WHAT'S **INSIDE**

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www.cas.ca

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

Canadian Anesthesiologists' Society

ANESTHESIANEWS

PRESIDENT'S MESSAGE

Dear Colleagues,

It is indeed an honour and a privilege to serve as President of the Canadian Anesthesiologists' Society (CAS). By way of introduction, I completed my anesthesiology residency training at the University of Saskatchewan then undertook a one-year fellowship in cardiothoracic anesthesia at Duke University, Durham, North Carolina. Since returning to Canada, I have worked in London, Ontario and am currently a Professor of Anesthesiology and Perioperative Medicine at Western University. Prior to becoming President of CAS, I served as Vice-President for two years, and was Annual Meeting Chair for four years. I have been happily married to my wife, Monica, for 24 years and we have two sons.

The CAS Annual Meeting held in Montreal this year was a big success with over 1,000 delegates attending. For the second year, we held pre-meeting workshops including a leadership workshop and POCUS workshop, and feedback from both these events continues to be excellent. We continue to develop PBLD workshops, the meeting app, and the live stream webinar that allows anesthesiologists with work commitments or travel difficulties to "attend" the Annual Meeting electronically. Special thanks to Dr Adriaan Van Rensburg, Annual Meeting Chair, for his expertise in organizing the meeting, and Dr Jordan Tarshis, Chair of the Continuing Education Professional Development Committee, for his help in education and accreditation.

This is an exciting time to be an anesthesiologist with dramatic changes occurring in healthcare delivery creating numerous opportunities and challenges. We have all witnessed the dramatic expansion of ambulatory anesthesia, Anesthesia Assistant services, and the perioperative use of ultrasound to name but a few. We face challenges with the safe delivery of these services, given the constrained resource setting we now all find ourselves in, the rise of an opioid epidemic, and the concomitant increase in oversight of these high-risk medications we administer every day. CAS continues to advocate on your behalf to both government and regulatory bodies to have the voice of Canadian anesthesiologists heard, and I will continue this advocacy during my term.

We will also continue to support the progression and use of our newly launched CAIRS (Canadian Anesthesia Incident Reporting System) program, and encourage all members to view and test the system online at www.cairs.ca. This project has been in development for many years under the leadership of Dr Scott Beattie, and we are extremely

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grateful for his contribution. I would also like to thank Dr Alain Deschamps who recently stepped forward to chair the CAIRS Management Committee. We need members to champion the use and adoption of CAIRS across the country and are counting on you to provide us with your feedback and experiences in the coming months. We can't do it without you!

As with all transitions, we have individuals who will be leaving the CAS Executive or changing roles. I would like to express a special "thank you" to Dr Susan O'Leary who will be stepping down as CAS Past President. One of Susan's strengths lies in her clear concise communication skills and she will be missed on the Executive Committee. Dr Doug DuVal will be moving into the role of Past President. Doug had a busy two years having taken on the issue of sedation by non-anesthesiology physicians for endoscopic procedures and providing consultation to regulatory bodies looking to increase oversight for high-risk medications to name but two complex issues. I would like to thank them both for their effort and dedication over the last two years.

Many of you will have noticed several new names at the National office and I would like to warmly welcome them to the CAS team. I would also like to thank our Executive Director, Debra Thomson, for leading this transition and for her ongoing work to strengthen and improve the Society for our members. Our membership has increased by over 10%, and we have moved our past financial deficit to a surplus position. I know that Debra and her team will continue to make positive strides to ensure that CAS is a society that we can all support and take pride in.

Finally, a reminder that the CAS is your society, and while we advocate on your behalf, we need your involvement! I strongly encourage all members to take an active role: give us your feedback! Put your name forward to become a member of a CAS committee, section, or division—it is our goal to encourage new leaders to step forward. Nominate deserving members for the annual awards so we can honour the best and brightest of our colleagues. Submit your abstracts to the Annual Meeting so we can hear about the great work you are doing at your own hospitals. Submit your grant proposals so we can support the best research from researchers asking innovative questions in support of patient outcomes. And join us at the Annual Meeting so you can ask the speakers the important questions you may have about anesthesia, provide feedback on your learning needs, and interact and share your ideas about innovations in anesthesia with your colleagues. I look forward to working together with all of you to shape the future of anesthesia in Canada.

I welcome comments and suggestions from members and encourage you to contact me directly at president@cas.ca.

Dr Daniel Bainbridge
President

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AS OF SEPTEMBER 2018

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You may contact Board members through the CAS central office.

Canadian Anesthesiologists' Society

www.cas.ca

2017 – 2018 BOARD OF DIRECTORS

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Mehdi Sefidgar (MB)
Doreen Yee (CARF)

Vacant:
Saskatchewan Division representative

CONGRATULATIONS!

Thank you to everyone who provided feedback towards our Annual Meeting evaluations! We are pleased to announce that **Dr George Curnew** is the winner of our draw for a $250 gift card.

For completing our needs assessment survey, the lucky winners are:

- **Rob Brown:** complimentary one-year CAS membership
- **Gail Hirano:** free registration to the 2019 Annual Meeting in Calgary, AB

CAS ANNUAL MEETING HIGHLIGHTS

The Annual Meeting provides expert-led professional development opportunities with takeaways directly applicable to the modern practitioner. It also provides a space for stimulating discussion leading to meaningful change as to where the speciality is and where it is going. With CAS' founding in 1943, the 2018 Annual Meeting also included special celebrations and reflection on 75 years of anesthesia excellence.

We would like to extend our sincere thanks to the members who joined us at the Annual Meeting in June. The beautiful city of Montréal provided the perfect backdrop for four days of educational programming, networking, catching up with friends, and celebrating the 75th year of CAS. A superb educational program and exciting networking events highlighted the theme of *Advancing Anesthesiology, Excellence & Leadership* throughout the weekend.

The scientific program did not disappoint, with expert speakers from across the globe presenting on key topics for the modern practitioner presented with an eye to the future of the speciality. Important again this year was ensuring that members and delegates could obtain a meaningful number of MOC credits while at the Annual Meeting. Eighteen hours of Section 1 CME credits showcased a diverse series of educational sessions including Pediatric Anesthesia, Cardiovascular and Thoracic, and Chronic Pain. In response to 2017 delegate feedback, the number of PBLDs increased to 19, allowing for more in-depth discussions aimed at advancing anesthesiology. Together with PBLDs, there were over 50 hours of Section 3 CME credits available, including four pre-conference workshops and nine workshops covering a breadth of learning streams such as Neuroanesthesia, Perioperative Medicine, Ambulatory, and Obstetric Anesthesia. Following last year's success, the second annual Residents' Section Simulation Olympics was in full swing all day Saturday with teams competing for first, second, and third prizes. The Exhibit Hall was a popular site throughout the weekend, with exhibitors showcasing the newest industry advances with poster sessions and discussions on the latest research developments.

Dr Beverley Orser delivered an inspiring Opening Plenary titled "Anesthesiology: Our Science is Our Destiny", emphasizing the important role anesthesiologists hold as leaders in directing the future of the speciality and a reminder to celebrate each win, no matter how small, along the way to advancing patient care. Back by popular demand, Negotiation and Conflict Management for Anesthesiologists was offered again as a pre-conference workshop, providing opportunity for participants to develop their active listening skills and improve communication in the workplace. The popular "To Sim or Not To Sim" pre-conference workshop also offered hands-on practice in realistic perioperative crises scenarios. A special two-part collaboration presented by French and Québécois experts from CAS and the French Society of Anesthesia & Intensive Care Medicine provided an interactive session focusing on simulated perioperative case studies.

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The social and networking events were not to be missed this year. The annual Fun Run for CARF was well-attended with early risers who ventured through downtown Montreal on a 5K run, raising money for anesthesia research in Canada. The CASIEF Gala Fundraising Dinner was hosted at the historic Auberge Saint-Gabriel and featured a talk by renowned pediatric surgeon, Dr Dan Poenaru. During the President's Dinner, the Painchaud Family dazzled as the entertainment using flaming instruments, acrobatic guitar moves, and an endless musical repertoire to cover all manner of audience requests.

The 75th Anniversary of CAS provided a second theme this year, with extra-special activities incorporated into the itinerary. The Annual Meeting began with fanfare at the Opening Ceremony, which included a bagpiper leading a procession of CAS VIPs from over the years—including past presidents, honour award and gold medal winners, recipients of the Order of Canada (Drs Angela Enright, M Joanne Douglas and Earl Wynands) and international guests including Dr Gerardo Ernesto Prieto Hurtado, President of the Federación Mexicana de Colegios de Anestesiología; Mr Paul Pomerantz, CEO, American Society of Anesthesiologists; and Dr David Bronheim, President, New York State Society of Anesthesiologists. The Welcome Reception featured local entertainment by Cirque Eloize, whose acrobatic skills wowed delegates and exhibitors alike as new industry advances were discussed over hors d'oeuvres. The President's Symposium, organized by the Archives & Artifacts Committee, covered 75 years of achievements by Canadian anesthesiologists and included a unique perspective from original CAS founder, Dr Harold Griffith. A special anniversary booth and curated historical artifacts were also on display in the Exhibit Hall where a giant celebratory cake was served on Saturday.

Canadian Anesthesiologists' Society

Société canadienne des anesthésiologistes

1943 – 2018

The Annual Meeting also provides a collaborative atmosphere where forward-thinking ideas can be cultivated. This year, the Annual Meeting provided space for the official creation of a new section of CAS—the CAS Section for Environmental Sustainability (read their introduction and mission on page 11). An inaugural meeting of Canadian Anesthesia Chiefs was also hosted, paving the way for future discussions as part of the Canadian Anesthesia Chiefs Organization (CACO).

The future of patient safety was an important topic during the Annual Meeting, with Enhanced Recovery after Surgery providing the basis for a workshop discussion and the John Wade Patient Safety Symposium. Dr Franco Carli also presented "Enhanced Recovery Canada: From Siloed Provider to Team Player" as the Angela Enright Lecture, which focused on the implementation of Enhanced Recovery principles within Canadian surgical practices. New in 2018, the Awards Ceremony & Angela Enright Lecture were combined into a sit-down luncheon—to great success! This new format was a lovely way to wrap up the weekend and connect with this year's award winners. If you missed it this year, be sure to plan to stay in 2019.

2019 CAS ANNUAL MEETING

JUNE 21 – JUNE 24, 2019

Calgary TELUS Convention Centre
Calgary, Alberta

Watch for news on exciting meeting events, speakers and programming.

Canadian Anesthesiologists' Society

www.cas.ca

CAS 2018 ANNUAL MEETING

THANK YOU TO OUR SPONSORS

The Canadian Anesthesiologists' Society gratefully acknowledges the 2018 Annual Meeting financial assistance of the following industry partners through educational grants

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In this issue, we highlight the work of three committees, work that is being done by the many volunteers who participate to make a difference to anesthesia in Canada.

We welcome members from all across the country, at all stages of their careers. Please consider making a contribution to your professional society and let us know your interests. In future issues we will describe the work of other committees — keep the CAS in mind, we want to involve everyone!

TO FIND OUT MORE, PLEASE CONTACT:

Nadina Holca
Executive Assistant
nholca@cas.ca
416-480-0602 x 7120

ARCHIVES AND ARTIFACTS COMMITTEE

The Archives and Artifacts (A&A) Committee is responsible for the organization and preservation of documents, recordings, and pictures (archives) and objects (artifacts) of historical significance to the Society and to anesthesia in Canada. It also looks after the History Section of the CAS's web page and the History Symposium held at the CAS Annual Meeting. The Committee assists and encourages members in the publication of papers on the history of anesthesia in Canada (e.g., "Images in Anesthesia" in the *Canadian Journal of Anesthesia (CJA)*).

This year, for the 75th anniversary of CAS, Dr Derek Dillane organized a superb history session for the 2018 President's Symposium entitled: "From Curare to CASIEF: Contributions Made by Canadians to the Development and Growth of Anesthesiology". Prior to the two main speakers, Dr Angela Enright and Dr Franco Carli, Dr Daniel Chartrand briefly presented on the first century of Canadian anesthesia before the creation of CAS. Using an audio recording made in 1984 by Dr Earl Wynands, the audience was able to hear Dr Harold Griffith explaining the creation of CAS. There was also a special exhibit of artifacts and video presentations in the exhibit hall.

" All CAS members are invited to participate in the diverse CAS committees and Sections. Personally, over the last 18 years, I have participated in many CAS committees and served on the Board of Directors. Over these years, I have followed my special interests and have been particularly involved with the development of the *Guidelines to the Practice of Anesthesia* and with numerous patient safety initiatives. But I also had a secret passion about the history of medicine and, of course, anesthesia. Therefore, to contribute to the A&A Committee is a great opportunity for me to learn more about the history of anesthesia and our great predecessors, whose names and accomplishments should not be forgotten. So, if you have a special interest in the history of anesthesia and the CAS, I invite you to think about joining our A&A Committee. Please do not hesitate to contact me."

Dr Daniel Chartrand, Chair
Archives & Artifacts Committee

STANDARDS COMMITTEE

The CAS Standards Committee is responsible for advising the CAS Board of Directors on matters related to the standards of anesthetic practice in Canada. This includes a focus on anesthesia safety, and existing and developing technologies to improve safety and environmental issues. Most CAS members are familiar with the Guidelines to the Practice of Anesthesia and the associated appendices and position statements.

These documents are reviewed annually and revised and updated as required by the Committee based on rigorous review of the available medical evidence relating to anesthesia practice internationally. The Committee then generates proposals for changes and additions to the Guidelines and its appendices and presents them to the CAS Board of Directors for its approval. This is the primary function of the Standards Committee. For example, over the past two years we have been working hard on revising and updating the appendix on Procedural Sedation which will be published soon.

The CAS *Guidelines* have a wide circulation through publication in the *Canadian Journal of Anesthesia (CJA)* and the CAS website from which they are frequently downloaded and widely used both nationally and internationally to help promote and guide safe anesthesia practice. The first edition of the *Guidelines* was published in 1977 thanks to the vision and hard work of many people in CAS, notably the late Dr John Feindel, who was the first chair of the Standards Committee.

The Standards Committee also receives a significant number of inquiries and questions from anesthesiologists and other health professionals related to the interpretation of the *Guidelines*. The questions and feedback help the Committee to better understand what topics and areas of anesthesia practice require more attention in our existing *Guidelines* and also provide us with ideas for new Sections as anesthesia practice and technology rapidly change.

Our committee works in close cooperation with other CAS committees, in particular Patient Safety and the Committee on the Anesthesia Care Team (COACT).

Standards Committee members serve a three-year term with the option for a one-year extension. We seek to have members reflect the bilingual nature of Canada representing the four major regions (Western, Ontario, Quebec, and Atlantic) and with different subspecialty or technical interests. It is very rewarding and valuable work. The Committee meets in person at the CAS Annual Meeting and we have two or three teleconferences over the year. Overall, the time and work commitment for committee members is not onerous. As the current Chair, I strongly encourage any CAS members to put their name forward if this work interests them. No previous experience or background in this type of work is required. Members may approach me directly or through the CAS office if they have an interest in the Standards Committee or have any questions.

" My personal interest in the Committee relates in part to my non-clinical professional activities within my own department at Dalhousie University in Halifax and an interest in Quality Improvement and Patient Safety from very early in my career. I wanted to become more involved at a national level to promote the highest quality anesthesia care delivery in Canada. I have found the work to be immensely rewarding and have thoroughly enjoyed working with so many talented and committed people within CAS. Before I became involved, perhaps like some others, I wondered "what can CAS do for me?" I now have a much better appreciation for the valuable work that is done (much of it behind the scenes and on a volunteer basis) and how incredibly passionate everyone involved with CAS is as we work to strengthen our specialty and its profile and improve patient safety."

Dr Gregory R Dobson
Chair
Standards Committee

CHOOSING WISELY CANADA

In 2014 Choosing Wisely Canada (CWC) was launched as a national campaign to bring forward a conversation between healthcare providers and the public about care of low value. The campaign revolves around medical professional societies and groups of healthcare providers who put forward evidence-based recommendations to limit low-value care in their areas of practice. This strategy began in the United States through the American Board of Internal Medicine and now has global reach across more than 17 countries.

Since the release of the recommendations, the CAS Choosing Wisely Committee has engaged with national anesthesia groups and others to support implementation and dissemination of these recommendations. For example, presentations to the National Association of PeriAnesthesia Nurses of Canada highlighted our recommendations for them. We have supported knowledge translation and quality improvement efforts, such as the work by Ontario's Anesthesiologists to embed the recommendations in practice.

We have also been a leading partner with the national Choosing Wisely campaign to advance science around effective de-implementation in healthcare. In the spring of 2018, the national Choosing Wisely research network was announced and was successful in obtaining Canadian Institutes of Health Research (CIHR) funding for a series of inter-provincial studies designed to better understand effective practice change strategies. The CAS recommendations are one of two clinical areas being studied through this initiative and members of the CAS Choosing Wisely committee are supporting this work.

In the future, the Committee will reboot the national process to explore adding recommendations to our campaign and will continue to support implementation initiatives by CAS members.

The CAS Choosing Wisely Committee was established to guide the Canadian anesthesia community's participation in this campaign. We led a national conversation among CAS members to identify areas of focus, to bring together the evidence supporting these topics and, in 2015, released the CAS Choosing Wisely recommendations. Each year, the evidence in support of these recommendations is reviewed to ensure they remain up-to-date and relevant for contemporary practice and the Committee hosts a session at the CAS Annual Meeting to highlight updated aspects of the national campaign.

1. Don't order baseline laboratory studies (complete blood count, coagulation testing or serum biochemistry) for asymptomatic patients undergoing low-risk non-cardiac surgery.
2. Don't order a baseline electrocardiogram for asymptomatic patients undergoing low-risk non-cardiac surgery.
3. Don't order a baseline chest x-ray in asymptomatic patients, except as part of surgical or oncological evaluation.
4. Don't perform resting echocardiography as part of pre-operative assessment for asymptomatic patients undergoing low to intermediate-risk non- cardiac surgery.
5. Don't perform cardiac stress testing for asymptomatic patients undergoing low to intermediate risk non-cardiac surgery.

" My clinical work is based at Women's College and Toronto Western Hospital and I hold an academic appointment with the University of Toronto. At Women's College, I serve as Medical Director of the Anesthesia Preadmission Clinic which was the catalyst for my involvement with Choosing Wisely Canada (CWC). Women's College hosts the national evaluation program for CWC. The hospital is a fully affiliated academic institution that is 100% ambulatory, serving as a natural location to study the implementation and impact of the CAS Choosing Wisely recommendations. For me, Choosing Wisely is critically important to maintaining a robust and sustainable healthcare system. Understanding the parts of practice not supported by evidence makes room for the parts that do improve patient outcomes. Understanding how we can effectively implement these strategies in practice makes healthcare stronger and highlights anesthesiologists as leaders within our ever-changing system."

Dr Kyle Kirkham, Chair
Choosing Wisely Canada

THE NEW SECTION FOR ENVIRONMENTAL SUSTAINABILITY — AN INVITATION!

By: Dr Rakesh Sondekoppam, Chair and Dr Timur Özelsel, Vice-Chair

Welcome to the newly founded CAS Section for Environmental Sustainability. We hope that you will recognize how much your participation is needed!

The quality of healthcare systems determines the physical and mental well-being of a population, contributing both to a healthy workforce and the economic prosperity of a nation. As healthcare practitioners—nurses, techs, residents, or anesthesiologists—we are all a crucial part of healthcare. For most of us, taking care of and helping our patients is more than just a job, it is our calling. We take this very seriously and have devoted a significant portion of our lives towards attaining and maintaining the very highest standards in our care.

While our role at the patient level is not changing, how do we react if we are told that our practice itself is indirectly hurting the health of the population? More and more we realize that healthcare practices are an indirect contributor to the health burden that is increasing over time. In fact, the healthcare industry is the second largest industrial producer of greenhouse gases, right behind the food industry. Hospitals across Canada consume the electricity of approximately 440,000 homes and an average surgical case can produce the same amount of waste as a household of four does in a week. More and more we learn just how bad our inhalational anesthetics are for the atmosphere and how they are accumulating in the air in even the most remote locations on the planet. None of us practise with the intent to harm, but many of the practices in our work lives are harmful. We are doing great work as individuals but our continued use and wastage of resources endangers the health of the planet at large. We should not have to choose between the patient and the planet; every effort should be made to develop a practice that favours both.

With this vision, a group of CAS members proposed starting a Section with a focus on environmentally-sustainable practices in anesthesiology and it was approved by the Board at the meeting in Montréal as the CAS Section for Environmental Sustainability.

What we need is dissemination of current knowledge, the discovery of new knowledge, and an exploration of ways to practise that consider the patient, the environment, and the true cost. Our Section will look at different areas where the jobs of an anesthesiologist, anesthetic assistant, peri-anesthesia nurse, and surgeon may affect the environment, and it is our goal to identify ways of lowering the environmental impact in all the areas we work. We plan to develop separate committees within the Section to explore these aspects of our specialty and we would love to see you participate as much as possible. Further, we aim to combine these efforts with other international societies and associations concerned with health and the environment.

The World Health Organization has declared climate change the number one threat to (human) life in the 21st century and is appealing to healthcare professionals all across the planet. We live in a time of unparalleled technological wonder, but also in a time of the sixth mass extinction, overpopulation, loss of biodiversity, and global warming. We can start by educating ourselves and spreading the knowledge we have acquired. This is why we need you! Join us in our vision of creating a sustainable practice in anesthesia and perioperative medicine. Let us collectively contribute to a future that is healthier for all.

Canadian Anesthesiologists' Society
Société canadienne des anesthésiologistes

HONOURING EXCELLENCE / HONORER L'EXCELLENCE
CALL FOR NOMINATIONS / APPEL DE CANDIDATURES

2019 CAS HONOUR AWARDS
PRIX DE DISTINCTIONS **2019**

The **CAS Honour Awards** program celebrates the diverse representation of anesthesiologists across Canada and their achievements. CAS is now accepting nominations for 2019. Enhance the profession and spread inspiration by nominating an outstanding colleague for one of these prestigious awards—to join an exclusive group of previously recognized CAS members.

Le programme des **Prix de distinction de la SCA** célèbre la représentation diversifiée des anesthésiologistes de partout au Canada et de leurs réalisations. La SCA accepte maintenant les candidatures pour 2019. Améliorez la profession et partagez l'inspiration en présentant la candidature d'un collègue remarquable à l'un de ces prestigieux prix—pour joindre un groupe exclusif de membres de la SCA récompensés précédemment.

HONOUR AWARD CATEGORIES / CATÉGORIES—PRIX DE DISTINCTIONS

Gold Medal
Médaille d'or

Clinical Practitioner
Pratique clinique

Clinical Teacher
Enseignement clinique

John Bradley Young Educator
Jeune éducateur John-Bradley

Emeritus Membership
Membre émérite

Research Recognition
Mérite en recherche

Visit the **Awards and Grants** tab on the CAS website at **www.cas.ca** for submission instructions and information.

Visitez la section **"Subventions et bourses"** sur le site de la SCA **www.cas.ca** pour toutes informations et instructions pertinentes à la soumission.

Deadline for Nominations is **October 15, 2018.**
Date limite de soumission pour les candidatures est **le 15 octobre, 2018.**

CURRENT AND INCOMING CAS COMMITTEE CHAIRS

CAS is pleased to introduce the committee chairs for 2018 – 2019 (* indicates a new Chair) and expresses its appreciation and gratitude to the following individuals for carrying out these important roles. Their commitment and the work of each committee contribute significantly towards the mission of CAS and its ability to deliver enhanced member services.

ANNUAL MEETING
Chair: Dr Adriaan Van Rensburg, Toronto, ON

2019 Local Arrangements – Calgary Annual Meeting
Chair: Dr Michael Cassidy, Calgary, AB*

Scientific Affairs (an Annual Meeting Sub-committee)
Chair: Dr Tim Turkstra, London, ON

ARCHIVES AND ARTIFACTS
Chair: Dr Daniel Chartrand, Montreal, QC

CAIRS (CANADIAN ANESTHESIA INCIDENT REPORTING SYSTEM) MANAGEMENT
Chair: Dr Alain Deschamps, Montréal, QC*

CAS CHOOSING WISELY CANADA
Chair: Dr Kyle Kirkham, Toronto, ON

COACT (COMMITTEE ON ANESTHESIA CARE TEAM)
Chair: Dr Susan O'Leary, Hamilton, ON

CONTINUING EDUCATION AND PROFESSIONAL DEVELOPMENT
Chair: Dr Jordan Tarshis, Toronto, ON

CPD Modules Sub-Committee
Chair: Dr Adriaan Van Rensburg, Toronto, ON*

ETHICS
Chair: Dr Ian Herrick, London, ON

FINANCE
Chair: Dr James Kim, Vancouver, BC

MEDICAL ECONOMICS/PHYSICIAN RESOURCES
Co-Chair: Dr Jean-François Courval, Dorval, QC
Co-Chair: Dr Eric Goldszmidt, Toronto, ON

PATIENT SAFETY
Chair: Dr Lucie Filteau, Ottawa, ON*

RESEARCH ADVISORY
Chair: Dr Gregory Bryson, Ottawa, ON*

STANDARDS
Chair: Dr Gregory Dobson, Halifax, NS
CAS Liaison standards@cas.ca

FUN RUN FOR CARF RAISES $2,500

Photo: Dr Dolores McKeen

The Canadian Anesthesia Research Foundation (CARF) would like to thank everyone who came out to support the annual Fun Run that took place on the morning of Sunday, June 17 in Old Montréal.

This year, the funds raised will directly benefit the 2019 Career Scientist Award, which provides partial salary support for the investigator to fund protected research time. The Career Scientist Award is normally awarded every other year, but on a trial basis this will be available in 2019. CARF would also like to extend a very special thank you to Dr André Denault from the Université de Montréal for his exceptional work in organizing the successful Fun Run.

We're already excited for next year!

CAS IS PROUD OF ITS MEMBERS' ACHIEVEMENTS AT ALL STAGES OF THEIR CAREERS.

If you have reached an important milestone or received an award or professional recognition, please let us know! We'd like to share this with all our members through Anesthesia News (this quarterly newsletter) and email communications. Photos are welcome!

PLEASE FORWARD PARTICULARS TO:

Amanda Cormier
Director, Communications, Marketing & Events
acormier@cas.ca

DR DAVY CHENG APPOINTED ACTING DEAN OF SCHULICH SCHOOL OF MEDICINE & DENTISTRY

Dr Davy Cheng has agreed to serve as Acting Dean of the Schulich School of Medicine & Dentistry for the period October 1, 2018 to June 30, 2019.

Dr Cheng is a Distinguished University Professor in the Department of Anesthesia & Perioperative Medicine and he also currently serves as the Vice Dean of Faculty Affairs for the Schulich School of Medicine & Dentistry. He is recognized as a world expert in perioperative outcomes and resource utilization in cardiac surgery/anesthesia, critical care medicine, and perioperative evidence-based medicine.

Prior to his current role, Dr Cheng served as the Chair/Chief of the Department of Anesthesia & Perioperative Medicine (2001 – 2017) and as Chair of the Committee of Clinical Chairs (2012 – 2016).

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

CPD MODULE: Updated guide for the management of malignant hyperthermia
June 2018

ALSO AVAILABLE

- Anesthetic implications of recreational drug use
  December 2017
- Massive hemorrhage and transfusion in the operating room
  September 2017
- Managing the Perioperative Patient on Direct Oral Anticoagulants
  June 2017
- The impaired anesthesiologist: What you should know about substance abuse
  February 2017
- Hypertensive disorders of pregnancy
  September 2016

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.

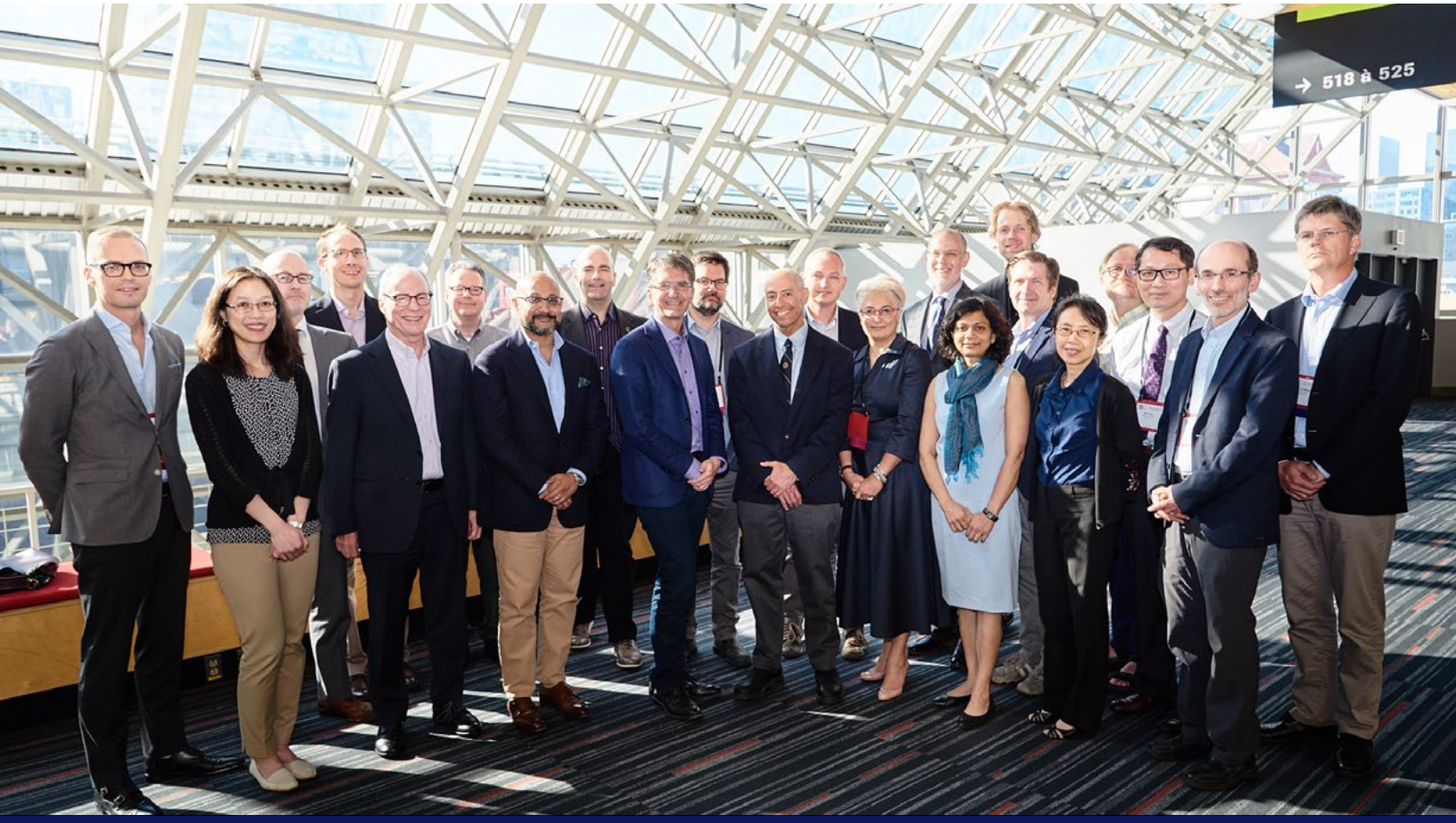
Publication of these modules is made possible through unrestricted education grants from the following industry partner:

MERCK

CANADIAN JOURNAL OF ANESTHESIA ACHIEVES HIGHEST IMPACT FACTOR IN ITS HISTORY

With the recently released 2017 Impact Factor (IF) for the *Canadian Journal of Anesthesia (CJA)* of 3.38, the *CJA* has achieved its highest IF in its history.

This year's IF, which is published annually by Clarivate Analytics, represents the number of citations in 2017 of *CJA* articles that were published in the two preceding years (2015 and 2016) divided by the number of articles that were published in those same years. It is widely used as a surrogate for the quality of a journal. When added to the more than one million *CJA* article downloads that are seen annually from more than 50 different countries, the *CJA* is both read and cited widely. This puts the *CJA* strongly in the top 10 of the anesthesia and pain journals that are published internationally. This achievement is the result of countless hours invested by the *CJA's* editorial board, office staff, and reviewers—and the authors!—who all contribute to the more than 200 articles that are published annually in the *CJA*. The responsibility to serve as a conduit for authors' scientific work is a responsibility taken very seriously by all at the *CJA*. It is satisfying to see that all of these efforts recognized.



EDITORIAL BOARD MEETING IN MONTRÉAL

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DR ALAIN DESCHAMPS AND COINVESTIGATORS RECEIVE $765,000 GRANT

Canadian Anesthesiologists' Society

CARF
Canadian Anesthesia Research Foundation
La Fondation canadienne de recherche en anesthésie

PACT Canadian Perioperative Anesthesia Clinical Trials Group
Groupe Canadien d'Essais Cliniques en Anesthésie et Médecine Périopératoire

The CAS, the Canadian Anesthesia Research Foundation (CARF) and the Canadian Perioperative Anesthesia Clinical Trials Group (PACT) are delighted to congratulate Dr Alain Deschamps and his coinvestigators, Dr Tarit Saha, Dr Renée El Gabalawy, Dr Eric Jacobsohn, and D Michael Avidan on their successful $765,000 Canadian Institutes of Health Research (CIHR) grant for the **ENGAGED Canada Trial**.

This trial will investigate the use of raw EEG monitoring to prevent post-operative delirium. The success rate for the entire CIHR competition is 14%, and the success rate for RCTs is 16.7%. This project received the 6th ranking in the RCT section which is an excellent achievement.

The success of this CIHR grant is a testament to what is possible with national collaboration, local investment, and the collaborative structure of PACT. Congratulations to Dr Deschamps and his team, and many thanks to all who contributed towards this project.

Dr Alain Deschamps, of the Montreal Heart Institute, is a past CARF award winner. He won the Dr. R A Gordon Research Award in 2012 for *"Feasibility Trial to Maintain Normal Cerebral Oxygen Saturation (rSO2) in High-Risk Cardiac Surgery (NORMOSAT Trial)"*.

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THE FIRST MINUTE OF LIFE: THE DEVELOPMENT AND LEGACY OF THE APGAR SCORE

Dr. Virginia Apgar revolutionized the standard of care in obstetric anesthesia and described a simple, yet effective way of assessing the health of the infant at birth. In fact, a review almost 50 years after the publication of the Apgar score stated, "every baby born in a modern hospital anywhere in the world is looked at first through the eyes of Virginia Apgar".[1]

As late as the 1940s, there was very little attention paid the neonate in the first hours of life. While the obstetrician or midwife were busy attending to the mother, the circulating nurse or residents were relied upon to undertake resuscitation of the neonate if needed. More often than not, trained anesthesiologists were not present in delivery rooms, so the responsibility fell upon residents with little training in neonatal resuscitation. This was a disorganized and haphazard process since there was no standard evaluation of the newborn's transition to life outside of the womb.[2] It was often assumed that little could be done for babies who were small and struggling, so they were left to die. Therefore, from 1930 to 1950, while infant mortality rates improved overall, the survival rates for the first 24 hours of life barely changed.[2] It was clear to Dr. Apgar, an anesthesiologist at Columbia University, that in many cases, newborns could be saved if they were examined closely after birth.

In 1949, Dr. Apgar was the first woman to become a full professor at Columbia University College of Physicians and Surgeons.[3] She also began to study how anesthesia affected mothers and babies, a neglected area of research. Although the origin of the Apgar score is uncertain, common folklore has it that it began during breakfast at the hospital cafeteria in 1949, when a medical student mentioned the need for newborn evaluation. Dr. Apgar picked up the nearest piece of paper imprinted with "Please bring your own trays" and jotted down "heart rate, respiratory effort, muscle tone, reflex irritability, and color" as the five signs that became known as the Apgar score. These encompassed several standard signs used by anesthesiologists to monitor the state of patients. She then rushed off to the delivery suite to test out her theory.[4]

The more likely account came from Dr. William A. Silverman, a retired Professor of Pediatrics at Columbia University and friend of Dr. Apgar.[3] In the 1940s, Dr. Apgar was appalled by the previous neglect of apneic, small for age or malformed newborns. They were listed as stillborn and placed out of sight to be left for dead.

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Table 1. Apgar Score: Signs and Definitions

	Score		
Sign	0	1	2
Heart rate	Absent	Slow (< 100 beats/min)	> 100 beats/min
Respirations	Absent	Weak cry, hypoventilation	Good, strong cry
Muscle tone	Limp	Some flexion	Active motion
Reflex irritability	No response	Grimace	Cry or active withdrawal
Color	Blue or pale	Body pink, extremities blue	Completely pink

Dr. Apgar began to resuscitate these infants and developed a scoring system that would ensure observation and documentation of the condition of each newborn in the first minute of life. Between 1949 and 1952, Dr. Apgar considered several signs that could easily be observed in the newborn.[3] The five that were selected were the ones that could be evaluated without special equipment and easily taught to delivery room personnel. A score of 0, 1 or 2 was given for each sign at 60 seconds after delivery, with 0 being the worst and 2 being the best score (table 1).[5]

According to Dr. Apgar, the importance of the time chosen to assign the score could not be overestimated. She knew from her years of experience as an anesthesiologist that time is crucial and needs to be measured precisely. Sixty seconds was the time that coincided most commonly with maximum clinical depression of respiratory function.[6] She wrote, "only clinicians in anesthesia have learned to live by the second hand of a watch. To others a minute is an unbelievably short interval."[6] She would use an automatic timer, set to 55 seconds, thus allowing a five second evaluation of the five signs.[6]

In July 1953, the landmark paper "A proposal for a new method of evaluation of the newborn infant" was published in *Current Researches in Anesthesia and Analgesia*. The five criteria were used to examine 1760 infants born at Sloane Hospital for Women in New York. The trial demonstrated a correlation between the score at one minute after birth and neonatal death. Children who scored 0, 1, or 2 were considered to be in "poor condition"; children who scored between 3 to 7 were considered to be in "fair condition"; lastly, children who scored 8, 9 or 10 were considered to be in "good condition". The neonate mortality rate in each category was 14%, 1.1% and 0.13%, respectively.[5] The score was especially useful in judging the need for resuscitative measures, such as respiratory assistance.[7]

While the primary goal was to focus attention on the condition of the infant immediately after birth, Dr. Apgar also reasoned that the score could be used to compare various factors influencing neonatal health. She made several important observations that identified different factors that influenced a child's score at birth. These included the type of delivery, the age of the neonate, and mode of anesthesia used during delivery. Several of these observations were later elaborated upon and influenced the practice of obstetrical anesthesia.

At the time, cyclopropane was a popular obstetric anesthetic agent because of its rapid speed of induction, quick controllability of depth of anesthesia, and the possibility of ample oxygenation at all times.[8] However, in the original publication, it was found that infants born to mothers who had regional anesthesia were more vigorous than infants born to mothers who had general anesthesia. This relationship was further elucidated in the second report published in the *Journal of the American Medical Association* in 1958, which analyzed the scores of 15,348 infants.[7] The likely culprit was due to the enhancement of neonatal asphyxia under cyclopropane. While the drugs for regional anesthesia may pass through the placenta, they did not appear to augment the asphyxic depression of the infant.[7] Additionally, cyclopropane had significantly greater respiratory depression as compared with other methods of inhalation anesthesia.[9]

The newborn score allowed for thorough, careful, and objective examination of previous assumptions. For many anesthesiologists at the time, including Dr. Apgar, cyclopropane was a favourite agent for delivery. She had believed the gas to be completely safe and harmless for the infant. When her research indicated that infants born under cyclopropane were significantly more depressed compared to other infants, she was horrified and announced, "there goes my favorite gas!"[10] The obstetrical use of cyclopropane declined dramatically after the research was published, launching the move toward regional anesthesia in obstetrics.

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THE FIRST MINUTE OF LIFE: THE DEVELOPMENT AND LEGACY OF THE APGAR SCORE

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The use of the newborn score spread rapidly around the world. Other physicians began using it at longer intervals after birth to evaluate how the baby responded to resuscitation. Eventually the 1- and 5-minute score became standard. Greater acceptance of the 5-minute score came when the Collaborative Project, a 12-institution study involving 17,221 children, found it to be a greater predictor of neonatal mortality and future neurological development.[8]

In 1962, Drs. Butterfield and Covey, two pediatricians, published in *JAMA* an acronym to facilitate the teaching of the score. The five signs were renamed appearance, pulse, grimace, activity and respiration to form the Apgar score.[11] Dr. Apgar graciously wrote: "I was surprised and naturally pleased to open my *JAMA* this week to find the epigram [sic] looking at me! Many thanks for […] figuring out this simple teaching device."[4]

The relevance and application of the Apgar score continues into the 21st century. The Apgar score remains the best established index of immediate postnatal health[12]. In 2014, a study published in the Lancet analyzed all births in Scotland from 1992 to 2010. The record of 1,029,307 eligible live birth records showed a strong association of low Apgar score (0-3) to a 359.4-fold increase in risk of neonatal death.[13]

Low Apgar score at 5 minutes was strongly associated with neonatal and infant mortality attributable to anoxia or infection.[13] Interestingly, there was no association of Apgar score with the risk of sudden infant death syndrome (SIDS)[13]. It continues to be an important tool for prognosis and for the identification of risk factors associated with infant mortality.

The Apgar score also signified an unprecedented shift towards methods of structured thinking. Its clear purpose, ease of use, and high predictive value led the way for the development of numerous other clinical scores. Among them are the Aldrete Score, the Glasgow Coma Score, the Trauma Score, and, most recently, the Surgical Apgar Score.[14]

Through her keen sense of observation, Dr. Apgar transformed the fields of anesthesiology, obstetrics and neonatology. The Apgar score is a simple and effective method to guide medical decision making. It enables more consistent identification of neonates at high risk of death in the first minute of life, has prompted development of new clinical innovations, and provides clear feedback on treatment methods. The Apgar score has become an indispensable tool in achieving the remarkable safety of modern child delivery.

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