

INTERCHANGE

Society of Critical Care Anesthesiologists Newsletter Volume 30 | Issue 1 | January 2019

PRESIDENT'S MESSAGE

Colleagues,

The New Year promises to be an exciting and productive time for SOCCA. The SOCCA Board of Directors held a strategic planning retreat in September 2018 to discuss the future of the organizations and review the information from the SOCCA membership survey. Thank you for your support and participation in the membership survey. We gained valuable insight and knowledge that helped shape our strategic plan conversation.

During the strategic planning retreat, we reviewed SOCCA's mission, vision and strategic goals. Based on your feedback and our strategic discussion, the Board of Directors approved the new mission, vision, and strategic goals outlined below.

MISSION

SOCCA is dedicated to the support and development of anesthesiologists who care for critically ill patients of all types. SOCCA fosters the knowledge and practice of critical care medicine by anesthesiologists through education, research, advocacy, and community.

VISION

To promote and advocate for current and future critical care anesthesiologists through collaboration and innovative patient care.



**Daniel R. Brown,
MD, PhD, FCCM**

President
Mayo Clinic
Rochester, Minnesota

SOCCA Strategic Goals 2019-2021

- Goal 1: Sustain and grow membership
- Goal 2: Foster and promote member engagement and contributions
- Goal 3: Develop an active research section

Another task that came out of the strategic planning session was to review the SOCCA by-laws. Steve Surgenor

spearheaded this effort to revise our society by-laws to best allow us to achieve the strategic goals set and increase value for our members. Soon, Active members will receive an email outlining the by-law revisions for your review and vote. Please confirm your support by participating in the electronic voting platform that will accompany the by-laws.

Here is a short a summary of the recommended revision:

- **Section 2.6** – Added language “by a majority vote of all Active members” to the section highlighted to clarify voting rights.
- **Section 2.9** – Eliminated the section on in person voting to allow for electronic voting
- **Section 2.10** – Eliminated the Section
- **Section 3.2** – Added Two Board of Director positions

continued on page 2

Contents

President's Message	1
Job Board.....	2
Education Committee Update.....	3
'Tis the (Flu) Season: Influenza Infection in Critically Ill Patients.....	4
Open Repair of Massive Incisional Hernia with Loss of Domain	6
Navigating the Catastrophe: Mindfulness Is a Tool That Could Bring Us Closer to Happiness... A Personal Perspective.....	7
A Brief Conversation With... Mike Fierro, MD.....	10
“Did You See This?”	11
Call for Articles.....	13
SOCCA Board of Directors.....	13
About SOCCA / Join SOCCA	14



PRESIDENT'S MESSAGE *continued from the cover*

- **Section 4.4** – Deleted Committee on Past Presidents
- **Section 4.5** – Updated language on determining the need for external financial audits
- **Section 4.7** – Updated term limit language and Nominating Committee responsibilities
- **Section 4.8** – Updated language on succession planning
- **Section 5.2** – Deleted committee term limits to all for flexibility in committee term
- **Article IX** – Amendments to Bylaws – Revised language to allow for electronic voting of amendments
- **Appendix** – Committee Charges – Deleted Committee Charges because of a duplication of Section 5.10.1

Members have voiced considerable interest in becoming more involved in SOCCA. During our strategic planning retreat, the Board of Directors discussed ways to increase member engagement. There are now multiple ways for members to become involved and contribute to SOCCA this year. Past-President Avery Tung will be chairing the Nominating Committee that will determine the 2019 election slate for society officers. This group will meet virtually in the first quarter to review applicants and propose a slate of candidates for Board approval to the electoral ballot. This leads to the second request for volunteers. The society elects board members yearly. The new by-laws add to the number of board members, further increasing member involvement opportunities. Finally, the position of SOCCA Alternate Delegate to the ASA House of Delegates will be open for appointment. The Alternate Delegate to the ASA House of Delegates is appointed by the President of SOCCA to a term of three years and may be reappointed by the President for additional terms. The Society's Delegate and Alternate Delegate to the ASA House of Delegates shall serve as ex-officio Directors without voting privileges. To volunteer for

any of these opportunities, please contact our director, Vivian Abalama at vabalama@iars.org.

Our annual meeting will be held at Fairmont The Queen Elizabeth Hotel in Montreal, Quebec, Canada on Friday, May 17, 2019. Sheela Pai Cole and Peter Von Homeyer have developed what is sure to be another excellent educational offering. The Aligned Meeting Day of the IARS meeting follows on Saturday and is open to all SOCCA attendees. Also, on Saturday, SOCCA's Education, Communication, Research and Membership Committees will be having face to face meetings. These committee meetings are meant to develop strategies that will yield value to members throughout the year and are additional opportunities for members to network and engage in society activities. For example, the Education Committee is restructuring and will be responsible for all of the educational offerings by the society. In addition to our annual meeting, this group will coordinate our educational partnerships with the IARS, ASA, SCA and the Indian College of Anesthesiologists. In addition, this committee will also work to develop liaisons with other committees such as Communications to expose our educational content to members via social media. In summary, Montreal in May will be an exciting gathering.

In closing, I ask for your involvement as SOCCA members by voting on our new by-laws and to make every effort to attend our annual meeting in Montreal this May. During the Annual Meeting, I will deliver a Welcome Address, where I will discuss the many ways in which you are able to contribute and how your efforts will help increase the value of the society to the membership. I wish you all a productive 2019. 🏛️

Daniel R. Brown, MD, PhD, FCCM
President, SOCCA



JOB BOARD

Have you visited SOCCA's Job Board recently? Recent listings highlight a position with the Oregon Health & Science University of Portland, Oregon. Read more of the members-only job posts and, if you would like to post a job on this site, please email a description and /or flyer to SOCCA Society Director, Vivian Abalama, CAE, IOM at vabalama@iars.org.

COMMITTEE REPORT

Education Committee Update



Sheela Pai Cole

Clinical Associate
Professor, Anesthesiology,
Perioperative, and Pain
Medicine
Stanford University
Department of
Anesthesia
Stanford, California



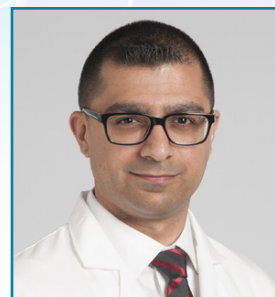
**Peter Von Homeyer,
MD, FASE**

Assistant Professor
of Anesthesiology
University of
Washington School
of Medicine
Seattle, Washington



**Kunal
Karamchandani, MD**

Assistant Professor
of Anesthesiology
Penn State Health
Hershey Medical Center
Hershey, Pennsylvania



**Ashish Khanna, MD,
FCCP, FCCM**

Outcomes Research
and General
Anesthesiology & Center
for Critical Care
Anesthesiology Institute
Cleveland Clinic
Cleveland, Ohio

The SOCCA Educational Committee is primarily charged with creating educational content for the Annual SOCCA Meeting. To date, this has been our priority focus and we are working hard to develop a unique and challenging annual meeting for 2019. The Committee is currently made up of four SOCCA members: Sheela Pai Cole (Chair), Peter Von Homeyer (Vice chair), Kunal Karamchandani, and Ashish Khanna.

As many SOCCA members already know, the 2019 meeting will occur on May 17, 2019 just before the IARS meeting in Montreal, Canada. This meeting will feature several speakers and expert panels, tackling diverse topics relevant to Critical Care Anesthesiologists, such as hemodynamic perfusion targets, the benefits and perils of social media in critical care, current utilization and optimization of novel hemodynamic devices, and end-of-life care.

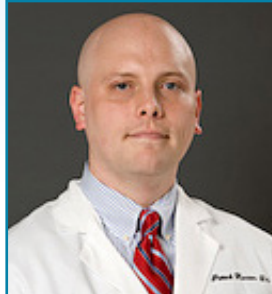
In the near future, we hope to engage our committee member to consider ways to provide additional education content to SOCCA members outside of the Annual Meeting, with a goal to provide several, relevant, continuously-updating, year-round educational offerings on behalf of SOCCA. If you have ideas, thoughts or suggestions to educational content provided to you by SOCCA, please feel free to contact any of the Educational Committee leadership, Sheela Pai Cole (Chair) or Peter Von Moyer (Vice-Chair), or the SOCCA President (Dan Brown) at any time. We sincerely hope you are looking forward to the Annual Meeting as much as we are! 🏛️

FEATURED ARTICLE

'Tis the (Flu) Season – Influenza Infection in Critically Ill Patients

As influenza season begins in the United States, we should reflect on the nature of the virus, pathological presentation and treatment considerations. Multiple types of influenza exist, with type A accounting for the most severe manifestations in humans and responsible for the major pandemic outbreaks, notably in 1918, 1957, 1968, and 2009. Types B and C also infect humans but result in a more typical seasonal infection. Type A Influenza is further subtyped based upon surface antigen expression, using the H-N- nomenclature, to describe hemagglutinin and neuraminidase expression. Some subtypes have been found to be notably more pathogenic, such as H1N1, the cause of the “Spanish flu” outbreak in 1918 resulting in an estimated 50 million deaths worldwide. While most strains of the Influenza virus disproportionately affect the young and the old, H1N1 subtypes appear to impact populations more broadly, and they may be more pathologically virulent. Since the 2009 “Swine flu” pandemic, the predominant type A viral subtype has been H1N1.

Regional climate plays a role in viral shedding and influenza infection, with outbreaks in the Southern hemisphere occurring



C. Patrick Henson, DO

Department of
Anesthesiology,
Division of
Anesthesiology
Critical Care
Vanderbilt University
Medical Center
Nashville, Tennessee

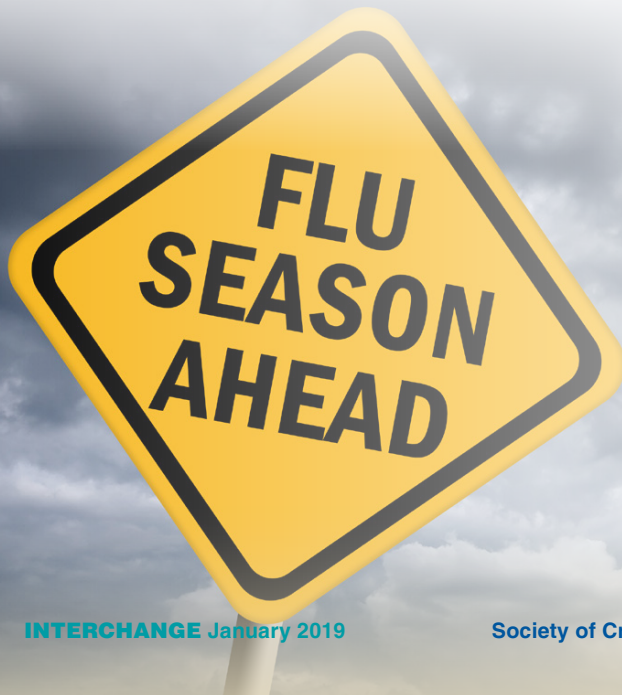
during the winter months (June-August) and then spreading to the Northern hemisphere several months later during the winter months there (January-March of the following year). The nature of the subtropical climates, specifically in southeast Asia, allow for human infection nearly year-round, and birds in these regions may act as a viral reservoir of type A influenza, promoting future yearly worldwide outbreaks. Antigenic shift within strains is partly responsible for pandemic emergence from seasonal strains, and animals may act as a reservoir for these changes. While certain populations will always be susceptible to complications of influenza infection, pandemic strains are often more antigenically novel to humans, and thus result in increased infection numbers and pathogenicity, frequently associated with higher morbidity and mortality.

The 1918 influenza outbreak was notable for several reasons. A pandemic strain emerged into a world developing closer quarters. Military requirements necessitated huge numbers of people in smaller spaces, while urban density was increasing, and sterility was still a novel concept. In addition, a profoundly pathogenic response was provoked by this particular strain of H1N1 influenza, resulting in rampant activation of the native immune response. It was likely that this strain had not been seen in the decades immediately prior, and thus, no limited immunity would have been conferred to the populace. Immunologic response would be expected to be more severe, and it was. Approximately 50 million people died as a result of the 1918 epidemic, likely an underestimation. Successive pandemics have been less severe, relatively, although many factors contribute to that, including improvements in living conditions, health care and treatment options.

The patient with influenza may present differently, depending on age, underlying health status, and timeline of infection. Healthy, young adult patients may take longer to present for medical care and subsequently may be further delayed for aggressive treatment, due to their resilience and compensatory ability. As a result, their illness may be more advanced when admitted. The very young, very old and infirm patients will be more likely to seek early medical care and are much more likely to be treated aggressively.

Several rapid diagnostic influenza tests are currently in use. While some variability exists within tests, nearly all require nasopharyngeal swab sampling and report presence of type A and B viral antigens within 10-30 minutes. The typical rapid

continued on page 5



influenza diagnostic tests (RIDT) carry high specificity but moderate sensitivity when compared to the gold standard of PCR, potentially allowing for a higher false-negative rate. Digital immunoassay (DIA) and rapid nucleic acid amplification tests (NAAT) allow for higher sensitivity but may introduce increased cost and more technical skill to read the results. Later diagnosis of influenza infection in hospitalized critically ill patients is associated with increases in mortality and secondary complications. One of the most important diagnostic tools in these patients is the clinical index of suspicion, and with the high specificity of the rapid diagnostic tests, it may be reasonable to test more hospitalized patients admitted with respiratory symptoms, whereas outpatients may actually be tested less frequently, depending on timeline of illness.

While the epidemiological assault from the influenza virus is seasonal and predictable, the individual response may not be as easily estimated. As antigenic shift allows for relatively novel subtype presentation, strains that evade immune memory may provoke a worsened host response, resulting in the characteristic cytokine storm and inflammatory cascade that is responsible for much of the systemic damage in severe influenza, as well as promotion of secondary complications. Viral sepsis may be challenging to diagnose and treat, as much of the care is supportive. Immunomodulatory therapies are likely to provide the next weapon against septic viral infections, including influenza, but these are currently experimental. Prompt diagnosis and appropriate critical care management are the mainstay of therapy at this time.

Neuraminidase inhibitors, such as oseltamivir, and the recently approved endonuclease inhibitor baloxovir have been shown to reduce the duration of symptoms in patients with influenza diagnosed within 24-48 hours. Much of the data regarding neuraminidase inhibitor use in critically ill patients is from the most recent 2009 pandemic, the H1N1 "Swine flu". Neuraminidase inhibitor use has been associated with mortality reduction in critically ill patients with influenza and should be considered in any critically ill patient with influenza, as survival benefit appears to be increased across the board. Higher-dose and extended therapy may be reasonable, especially in patients who remain critically ill or those with progressive symptoms on standard treatment, but data is lacking to strongly support positive impact on survival or ICU-free days. Baloxovir has not been thoroughly evaluated in a critically ill patient population. Older M2 inhibitors (amantadine) are no longer recommended, given the extremely high treatment resistance observed.


Alternative therapies, such as administration of plasma from donors with influenza exposure and intravenous immunoglobulins, show promise in reducing the inflammatory burden and may improve survival, but are likely to be reserved for the sickest patients. Corticosteroids and macrolide compounds such as clarithromycin and rapamycin have defined anti-inflammatory benefits, but their use is not routinely

recommended in severe influenza infection, as no obvious benefit has been delineated, and outcomes may actually be worse. Isolation of critically ill patients with influenza should be mandated, and non-clinical exposures limited, given the high risk of transmission. The duration of isolation is institution-specific, but influenza virus has been found in tracheal isolates of intubation patients >21 days after admission.

Bacterial superinfection is commonly associated with severe influenza infection, and may be the presenting complaint in younger patients, as it often tends to develop well after the initial viral infection. Epithelial injury due to viral activity and the associated host response results in a nidus for infection, and community-acquired organisms, such as staphylococcus and streptococcus species, should be suspected. Therapy with a third-generation cephalosporin should be started in patients with post-influenza pneumonia, with or without a fluoroquinolone depending on suspicion. Broad-spectrum antibiotic therapy should always be a consideration in the critically ill patient with infection and is a reasonable approach in the patient with influenza until bacterial superinfection can be ruled out or appropriately speciated.

Epithelial damage, the host response, and bacterial superinfection can all lead to the development of severe lung injury and ARDS. Management of these patients is fairly consistent with management of ARDS in the general population. Neutrophil migration and endothelial injury promote parenchymal congestion and respiratory failure, either during the initial viral insult or following secondary infection, and strict attention should be given to maintaining low tidal volume ventilation and reduced plateau pressure as able, as outlined in lung-protective ventilation guidelines.

Other approaches to management of severe respiratory failure, such as use of neuromuscular blockade, prone positioning, pulmonary vasodilators and alternative modes of ventilation, may be considered based on the clinical course and institutional abilities. In patients with refractory respiratory failure, ECMO can be considered. Although it can be difficult to prognosticate timeline of the influenza patient with severe respiratory failure, survival is significantly better with earlier application; however, this should be balanced with risks when stratifying patients for selection, and not all patients will be appropriate candidates. Early referral to an ECMO consultation service or ECMO center may help clarify opportunities and expectations in the critically ill patient with influenza.

In closing, the critically ill patient with influenza has a high risk of morbidity and mortality, influenced in part by underlying health status, severity of pandemic outbreak, bacterial superinfection, and host response to infection. Early recognition and aggressive treatment is imperative in this patient population. 

CASE REPORT

Open Repair of Massive Incisional Hernia with Loss of Domain

BACKGROUND:

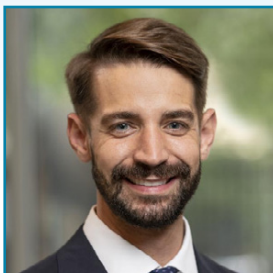
Loss of domain is a situation in which the majority of the viscera are outside of the abdominal wall, as may occur with large hernias. In this report, we discuss the surgical approach to repair of the abdominal wall and reduction of the abdominal viscera, and we highlight the significant anesthetic challenges associated with these repairs.

CASE REPORT:

A 74-year-old man presented to the operating room for an open abdominal incisional hernia repair with mesh, posterior component separation (retrorectus dissection and subsequent reconstruction of the linea alba), external oblique re-release, and abdominal wall reconstruction with flap to repair a recurrent massive ventral incisional hernia following an open AAA repair in 2005. An initial repair of the incisional hernia was attempted with mesh and anterior component separation, but eventually failed, leaving the patient's small bowel, large bowel, liver, and gallbladder in an extra-abdominal location. To facilitate this attempt at the procedure, the patient underwent preoperative progressive pneumoperitoneum to increase abdominal wall compliance. A peritoneal dialysis catheter was used to insufflate the intra-peritoneal space with room air twice a day for 10 days prior to surgery. Unfortunately, this therapeutic pneumoperitoneum resulted in extensive subcutaneous and intramuscular emphysema throughout the abdomen, chest wall, face, and neck, plus a small right pneumothorax and moderate pneumomediastinum.

On the day of surgery, general anesthesia was induced and endotracheal intubation was performed via direct laryngoscopy without difficulty. Two large-bore IVs and an arterial line were placed. An orogastric tube was placed after intubation and 500 mL of bilious gastric contents were suctioned. Large volume resuscitation was used for hemodynamic management and only low-dose phenylephrine was required. Despite the preoperative attempt at progressive pneumoperitoneum, the patient had incredibly redundant colon that could not be safely returned to the abdomen. A right hemicolectomy and cholecystectomy were, therefore, performed to facilitate closure, with prophylactic bilateral fasciotomy to reduce the risk of compartment syndrome.

Post-operatively, the patient was admitted to the ICU intubated, sedated, and paralyzed. Paralysis was maintained for 24 hours post-operatively to eliminate abdominal wall muscle tone and



**Alessandro
De Camilli, MD**



**Andrew Rivera-
Hober, MD**


New York-Presbyterian
Hospital, Columbia
University Medical
Center
New York, New York

reduce intraabdominal pressures. His plateau pressure started at 20 cm H₂O, rose to 29 at the end of the procedure, then fell to 25 cm H₂O in the ICU. His course was complicated by AKI and progressive hypoxemic respiratory failure on post-operative day (POD) #1, requiring VV ECMO, multiple exploratory laparotomies for diffusely ischemic bowel, and ultimately multiorgan failure with metabolic disarray that proved unresponsive to medical therapy. He was made DNR/DNI on POD#10 from the initial open hernia repair and died shortly after withdrawal of care.

DISCUSSION:

This case highlights the significant challenges associated with complex perioperative procedures and the role of multidisciplinary perioperative care support. Reducing a hernia of this size frequently induces abdominal hypertension and can cause abdominal compartment syndrome. In this case, compression of the renal veins and mesenteric venous drainage due to increased intra-abdominal pressure likely precipitated AKI and mesenteric ischemia. Increased intra-abdominal pressure also likely put upward pressure on the diaphragm, reduced lung compliance, and precipitated worsening respiratory failure, ultimately requiring ECMO support.

This patient had several preoperative medical diseases that likely further contributed to his perioperative complications. For example, he was an obese former smoker with CPAP-dependent obstructive sleep apnea. His baseline risk of perioperative respiratory complications was therefore high. Moreover, he was an insulin-dependent diabetic at risk of impaired gastric emptying, delayed wound healing, and perioperative AKI.

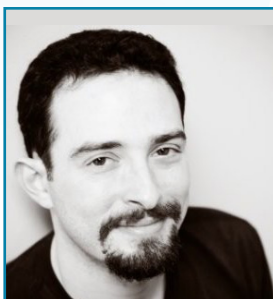
This case highlights the role of the Critical Care Anesthesiologist as a perioperative specialist with critical roles in the operating room, providing care to high-risk patients and surgical procedures. Critical Care Anesthesiologists also provide expert postoperative critical care to manage complications, both expected and unexpected, for these high-risk patients. When working together as part of a multidisciplinary team, critical care anesthesiologists fill an important role in the care of critically ill perioperative patients. Despite this patient's poor outcome, Critical Care Anesthesiologists were critically important in providing optimal perioperative care to this and other high-risk patients. 

WELLNESS SERIES

Navigating the Catastrophe: Mindfulness Is a Tool That Could Bring Us Closer to Happiness...A Personal Perspective

Burnout, as defined by a loss of enthusiasm for one's work, a decline in work satisfaction, and an increase in emotional detachment and cynicism, is a growing concern in medicine. In Medscape's National Physician Burnout and Depression Report 2018, a survey of over 15,000 physicians, 42% of all respondents reported feeling burned out, including 48% of intensivists (the highest rate among all specialties).¹ Burnout in medical practitioners has been associated with multiple negative health outcomes, including increased suicidality.² Besides affecting physician's satisfaction, burnout also has a significant effect on patient care. Increased feelings of emotional exhaustion among practitioners have been associated with decreased quality of care and even increased mortality in intensive care units.³ Many of the factors that contribute to burnout, such as increased workload, emotional stressors, and decreased control over practice parameters⁴ may be difficult to ameliorate without substantial changes in our medical system. However, one may still be able to find better ways to cope with unavoidable job- and life-related stressors.

Meditation, one such technique, is a practice that has roots going back thousands of years. Despite this, it has only been brought into the sphere of mainstream medicine in the past



Jordan Brand, MD

San Francisco VA
Health Care System
UC San Francisco
San Francisco,
California

40 years or so, starting with foundational work by Herbert Benson in the 1970s (who referred to the "relaxation response" instead of placing meditation in a cultural or religious context). In 1979, Jon Kabat-Zinn founded the Mindfulness-Based Stress Reduction (MBSR) program at the University of Massachusetts Medical Center to help patients with various types of chronic stress. Mindfulness, in Kabat-Zinn's words, is defined as "the awareness that arises by paying attention on purpose, in the present moment, and non-judgmentally."⁵ MBSR utilizes meditation, yoga, and body awareness exercises to recalibrate patients' responses to stress and pain. The program is outlined in Kabat-Zinn's provocatively titled book, *Full Catastrophe Living*. (Taken from a line in *Zorba the Greek*, "the full catastrophe" refers to the richness and complexity of life, with its inevitable joys and disappointments.) Meditation and other mindfulness-based interventions have shown promise in the treatment of many conditions, including depression, anxiety, and stress caused by chronic illness.⁶ There is also evidence that mindfulness can be associated with overall happiness. According to a 2010 study in *Science*, people are happier when focused on what they are doing, rather than when their minds are wandering.⁷ MBSR has frequently been the intervention used in research on mindfulness and forms the basis of many other related programs.

continued on page 8



Recently, I had the opportunity to delve into mindfulness practice by taking part in a study of Enhanced Stress Resilience Training (ESRT), a program that distills the fundamentals of MBSR from an eight-week intensive course down to six 1.5-hour weekly sessions. The ESRT program is specifically tailored for those in high-stress professions, in this case surgeons and anesthesiologists. The lead investigator for the study is Carter Lebares, an assistant professor of surgery at UCSF. Dr. Lebares, who has been meditating since before medical school, ascribes her interest in mindfulness and its professional applications to the changes in her fellow students during medical school. She was disappointed to see many of her friends lose their idealism and dedication to patients and focus on the financial rewards of the profession. "I really knew these people, really knew the size of their hearts. But somewhere around the second year, they would say, 'I don't know what's going to happen in the next few years, but there better be a damn nice car at the end of it.' This was very alarming to me; it was like a positive resource for medicine was being lost. And later, when burnout was being discussed more, I realized that I had been seeing burnout unfold." She believes that mindfulness can be a key to maintaining emotional investment and optimism in medicine.

Dr. Lebares feels that ESRT provides an ideal model for studying the effect of mindfulness on burnout: "I worry about offering something that's just based on anecdote and personal experience...this is a really well-defined, secular tool that can be evaluated in a rigorous way." The primary outcomes of her study are changes in self-reported measures of well-being, and secondary outcomes include measures of work performance, cognitive function, and emotional regulation. While this study is likely to be the first step in a larger research program, Dr. Lebares is particularly hopeful that beyond improving individual mental health, mindfulness strategies can improve team dynamics in the OR. "Groups that work on a complex task as a team really influence each other. I want to know what it would be like if the surgeon and the anesthesiologist set a tone of being very present and mindful, whether that would be reflected in better work or better outcomes."

At the time I started the ESRT course, I knew little of this background; what I did know was that I was under a lot of stress, both professional and personal, and UCSF was coincidentally offering faculty an innovative course in stress management. Prior to the first class, I underwent a small battery of tests assessing my cognitive and attentional abilities and filled out a detailed survey on my mental health and self-care. The researchers also observed the performance of most study participants in the OR environment (I did not take part in this portion myself due to the fact that I do my clinical work at the San Francisco VA rather than one of the main UCSF hospitals).

When I walked into the first ESRT class, the scene was a bit surreal: a group of surgeons and anesthesiologists, dressed in a variety of scrubs, formal shirts and slacks, and workout gear, sat cross-legged on yoga mats arranged in a circle. Our teacher explained the goals of the course and the overall concept of mindfulness and then jumped right in to some basic breathing and meditation exercises. A major component of ESRT that we were introduced to in the first class is the "body scan," in which we focused our awareness of each part of our body in turn and tried to monitor our sensations, without any judgment or attempts to change things. This made me aware of what, to the uninitiated, is a surprising revelation: meditation, when done correctly, can be quite difficult and not necessarily relaxing. Kabat-Zinn freely acknowledges this in his book, saying, "it can be stressful to take the stress reduction program."⁸

Another common theme was that mindfulness practices are difficult to teach from a purely intellectual perspective; engaging in such practice is necessary and ultimately more important to understanding. Therefore, while each class was accompanied with various handouts and references, these were not the focus and our only "homework" was engaging in meditation or other exercises, ideally for 20 minutes per day. Despite this, there was some conceptual framework laid out to focus our thoughts. Each class had a slightly different theme and involved variations on mindfulness principles. These included "There is more right with you than wrong with you," and "Stress is inevitable, but suffering can be optional." The themes would generally recur a few times during guided meditations. The course culminated with a "mindful hike" in the Presidio. Follow-up included a repeat of the initial survey and testing; the results are not yet published.

So did ESRT make a difference in my life? I do feel noticeably more centered and better able to deal with stress after the course. The mindfulness exercises, while not easy, were interesting and rewarding, especially to someone who enjoys new challenges. I haven't seen a clear difference in my cognitive performance, but this might be harder to elicit. Crucially, ESRT provided an excuse for me to spend a little time each week on my own well-being, and made me realize that the best way to ensure that one takes time for self-care is to make a dedicated commitment to doing so. Ironically, it often seems that the biggest obstacle physicians face to taking time for ourselves is that we feel guilty using what little spare time we have for something as "frivolous" as our own health when there is so much else that needs our attention from minute to minute. Carving out such time, though, is essential even if it often requires advance scheduling. Despite the difficulty of adding another commitment to the day, investing a few minutes on meditation, yoga, or other such practice can make a real

continued on page 9

difference in our mental and physical health, and even benefit our patients as well.

If hospitals and departments devoted resources to making mindfulness exercises more available and practical, such as setting aside time in the daily schedule for meditation sessions or organizing group classes, and made it clear that such activities were not just permitted but encouraged, this investment might be returned in the form of practitioners who are more resilient, less cynical, and better able to serve their patients and themselves. As Kabat-Zinn puts it, mindfulness is an opportunity “to use yourself as a laboratory to find out who you are and what you are capable of.”⁹ I look forward to seeing the results of Dr. Labares’ research on the topic, and in the spirit of ESRT, I invite my fellow SOCCA members not to just read about mindfulness, but to experience it for themselves. If you have ideas for how to integrate these activities into our busy lives, or want to share your experience with mindfulness and its many variations, please email us at soccanewsletter@socca.org or Jordan.brand@ucsf.edu. 🏠

REFERENCES

- ¹ <https://www.medscape.com/slideshow/2018-lifestyle-burnout-depression-6009235#1>
- ² Dyrbye LN et al. Burnout and suicidal ideation among U.S. Medical Students. *Annals of Internal Medicine* 2008, 149(5): 334-41.
- ³ Welp A et al. Emotional exhaustion and workload predict clinician-rated and objective patient safety. *Frontiers in Psychology* 2015, 5: 1-13.
- ⁴ Shanafelt T et al. Oncologist burnout: causes, consequences, and responses. *Journal of Clinical Oncology* 2012, 20(11): 1235-41.
- ⁵ In Kabat-Zinn J, Full catastrophe living. Bantam Books, 1990; p. xxxv.
- ⁶ Hempel S, Shekelle PG, et al. Evidence map of mindfulness. Report prepared for Department of Veterans Affairs/Veterans Health Administration Quality Enhancement Research Initiative, 2004, p. 7.
- ⁷ Killingsworth MA, Gilbert DT. A wandering mind is an unhappy mind. *Science* 2010, 330(6006): 932.
- ⁸ Kabat-Zinn, p. xlix.
- ⁹ Kabat-Zinn, p. lxxv.

MEMBER SPOTLIGHT

A Brief Conversation with...Mike Fierro

Mike Fierro is an anesthesiologist and critical care medicine physician at the Medical College of Wisconsin. His practice includes general adult anesthesiology and critical care in the Cardiovascular Intensive Care Unit at Froedtert Memorial Lutheran Hospital. He has maintained the SOCCA Twitter account since 2016: [@SOCCA_CritCare](#)



Q. Why is social media important for critical care physicians in 2018?

A. Social media has a variety of interesting applications for physicians beyond its originally intended scope. Biomedical publishers and journals are using Twitter accounts to promote publications, and Twitter therefore allows you to keep up with recent developments in the literature. Simultaneously, it is interesting to watch which publications garner attention through re-tweets and discussion, which can be markers of buzz-worthiness. As heavy clinical demands can make it easy to overlook prominent or interesting publications, Twitter provides another means by which to track new developments.

More broadly, social media can facilitate keeping in touch with colleagues and glancing into aspects of clinical practice elsewhere. Images and videos of patients ambulating on ECMO, portable “heart in a box” perfusion systems, and other interesting vignettes are both enduring and highlight potential opportunities for development of our individual practices.

Q. Twitter in particular has emerged as an important venue for post-publication peer review and discussion. Can you speak to how researchers can utilize social media to promote their work?

A. Historically we have conceptualized peer review as a time-limited process that occurs prior to publication. Subsequent discussion or criticism was confined to “letters to the editor,” or similar feedback mechanisms, which are delayed and subjected to selection bias and heavy editing, especially in prominent journals. Discussion of publications on Twitter, conversely, is increasingly common, near-immediate, and unfiltered. These commentaries can

enable authors and readers to think about scholarly work in novel dimensions and can identify novel strengths and weaknesses. This discourse is typically broad and honest but succinct. Researchers should have a vested interest in keeping abreast of these discussions and, when appropriate, engaging online.

Q. What role do you see SOCCA playing in this process, and how can SOCCA members engage with the society through social media?

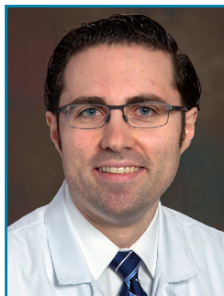
A. The goal for our SOCCA Twitter account (@SOCCA_CritCare) is to be an online content generator, which includes helping members promote their work. We hope to feature research and publications generated by our members and allow them to add additional commentary. This might include highlighting more subtle findings or sharing their experience doing the work. I would encourage members to make a Twitter account and follow SOCCA. More broadly, many thought leaders in critical care are visible and active online, and these sources can serve to broaden your exposure to new thoughts and ideas. Social media can also highlight the personal aspects of our society through images of members interacting and making connections. I would welcome contributions from members either directly or through our Twitter account.

Q. What other aspects of Twitter are appealing? Are there any important caveats?

A. Twitter is an excellent venue for several reasons, especially for newcomers to social media or those with less interest in self-broadcasting. Users can be passive consumers of information as you have to provide little or no information about yourself. However, social media relies on individuals to exercise some degree of judgement about what they are reading, who they are engaging with, and the quality of this information. In a typical physician use case, the vast majority of information is going to be interesting or meritorious.

Q. In addition to Twitter, what specific social media outlets are most relevant for physicians?

A. Facebook has a wide variety of private groups targeted toward physicians. These are typically reflect special interests and employ some screening to limit engagement. These forums can be appealing opportunities to share ideas and discuss topics within a peer group.



Craig S. Jabaley, MD

Assistant Professor of Anesthesiology
Emory University
School of Medicine
Atlanta, Georgia

continued on page 12

LITERATURE SURVEY

“Did You See This?”

Rochweg B, Oczkowski SJ, Siemieniuk RAC, et al. Corticosteroids in Sepsis: An Updated Systematic Review and Meta-Analysis. Crit Care Med. 2018;46(9):1411-1420.

This review and meta-analysis sought to further elucidate the efficacy and safety of steroids in sepsis given newly published randomized controlled trials in this arena. The authors searched published and unpublished sources for randomized controlled trials comparing any of various corticosteroids to a placebo in sepsis patients older than the neonatal period. In total, 42 randomized controlled trials studying over 10,000 patients were eligible for analysis.

The authors reported that corticosteroid use in septic patients may offer only a small reduction in absolute mortality of about 2%, albeit with low certainty. Overall, corticosteroids may also result in a small increase in the risk of neuromuscular weakness. Hyperglycemia and hypernatremia, known side-effects of corticosteroid therapy, were not adequately described in the studies and neither were their sequelae for patients, further contributing to lower certainty of evidence regarding effects.

Rygaard, S.L., Butler, E., Granholm, A. et al. Low-dose corticosteroids for adult patients with septic shock: a systematic review with meta-analysis and trial sequential analysis. Intensive Care Med (2018) 44: 1003.

This review took a more exclusive look at existing randomized controlled trials in the published literature by focusing on “low-dose corticosteroid use”, requiring that the corticosteroid dose was equal to or less than 500 mg per day of hydrocortisone (or equivalent) and only included adult studies. The primary outcome was short-term mortality (90 days). Secondary outcomes analyzed were long-term mortality (6 months to 1 year), adverse events, patient-reported quality of life at final follow-up. Tertiary outcomes, which were not vetted for bias, were time to shock resolution, secondary infection, GI bleeding, delirium, hypernatremia, hyperglycemia; and duration of ICU stay, hospital stay, and mechanical ventilation. Studies were independently assessed for risk of bias by 2 investigators. In total there were 22 studies that included 7,297 patients.

From this evaluation, the investigators reported that “low dose corticosteroid use” does not seem to affect either short-term or long-term mortality in a statistically significant manner. However, it does appear to increase adverse events. Treatment



John Antony Vullo, MD

Assistant Professor,
Department of
Anesthesiology,
Perioperative & Pain
Medicine

Icahn School of
Medicine, Mount Sinai
Medical System
New York, New York

with low-dose steroids did not seem to be associated with secondary infection. Treatment with corticosteroids does decrease the duration of shock, length of mechanical ventilation, and ICU length of stay.

Annane D, Pastores SM, Rochweg B, et al. Guidelines for the Diagnosis and Management of Critical Illness-Related Corticosteroid Insufficiency (CIRCI) in Critically Ill Patients (Part I): Society of Critical Care Medicine (SCCM) and European Society of Intensive Care Medicine (ESICM) 2017. Crit Care Med. 2017; 45(12):2078–2088.

Pastores SM, Annane D, Rochweg B, et al. Guidelines for the Diagnosis and Management of Critical Illness-Related Corticosteroid Insufficiency (CIRCI) in Critically Ill Patients (Part II): Society of Critical Care Medicine (SCCM) and European Society of Intensive Care Medicine (ESICM) 2017. Crit Care Med. 2017; 46(1):146–148.

The Society of Critical Care Medicine (SCCM) and European Society of Intensive Care Medicine (ESICM) recently updated their guidelines for the diagnosis and management of critical illness-related corticosteroid insufficiency (CIRCI). Relevant studies were formulated using the GRADE methodology. Recommendations were classified as strong or conditional and the quality of evidence was classified from high to very low. A recommendation required approval agreement of at least 80% of task force members to be included.

Regarding the diagnosis of CIRCI:

- They make no recommendation on a test to diagnose CIRCI, but they do reinforce Endocrine Society guideline recommendation that high-dose (250mcg) ACTH stimulation test is superior to others.
- They suggest against using plasma free cortisol or salivary cortisol level vs plasma total cortisol. (Conditional, Very Low quality of evidence)

Regarding the treatment of specific conditions:

- Sepsis with shock — IV hydrocortisone <400mg/day for at least 3 days. (Conditional, Moderate quality of evidence)
- Sepsis without shock — suggest not using corticosteroids for the side effects given lack of clear benefit. (Conditional, Moderate quality of evidence)

continued on page 12



Q. Many departments and hospitals have followed the suit of large corporations in devoting time and money to managing their brand online. Beyond promotion of scholarly work, do you think that physicians should be similarly engaged in cultivating an online presence?

A. There are certainly physicians and non-physicians alike who have branded themselves and are highly visible online despite more limited engagement through more traditional outlets, such as conferences or peer-reviewed publication. While these contributions may not lend themselves to a typical academic CV, cultivating a blog or sharing images, stories, or critiques online can be very valuable. One of the appealing aspects of social media is the ability to freely exchange ideas, which has been termed “free open access medical education,” or FOAM. These discussions are often tagged with #FOAMed. @kevinmd is probably the best example of a highly visible physician.

Traditionally, physicians were required to travel to conferences and other institutions to become known to the anesthesiology and critical care communities. While these activities remain important, Twitter simplifies the process of connecting with colleagues and allows for thought sharing any time from anywhere. Furthermore, physicians can “brand” themselves on

social media and create a following by tweeting about concepts they find important, sharing observations, discussing their research, or showing off their non-medical side. This has given physicians the ability to share a 280 character message with thousands of followers with the click of a mouse.

Q. What parting advice would you have to members who are keen to engage with social media but are unsure how or where to begin?

A. I have hopefully laid out a compelling case for how social media can allow you to cast a wider net and find people who may share common interests. These connections can enable you to meet or interact with people to whom you wouldn’t normally be exposed, which can have positive downstream implications for research, collaboration, and even employment. **I would encourage members who are interested in Twitter to make an account and follow us  @SOCCA_CritCare.** The Twitter smartphone application is user-friendly and easy to use for brief periods during downtime. We will be highlighting not only the activities of our members but also interesting developments across the critical care landscape to enable new users to find additional avenues of engagement. 

LITERATURE SURVEY “Did You See This?” *continued from page 11*

- Acute Respiratory Distress Syndrome — in early moderate to severe ARDS (PaO₂/FiO₂ < 200 and within 14 days of onset) they suggest using corticosteroids for potent. (Conditional, Moderate quality of evidence)
- Trauma — suggest against the use of corticosteroids. (Conditional, Low quality of evidence)
- Community-acquired Pneumonia (CAP) — suggest <400mg IV hydrocortisone for 5-7 days in hospitalized patients with CAP. (Conditional, Moderate quality of evidence)
- Influenza — suggest against the use of corticosteroids. No randomized controlled trials were found. (Conditional, Very Low quality of evidence)
- Meningitis — suggest using corticosteroids primarily for the potential effects on hearing loss and other neurological sequelae. (Strong, Low quality of evidence)
- Cardiopulmonary Bypass Surgery — although no statistically significant data exists, they suggest using corticosteroids given the trends toward benefit for lower atrial fibrillation rates post-operatively and mortality. (Conditional, Moderate quality of evidence)
- Cardiac Arrest — suggest using corticosteroids after resuscitation. (Conditional, Very Low quality of evidence)



SOCCA Information

EMAIL

Meetings: SOCCAm meetings@iars.org

Membership information: SOCCA@iars.org

VISIT THE SOCCA WEBSITE at:
www.SOCCA.org

MEMBERSHIP

Membership in SOCCA is open to all anesthesiologists who have an interest in critical care medicine; nonanesthesiologist-physicians and scientists who are active in teaching or research relating to critical care medicine; residents and fellows in approved anesthesiology programs; and full-time medical students in an accredited school of medicine.

MEMBERSHIP BENEFITS

Discounted pricing for the SOCCA Annual Meeting, a forum for the specialist with broad-based interests, including respiratory therapy, postoperative cardiac surgical, neurological and transplant management, and trauma care

Discounted membership in the IARS, which includes access to two peer-reviewed journals – Anesthesia & Analgesia and A&A Case Reports, free journal CME, and eligibility to apply for IARS research grants

Free ICU Residents' Guide

Free quarterly newsletter Interchange, which covers ethically controversial issues, survey of practice patterns, and historical aspects of anesthesiology

Renew or join today at www.SOCCA.org/membership.php

EDITORIAL NOTES

Editor

Kevin Hatton, MD

Division Chief, Anesthesiology,
Critical Care Medicine
University of Kentucky College
of Medicine
Lexington, Kentucky

Editorial Board

Zdravka Zafirova, MD
Newsletter Associate Editor

Jordan Brand, MD
Gernman Echeverry, MD
Christopher P. Henson, DO
Craig S. Jabaley, MD

Fellowship Program Reviews

If you would like to contribute a review for a Fellowship Program at your institution in a future issue of the SOCCA Interchange, please contact: Vivian Abalama, CAE, IOM at vabalama@iars.org.

Editorial Policy

The opinions presented are those of the authors only, not of SOCCA. Drug dosages, accuracy and completeness of content are not guaranteed by SOCCA.

CALL FOR ARTICLES



If you have an interesting case report, an idea for a pro-con discussion, a review idea, or an opinion on a recently published article, please review the [submission guidelines](#), then submit your proposal/article to the Newsletter Editor, Kevin Hatton, MD at kevin.hatton@uky.edu on or before May 24, 2019. If your article is chosen for the newsletter, we will contact you for editing and formatting. Thank you.

SOCCA Board of Directors

OFFICERS

President

Daniel R. Brown, MD, PhD, FCCM
Mayo Clinic
Rochester, Minnesota



President-Elect

Miguel A. Cobas, MD, FCCM
University of Miami
Miami, Florida



Treasurer

Michael H. Wall, MD, FCCM
University of Minnesota
Minneapolis, Minnesota



Secretary

Mark E. Nunnally, MD, FCCM
New York University
Langone Medical Center
New York, New York



Immediate Past President

Avery Tung, MD, FCCM
University of Chicago
Chicago, Illinois



DIRECTORS

Director

James M. Blum, MD, FCCM
Emory University
Hospital
Atlanta, Georgia



Director

Michael Haney, MD, PhD
Umea University
Umea, Sweden



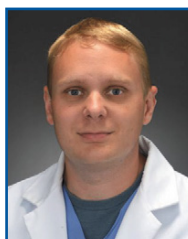
Director

Linda Liu, MD
University of California
San Francisco, California



ASA Delegate (Ex-Officio)

S. Patrick Bender, MD
University of Vermont
Medical Center
Burlington, Vermont



Director

Adam Evans, MD, MBA, FCCM
Anesthesia Associates
of Morristown
Morristown, New Jersey



Director

Benjamin A. Kohl, MD, FCCM
Thomas Jefferson
University
Philadelphia, Pennsylvania



Director

Stephen D. Surgenor, MD
Dartmouth Hitchcock
Medical Center
Lebanon, New Hampshire



Canadian Representative (Ex-Officio)

Patricia M. Murphy, MD
Toronto General Hospital
Toronto, Ontario, Canada

