAC), Canadian Association of Interns and Residents (CAIR), amongst many others, helped the research group develop and distribute the questionnaire. The initial questionnaire was distributed to operating room staff in Canada, with over 2,000 responses received. The survey has undergone further refinement and shortening, and has now been launched in several centers in the United States. The Common Issues Group, an organization of anesthesia leaders from English-speaking countries around the world, has also given preliminary support that may allow the dissemination of the survey much further afield.

The primary purposes of the survey were to: 1) examine the incidence of negative behaviours in Canada, 2) examine independent predictors of negative behaviours, and 3) determine the common behavioural responses of individuals exposed to negative behaviours. The preliminary data unfortunately suggests that the problem is ubiquitous. About 66% of staff working in the perioperative period report experiencing at least one negative behaviour in the last year, with 25% of staff experiencing at least one event per month. When asked whether staff have witnessed negative behaviour, as expected, the incidence is even higher, with about 90% of perioperative staff reporting witnessing at least one negative behaviour within the last year, while 25% reported witnessing it daily. While the analysis of "who" the perpetrators are is still preliminary, it appears that all perioperative professions exhibit these behaviours; whether or not there are significant differences between the professions is still unclear.

The research group has found the behavioural responses of people exposed to negative behaviours to be very illuminating. We classified behavioural responses into four categories, partly based on the survey validation process. These were: 1) cooperative, 2) passive, 3) malicious, and 4) manipulative. Although many staff used cooperative responses to these behaviours, the incidence of malicious, manipulative and passive responses was significant. Importantly, passive responses were the most common of all behavioural responses. This response generally involves acquiescing to the behaviour or avoiding conflict, including reducing communication with team members; these all have the potential to undermine a culture of safety.

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Soon after starting the Canadian survey, it was apparent that medical students represented a unique group, as their primary purpose in the operating room was to learn. As a result, the behavioural response model was reworked and validated for a Canadian graduating medical school cohort. Emphasis was placed on how negative behaviours could affect: 1) interest in the perioperative professions, and 2) student learning behaviours. This survey was then sent to the graduating medical school class at all Canadian medical schools with the help of the Canadian Federation of Medical Students (CFMS). The preliminary data indicate that students' interest in the surgical subspecialties may be negatively impacted by exposure to negative behaviours. Interestingly, students' interest in anesthesiology was unaffected by exposure.

The investigators are particularly grateful for the support of this ongoing work by the CAS, which has helped distribute and evaluate the psychometric properties of the questionnaire. We are currently accepting additional responses from Canadian operating room staff, and will be expanding to a number of other countries in the next few months. The research team is particularly interested in exploring whether the healthcare funding systems and physician payment methods (public, private, social, etc.) have an impact on negative behaviours. Once the problem and its predictors are adequately described, a specialized intervention will be developed and tested in a sample of operating rooms across the world.

Any operating room staff member who has not completed the survey to date, but would like to, is directed to the following link: www.fluidsurveys.com/s/ibs

BOARD UPDATE

DR FRANÇOIS GOBEIL ELECTED CAS TREASURER

As a result of Dr Douglas DuVal's election as Vice President, Dr François Gobeil was appointed to replace him as the CAS Treasurer at the June Board meeting in St John's and will continue in his role as the Quebec representative to the completion of that term. He assumes the Treasurer's role for the two years remaining in the term for which Dr Douglas DuVal was elected in 2013.

A graduate from the Université de Montréal and an anesthesiologist at Pierre Boucher Hospital in Montreal, Dr Gobeil is a recognized speaker in the area of pain management. He is the current President of the l'Association des anesthésiologistes du Québec (AAQ) and a former vice president of the Quebec Medical Association.

CAS SELECTS NEW CONFERENCE MANAGEMENT COMPANY

After a rigorous review of proposals from a number of qualified conference management companies to manage the 2015 – 2017 CAS Annual Meetings, the Executive Committee recommended the selection of Intertask to assume that role. The Board approved the recommendation at its June 17 meeting

in St John's.

CAS expresses its gratitude to MCI Canada for its service to CAS. In particular, MCI's handling of post-cancellation arrangements of the 2013 Annual Meeting in Calgary was noted by the Board.

CHOOSING WISELY CANADA

Choosing Wisely Canada is a campaign to help physicians and patients engage in conversations about unnecessary tests, treatments and procedures, and support physician efforts to help patients make smart and effective choices to ensure high quality care. The campaign aims to encourage and empower physicians to assimilate, evaluate, and implement the ever-increasing amount of evidence on current best practice. The campaign also supports the equally important role of patient education and the need to dispel the false notion that "more care is better care".

Choosing Wisely Canada is modeled after the hugely successful Choosing Wisely® campaign in the United States. To date, 60 medical societies have joined the campaign to develop Top 5 lists of tests and treatments physicians and patients should question—things for which there is strong evidence

of overuse, waste, or even harm to patients. Under the leadership of Dr Wendy Levinson and the Canadian Medical Association (CMA), in partnership with various national medical specialty societies, Choosing Wisely Canada released the initial wave of recommendations on April 2, 2014. The CAS plans to join in the second wave of specialty societies to make recommendations in this important national and international initiative.

WE NEED YOUR TOP 5!

Watch your inboxes in October 2014 for the Choosing Wisely survey. We need your opinion to help us choose a top 5 list of which tests and treatments we should continue to offer.



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CANAIRS REGISTRY PILOT

CAS, in collaboration with the national specialty societies of Australia and New Zealand and their joint certification college, is developing a web-based anesthesia incident reporting system.

Dr Scott Beattie, Department of Anesthesia and Pain Management, Toronto General Hospital, has taken the lead on this for the pilot site in Canada. A web-based database will allow individual anesthesiologists to report on critical incidents and near misses in the perioperative period.

A NAME CHANGE FOR THE ALLIED HEALTH COMMITTEE

Following a recommendation from the Allied Health Committee to re-name the committee to better reflect the changing roles of health professionals, the Board approved a name change put forward by the committee. The new name is Committee on Anesthesia Care Teams (COACT).

TREASURER'S REPORT

Dr Douglas DuVal's final report to the Board as Treasurer reflected on the Society's "better than expected" overall financial position at year-end as a result of the cancellation of the 2013 Annual Meeting in Calgary. On a budget of

\$3.69m the actual loss was \$180,000 compared to a budgeted loss of \$105,000, with a corresponding drop in net assets from \$1.85m at the beginning of the year to \$1.67m at the end of 2013.

In approving the 2013 auditor's report, the Board agreed to set aside \$700,000 of net assets in an internally restricted fund as a means of self-insuring against future loss.

To view the auditor's report, log in to the Member Portal, then enter the following URL into the address bar: https://www.cas.ca/Members/Page/Files/129_Web-CAS-Fin-Stmts-2013-final-En.pdf

A SHORT HISTORY OF THE CANADIAN JOURNAL OF ANESTHESIA

DR DONALD R MILLER, FRCPC

Former Editor-in-Chief
Canadian Journal of Anesthesia

This past June 14th, the opening plenary session of the CAS Annual Meeting (St John's, Newfoundland) celebrated the Diamond Jubilee of the *Canadian Journal of Anesthesia* (the *Journal*), marking its 60th year of publication (1954 – 2014). The purpose of the session was to inform meeting delegates, from researcher to clinician reader, why the *Journal* ranks consistently as a key membership benefit of the Society, to understand why the *Journal* is well-respected internationally, and to inform the audience on future directions of the *Journal* in advancing the knowledge base of anesthesia, pain, perioperative medicine and critical care, and its unique role in continuing professional development.

In considering the historical background of the *Journal* as a society-based publication, an important landmark was founding of the Canadian Society of Anaesthetists in 1920. Eight years later, in 1928, the Society became the official

"CMA Section of Anaesthesia" of the Canadian Medical Association. Eventually this section gave way to a free-standing society, and in 1943 the Canadian Anaesthetists' Society was established. The founding members were Drs Wesley Bourne, Harold Griffith, Digby Leigh, Roméo Rochette,

and Georges Cousineau. From the outset, one key goal of the Society's founders was to produce a specialty journal.

The first issue of the *Canadian Anaesthetists' Society Journal* (CASJ)

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The Seal of the Canadian Anaesthetists' Society: "We watch closely those who sleep."

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was published in 1954. The founding editor was the late Dr Roderick Gordon, who served as Editor-in-Chief for a remarkable period of nearly three decades (1954 – 1982) while also serving on the executive as the Society's secretary! Collaborating with Dr Gordon were small editorial boards consisting of just three to four members during the years 1954 – 1968. The early volumes consisted of summaries of papers presented at the annual meeting and regional meetings of the Society. During the period 1954 – 1970, the *CASJ* (as it was referred to at the time) appeared as a bilingual, quarterly publication in print copy only. The publisher was University of Toronto Press, and most journal operations were managed "in-house" within the Society's office in Toronto. Through the years 1954 – 1970 the reviews and papers of regional and national meetings gradually gave way to reports of new drugs and reports of original investigations. Early content was primarily Canadian, and by the early 1970s, up to 25% of editorial content originated from universities in the United States.

Dr Douglas Craig served as the second Editor-in-Chief of the *Journal*, from 1983 – 1987. As the number of article submissions increased, there was opportunity to expand the editorial board. Dr Craig undertook considerable efforts to ensure representation from each of the 16 (now 17) Canadian University Departments of Anesthesia (ACUDA) — a goal that, for logistical reasons, was never quite achieved. During Dr Craig's term, the editorial peer review process was updated to ensure enhanced rigour in the selection and presentation of published articles. By 1985, the publication frequency had increased to six issues per year (bimonthly). In 1987, the title of the *Journal* was changed from the *Canadian Anaesthetists' Society Journal (CASJ)* to "*Canadian Journal of Anaesthesia*" (*CJA*), in an effort to better reflect its increasing internationalization in

regards to manuscript submissions and readership. (NB: In 1999, the diphthong "ae" was removed from the *Journal's* title, and in the text of all published articles.) Another key change during Dr Craig's term was migration of the business office of the *Journal* to the Society's Head Office (Toronto) while the editorial office remained in Winnipeg. Historically the editorial office has subsequently moved from Toronto, to Winnipeg, to Montreal, Vancouver, Montreal (a second time!), Ottawa, and then — back to Winnipeg where it serves the sixth Editor-in-Chief, Dr Hilary Grocott.

In 1990, Dr David Bevan assumed the helm of the *Journal* as the third Editor-in-Chief (1990 – 2003). Dr Bevan focused on further internationalization of the editorial content of the *Journal* and was a key player in negotiating the creation of a new partnership to produce CD and DVD ROMs with *Anesthesiology*, *British Journal of Anaesthesia*, *Anesthesia & Analgesia*, and the *Canadian Journal of Anesthesia*, in the form of The Electronic Anaesthesia Library ("TEAL"). This series of CDs and subsequent DVDs (as content expanded) became a key resource within anesthetic departments prior to many advances of the now ubiquitous online journals. The primary advantage of TEAL (at the time) over internet accessible library or search facilities, was the ability to access complete papers of the four journals in lieu of the more omnipresent Medline format of a title and abstract. While TEAL was modestly profitable for each of the four host societies for nearly a decade, advances in the online journals saw the inevitable end of TEAL in 2007. By 1993, publication frequency of the *Journal* was monthly, and subscriptions were growing to >3500. Another major initiative during Dr Bevan's term was a decision to begin publication of an online *Journal*. While printing and distribution continued from University of Toronto Press, the first online publisher for the *Journal* was HighWire Press based at Stanford University (2000).

In 2000, Dr Jean-François Hardy from the University of Montreal became the *Journal's* fourth Editor-in-Chief. Dr Hardy focused on further development of international links and board members. In 2002, an important development in editorial policy was mandating written patient consent for publication of Case Reports/ Case Series. The *CJA* was one of the first journals in the specialty to make such a requirement and most journals in the field have subsequently adopted a similar policy. Another important legacy of Dr Hardy's tenure was the development and launch of the *Journal's* Continuing Professional Development (CPD) Modules beginning in 2004. These modules increased in publication frequency, content and accessibility in subsequent years under the fine leadership of Dr François Donati who served as Deputy Editor-in-Chief from 2008 – 2013.

In 2005, Dr Donald Miller assumed the role of Editor-in-Chief for a period of nine years (2005 – 2013). This was a critical period of transition and change on a number of fronts for the *Journal*. In recognizing that the online archive was complete only from 2000 onwards, hard copies of all manuscripts from 1954 – 1999 were scanned and digitized so that all articles exclusive of the most recent year were now freely available online, one year post-publication. From 2006 – 2008, there was a gradual shift in editorial content to ensure that all articles were aligned with the updated vision of the *Journal*: "Excellence in research and knowledge translation in anesthesia, pain, perioperative medicine and critical care."

By 2008, it had become increasingly apparent that the traditional "in-house" publication model for the *Journal* was challenged to keep abreast of all the changes in the fast-paced world of biomedical publication. That year, the Editorial Board and the CAS Board of Directors mutually agreed to partner

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operations of the *Journal* with an external publisher. The search for a new publisher led to innovative submissions from the largest and most successful international scholarly publishing firms. In 2008, Springer Science & Business Media, LLM, was chosen as the Society's publisher. Quickly thereafter a number of changes took place. The focus shifted from issue-based publication towards article-based publication. A unique digital object identifier (DOI) is now applied to each article and each article is published online first, ahead of print, to accelerate publication time. The *Journal* also acquired capacity for the first time ever, to offer authors the option of open access (OA) publication through Springer's unique OpenChoice™ program. In late 2008, the online journal archive was transferred from HighWire Press to SpringerLink (<http://www.springerlink.com.12630>), printing and circulation were transferred to the Springer offices in New York City, and the manuscript submission and peer review system were migrated to Editorial Manager (<http://cja.edmgr.com>).

These were large steps forward and the speed of editorial operations accelerated. By 2009, the positions of Deputy Editor-in-Chief, and two new Associate editors, and a Statistical Editor, were created. Thus, a Senior Editorial Team for the *Journal* was established consisting of four handling editors, and a more extensive process for joint editorial decision-making, more rapid peer review and detailed biostatistical assessment for the majority of published reports of original investigations. As part of the *Journal's* mission to outreach, additional international board members were appointed.

Since 2009, coincident with the transition to an external publisher, the *Journal* has grown considerably. New article submissions currently exceed 750 annually, originating from over 40 countries. Currently there are > 500,000 full text article requests/year, with 58% from outside North America,

reflecting the international scope and presence of the *Journal*. The journal impact factor has increased (IF = 2.495 in 2013), and circulation has nearly trebled since 2000, to > 8,500 subscribers (individual and institutional). Citation alerts for journal authors were introduced, as well as electronic table of content (eTOC) alerts for subscribers. The *Journal's* online platform is updated at regular intervals by Springer. In 2013, the platform for the accredited Continuing Professional Development Modules (offered quarterly) was transferred to Knowledge Direct to enhance user experience, and an iPad app became available for the first time for the benefit of subscribers.

By 2011, clinically relevant annual theme issues were launched and the *Journal* began to annually publish updated CAS Guidelines to the Practice of Anesthesia. Editorial policies are now updated regularly to ensure consistency with current best practices in scientific and medical publishing. Publishing integrity is rigorously pursued. A total of 38 articles were retracted from 2011 – 2013 for reasons of ethical and/or scientific misconduct.

Of equal importance, ensuring stability of an efficient publishing framework allowed the editorial team to focus in recent years on advancing editorial policy, planning more innovative editorial content, and developing special theme issues on topics relevant to clinical practice, for example: mechanisms of anesthesia (February, 2011), advances in medical education in anesthesia (February, 2012), patient safety (February, 2013) and perioperative pain medicine (February, 2014). Since 2008, the *Journal* has become a member of the Committee on Publication Ethics (COPE), and is compliant with the editorial and publishing policies of the Council of Science Editors (CSE) and the World Association of Medical Editors (WAME), as well as the International Committee of Medical Journal Editors (ICMJE). The Editor-in-

Chief also communicates regularly on common issues such as harmonized Instructions for Authors and misconduct, with the Editors-in-Chief of the major international anesthesia journals. Considerable efforts have been made to enhance the accuracy and clarity of scientific reporting, with greater adherence to the reporting requirements of validated reporting guidelines. The *Journal* is fully compliant with a new Open Access (OA) policy of Research Councils UK and Wellcome Trust, effective April 1st, 2013. Articles in the *Journal* that are open access are published under the Creative Commons Attribution licence.

In conclusion, the *Journal* has a rich and important history. From modest beginnings, the *Journal* has matured and expanded to become one of the most respected journals in its field. A great deal of credit for the *Journal's* success has been due to the expertise and dedication of generations of outstanding editorial board members and countless Guest Reviewers. Very best wishes are extended to the current editorial board and to Dr Hilary Grocott, the *Journal's* sixth Editor-in-Chief, for success in further enhancing the *Journal's* growth and relevance to our readership and our authors.

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CANADIAN JOURNAL OF ANESTHESIA: FORMER AND CURRENT EDITORS-IN-CHIEF:

Dr Roderick Gordon (1954 – 1982)

Dr Douglas Craig (1983 – 1988)

Dr David Bevan (1989 – 2000)

Dr Jean François Hardy (2001 – 2004)

Dr Donald Miller (2005 – 2013)

Dr Hilary Grocott (2014 –)

KEY ARTICLES FROM THE CANADIAN JOURNAL OF ANESTHESIA (1954 – 2013):

Selected key articles the *Canadian Journal of Anesthesia* which have impacted clinical practice:

Virtue RW, Lund LO, Phelps McK et al. Difluoro-methyl 1,1,2-trifluoro-2-chloroethyl ether as an anaesthetic agent: results with dogs and a preliminary note on observations with man. *Can Anaesth Soc J* 1966; 13:233-41. (This article is the first description of use of enflurane in humans.)

Oyama T, Shibata S, Matusmoto F et al. Effects of halothane anaesthesia and surgery on adrenocortical function in man. *Can Anaesth Soc J*. 1968; 15: 258 – 65. (First of several studies by this group to examine hormonal responses to anesthesia and surgery)

Britt BA, Locher WG, Kalow W. Hereditary aspects of malignant hyperthermia. *Can Anaesth Soc J*. 1969; 16:89 – 97 (One of the original articles to show that at least in some cases, MH is inherited)

Craig DB, Wahba WM, Don HF. Airway closure and lung volumes in surgical positions. *Can Anaesth Soc J* 1971; 18:92 – 8. (One of a series of important articles examining the clinical implications of overall airway closure in the perioperative setting).

Gelb AW, Knill RL. Subanesthetic halothane: its effect on regulation of ventilation and relevance to the recovery room. *Can Anaesth Soc*

J. 1978; 25: 488 – 94. (Seminal work showing that low doses of halothane (0.05 and 0.1 MAC markedly reduce ventilatory responses to hypoxemia)

Noble WH, Kay JC, Fisher JA. The effect of PCO₂ on hypoxic pulmonary vasoconstriction. *Can Anaesth Soc J*. 1981; 422 – 30. (In furthering the understanding of ARDS, this article describes use of a sophisticated model to isolate factors influencing hypoxic pulmonary vasoconstriction (HPV))

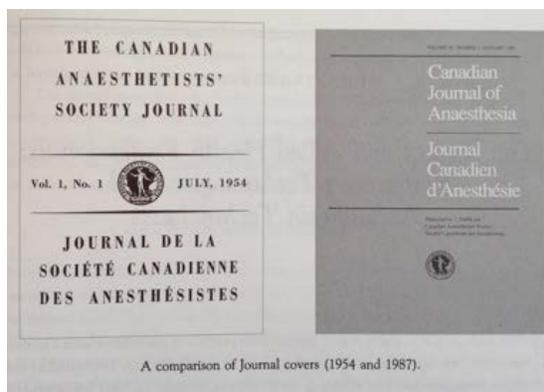
Mallampati SR, Gatt SP, Gugino LD et al. A clinical sign to predict difficult tracheal intubation: a prospective study. *Can Anaesth Soc J*. 1985; 32: 429 – 34. (This article showed that the preoperative ability to visualize the

upper airway anatomy is a valid means to predict laryngeal exposure during tracheal intubation)

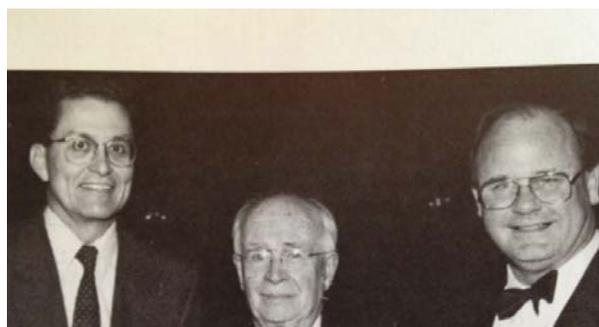
REFERENCES

Gordon RA, Craig DB, Bevan DR. The Society's *Journal*. Chapter 10 of: "Watching Closely Those Who Sleep: A History of the Canadian Anaesthesiologists' Society 1943 – 93." Supplement to the *Canadian Journal of Anaesthesia*; Volume 40, Number 6, June 1993.

Miller DR. A fond adieu and reflections on nine years at the helm of the *Journal*: 2005 – 2013. *Can J Anesth* 2013. DOI 10.1007/s12630-013-0046-0



Evolution of the covers of the *Journal* from 1954 to present



The first three editors, Toronto, 1992: Dr Rod Gordon (Editor, 1954 – 1982) flanked on the left by Dr Doug Craig (1983 – 1988) and on the right by Dr David Bevan (1989 – 2000). Reproduced with permission.



Canadian Anesthesiologists' Society
International Education Foundation

CAS IEF UPDATE

This is a brief update outlining important activities of CAS IEF in 2014.

Dr Brendan Finucane succeeded Dr Franco Carli as Chair of the Board of Trustees (Board) of CAS IEF on July 1, 2014. The Board expressed gratitude to Dr Carli for many years of outstanding service, both as a Board member and as Chair, and is very pleased that he will continue as a member of the Board of Trustees. The Board also thanked Dr Alexandre Dauphin for his valuable contribution as Vice Chair of CAS IEF and welcomed the incoming Vice Chair, Dr Patty Livingston. The Board would also like to welcome two new members, Ms Kerri Hornby representing industry, and Dr Andre Bernard from Dalhousie University.

BURKINA FASO

Dr Angela Enright has visited Burkina Faso in the past year and sees great potential for CAS IEF to become involved in a serious way there. The residency training program in anesthesia was established just three years ago. They have very good facilities and good leadership but they really need anesthesia teachers and especially French-speaking teachers. In addition to the distribution of oximeters in Burkina Faso, we are planning to run a SAFE Obstetric Anesthesia Course there and to follow that with a "Teach the Teacher" course, hopefully by the end of this year. Dr Enright has taken the lead on this initiative and, in future, we hope to establish a more formal educational role there. Maternal mortality is a major problem in Burkina Faso. We anticipate that we will need additional funding to launch this new program and we are appealing to our membership to keep this in mind as we approach our funding drive at the end of this year.

RWANDA

We are pleased to report that the Rwanda Program is progressing very well thanks to the outstanding contributions of Drs Enright, Carli and Livingston, and a large number of volunteers from around the world but predominantly from Canada. When the Program started in 2006, there was one anesthesiologist in Rwanda. In eight years that number has expanded to 10 consultants. We are now in the process of establishing a Pain Society in Rwanda. Rwanda has been a member country of the WFSA since 2012.

GUYANA

McMaster University has established links with the anesthesia department in Guyana and has helped them to establish a formal curriculum. Currently there are three trainees in the program and, as this program expands, they will need anesthesia teachers. English is the official language of Guyana. In future, we will consider a formal understanding between McMaster and CAS IEF to provide anesthesia training in Guyana.

THANK YOU!

We would like to take this opportunity to acknowledge the stalwart support we have received from CAS members for many years. Your generosity is greatly appreciated.

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