THE ADVOCATE!

"Keeping you in touch with our collective critical care team"

The Role Of Memories On Health-Related Quality Of Life After Intensive Care Unit Care: *An Unforgettable Controversy?*

By Dr. Volker Eichhorn

I had the opportunity to attend the German Capital Congress for Intensive Care Medicine in September 2016, in Berlin. The main message was around ***health-related quality of life (HRQoL)*** after ICU stay, which is often a topic we don't spend much time on but probably the most important factor for ICU survivors. As summarized by a former ICU patient: *"One thing I find somewhat alarming is that when they measure my lung capacity it measures 80% which they consider normal so in a sense they're telling me I'm fine now and there is nothing wrong with me. And yet I can't do any of the things that I took for granted". (Am J Respir Crit Care Med, 1997; 156: 1120-1128)*

Next to the overall physical health, we start focusing more on depression, PTSD and mental well-being post- ICU. For good reason, discussion about appropriate level of sedation has already started (Am J Respir Crit Care Med. 2003 Dec 15;168(12):1457-61, CritCare Med2009; 37:2527-2543). The understanding that **less sedation** is better for HRQoL is becoming more broadly understood among Intensivists. A recent prospective, multicenter study from Portugal on 310 patients has shown that having any memories from an ICU stay (ie., less sedated patients) is significantly superior, as measured by HRQoL 6 months after ICU discharge, when compared with not having any memories of the ICU stay (Patient Related Outcome Measures 2016:7 63–71). It is time to focus even more on "the lightest possible sedation" knowing that in doing so the quality of life for our patients once discharged from ICU, is dramatically improved. The epoch of RASS scores of -2 or less (i.e., deeply sedated) have passed, and we should be aiming for **RASS scores of 0 to +1** (i.e., less sedated). Accepting anxious facial expressions and tachypnea will be the norm - and should be seen as an adaptive physiologic response. Having less cognitive gaps after an ICU stay seems to correlate with a higher life quality. Our nurses at the bedside continuously explaining to the patient what is happening, asking about pain and giving social support are keys to this evolving way of ICU patient management. Pain needs to be continuously monitored and treated appropriately. The pain and sedation scores used in our units are definitely important and worth every effort.- a great starting point for ongoing work and improvement. Finally, our **early mobility** program is vital as its early aggressive physiotherapy and movement remain a major factor leading to improved patient outcomes.

Welcome Tamara!

We are pleased to introduce Tamara Mitterer as our new Research Coordinator for the Department of Critical Care, as of November 2016. Prior to joining the research team Tamara worked on 5.2, and brings over five years of nursing experience. In addition to her Bachelor of Science in Nursing, she holds a Bachelor of Science with a Major in Biology, during which she worked as a research assistant. Moving forward, she will be working closely with Dr. Robert Green, Dr. Osama Loubani, Dr. Rick Hall, Research Services, and the Canadian Critical Care Trails Group.

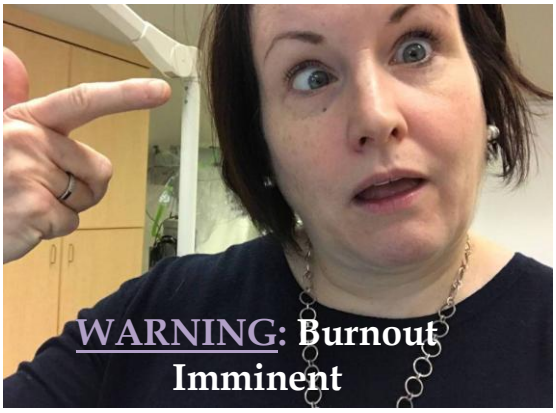
Tamara looks forward growing the Queen Elizabeth II Health Sciences Center as a leader in critical care research within Atlantic Canada. Promoting research as a means to develop best practice in critical care is important to her. She loves working in critical care, and is excited to collaborte with the 3A and 5.2 staff. You will be seeing her shortly as she initiates PROSPECT, a study which will investigate priobiotics on the incidence of VAP and infections in the ICU setting. ***Please see page four for current and future critical care studies.***

Credit: Giselle Davis Photography

Burnout Syndrome

Source: A Critical Care Societies Collaborative Statement: Burnout Syndrome in Critical Care Healthcare Professionals in American Journal of Respiratory and Critical Care Medicine (July 2016), 194 (1), 106-113.

Burnout Syndrome (BOS) occurs when there exists a significant discrepancy between the ideals and expectations of a healthcare professional (HCP), and the realities of their work; it directly affects both the physical and mental wellbeing of HCPs. There is a triad of symptoms classically associated with BOS: exhaustion, depersonalization and perceived reduced personal accomplishment. Organizationally, BOS is associated with many negative consequences, like increased staff turnover, reduced patient satisfaction, and diminished quality of healthcare. BOS is 'infectious', the prevalence highest being in those ICUs with a negative working culture.



The prevalence of BOS is alarmingly high in Critical Care. The referenced paper identifies that 25-33% of Critical Care RNs have severe BOS, and up to 86% have at least one of the triad of symptoms. Up to 45% of ICU physicians have severe BOS. Compared to other types of nurses and physicians, critical care has the highest prevalence.

Potential interventions to prevent or mitigate BOS are many, and generally relate to: i) enhancing the environment, and ii) enhancing the coping skills of individuals. The below table of interventions is adopted from the referenced paper.

Environmental Interventions
- Promote healthy work environment: communication training; appropriate staffing; meaningful recognition
- Self-scheduling / Time off / Limit maximum days worked consecutively

Team-based Interventions
- Team debriefings
- Use Communication Tools
- Team-building / Interpersonal training

HCP-focused Interventions
- Stress reduction training / Relaxation techniques / Meditation
- Assertiveness training
- Time management
- Worklife balance including hobbies, family, and social activities
- Selfcare including adequate rest, exercise, and healthy eating

Intervention to Mitigate Risk Factors in Environment
- Palliative care consultations
- Ethics consultations
- Goals of Care for every ICU patient
- Family Meeting within 72 hours of ICU admission

For more information about BOS, please see the referenced article. If BOS is impacting you and your work, please speak with your manager. Resources are available to support us all.

2017!

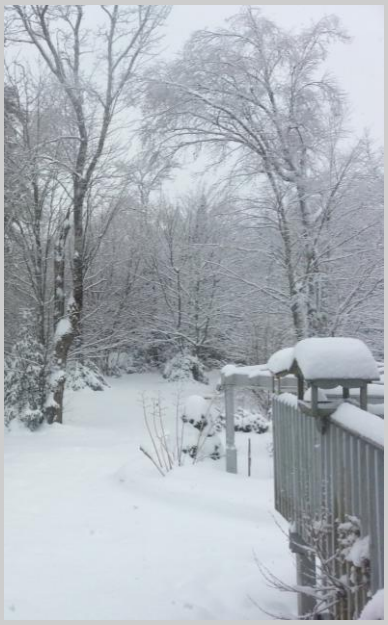
"When the well's dry, we know the worth of water" – Benjamin Franklin

It's Time For A Little Self-Care

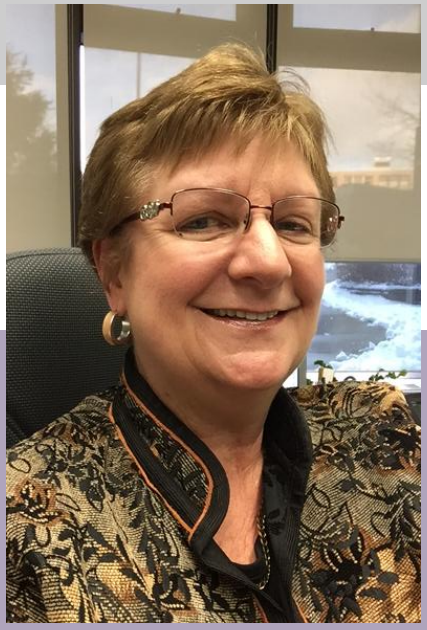
By Rev. David Maginley

It's a new year. And the resolution to care for yourself – body, mind, and soul – will be the most important, accessible, and intermittent promise you will make. In fact, you will not achieve it unless it is intermittent. Here's what I mean:
While caring for your body involves resistance and aerobic exercise, the real muscle growth and overall physical improvement actually happens on rest days between exercises. Even more, it is during sleep that the body rapidly heals and repairs itself. Training the same muscle group every day is the sure path to fatigue, not vitality. You must rest and refuel in order to make gains.

In the same way, working in critical and intensive care without taking regular breaks, without relaxing and nurturing yourself on days off, or taking vacations is a sure path to compassion fatigue. The soul, instead of the muscle, becomes strained and worn out. While the above article discusses burnout among critical care staff and measures you can take for self-care, I also invite you to take 15 minutes to meditate; at the Victoria General you can join other for meditation in the chapel, 11-1:20 M-F. And anywhere you can plug in through apps like buddyhify.com, calm.com, or headspace.com. Keeping that promise to care for yourself could make this the best year ever.



Leadership Corner: Introducing Sharon Stevens



Sharon Stevens is the Senior Director of Critical Care for Nova Scotia; the role of Senior Director was created last year as part of NSHA's provincial health system restructuring and programs development. Sharon holds a BScN from the University of Western Ontario and a Masters in Health Administration from the University of Ottawa. Critical Care practice and management has been the consistent thread throughout Sharon's career, which has taken her back and forth across Canada, from various Toronto area hospitals to Vancouver, Iqaluit –even as far as Saudi Arabia- and now Halifax.

Much of Sharon's work to date has been to first, gain an understanding of Nova Scotia's various communities, its myriad hospitals, and their respective 14 adult critical care units. A dominant observation thus far has been that regardless of a unit's location, size, acuity or resource levels, every ICU inter-professional team has been immensely proud of the care they provide to their patients and their families, and have shown a strong desire to continuously learn and improve. The provincial Critical Care Workstream, Co-chaired by Sharon, Drs. Ward Patrick and Howard Wightman (Valley Regional Hospital) is working on delineating what the provincial Critical Care system might look in the future; it is anticipated that there will be several opportunities for staff to collaborate with their peers throughout the province as new initiatives evolve Sharon encourages everyone to take advantage of these opportunities to add your knowledge and perspectives to ongoing critical care services development.

Sharon sends congratulations to all of you for the impressive care and compassion provided to the sickest patients in the province.

Vancomycin and CRRT Quality Assurance Project

A quality assurance project for vancomycin prescribing and therapeutic monitoring in patients on Continuous Renal Replacement Therapy (CRRT) has begun at the QEII MSNICU and MSICU. A 2-year retrospective evaluation of vancomycin use in patients on CRRT will be used to inform a practice change beginning in February 2017. Current literature suggests that vancomycin levels are often sub-therapeutic in critically ill patients on CRRT as these patients often have a higher volume of distribution and variable drug clearance, making vancomycin dosing challenging. Since acute kidney injury (AKI) requiring CRRT is often associated with sepsis, adequate and timely antibiotic therapy is essential!

The goal of this practice change is to implement an individualized approach to improve the frequency with which timely target vancomycin serum levels are reached in patients on CRRT at the QEII. Stay tuned for preliminary results of the retrospective portion, and information about the prospective practice change coming in the New Year.

This project is supervised by Dr. Meghan MacKenzie, PharmD, Clinical Coordinator Critical Care, and Dr. Tasha Ramsay, PharmD, Clinical Coordinator Infectious Diseases; supported by co-investigators Dr. Richard Hall, Department of Critical Care and Dr. Ian Davis, Division of Infectious Diseases; and led by QEII Pharmacy Resident, Julia Belliveau.

WANTED: Infection Prevention and Control Advocates

The Department of Critical Care and its Q&PS team are looking for Volunteers interested in taking the lead on championing Infection Prevention and Control Improvement initiatives.

3A and 5.2 ICU have a proven track record of infection prevention. We want to take this record to the next level, and demonstrate our leadership in infection prevention and control (IPAC).

We are looking for volunteers to participate in an interdisciplinary group. This group will work with management and the Quality Team to support a positive approach to IPAC.

Please Speak With Your Manager By February 3rd, About Getting Involved!

Examples of Potential Actions include:

- monitor infection rates, including MRSA, VRE, C. diff, VAP and CLI
- monitor hand hygiene rates
- monitor Tb testing rates, vaccination rates, & mask fit testing
- identification of needs for education & training, e.g., emerging viruses / infections
- identification of improvement priorities and strategies
- promoting and celebrating our IPAC successes

Upcoming Events & Conferences:

- **Critical Care Grand Rounds** @ 1200-1300, *Rm 378 Bethune, VG*
  Dr. Jack Rasmussen – Tuesday January 31st (TBA)
  Dr. Sam Minor - Tuesday February 7th (TBA)
  Dr. Edmund Tan – Tuesday February 21st (TBA)
  Dr. Emily Rowsell – Tuesday March 7th (TBA)
  Dr. Laurel Murphy – Tuesday April 4th (neuro-critical care)

- **Critical Care Journal Club** @ 1200-1300, *Rm 378 Bethune, VG*
  Tuesday January 17th
  Tuesday February 14th

- **Critical Care Bioethics Session** January 24th 2017 @ noon
  Rm 378 Bethune Bldg, VG Site
  Topic: Organ Donation After Circulatory Determination of Death
  Presenters: Dr. Emily Rowsell & Dr. Jeff Kirby

- **Blood and Beyond 2017** April 29th & 30th 2017
  The Prince George Hotel, Halifax, NS
  Register at http://nsanesthesia.ca/s/blood-and-beyond

Update from Critical Care Canada Forum

The CCCF was once again held in Toronto on October 30th to November 2nd. The conference was well attended and Dalhousie was well represented with informative presentations by local champions of organ donation and post intubation resuscitation management; Drs Stephen Beed and Robert Green.

A major focus of the conference was discussions around the new definition of sepsis (QSOFA). After a much heated discussion on the new definition, the majority of intensivists are still unclear of the role and place this new definition has in clinical practice and perhaps continuing to use the old definition is still okay. Other major highlights of the conference presented the disappointing data from the EURPHATES trial. The trial examined the use of Polymyxin B Hemoperfusion to clear endotoxin in patients with septic shock; however the end results did not show any overall benefit. The other major trial presented at the conference was the ICE-PACs Trial, which examined the use of prehospital cooling (by EHS) in cardiac arrests in patients. Unfortunately, the results of the trial did not show any long term benefit to patients who received prehospital cooling compared to standard therapy. - *Submitted by Dr. Edmund Tan*

Research Update!

Current studies we are recruiting into are:

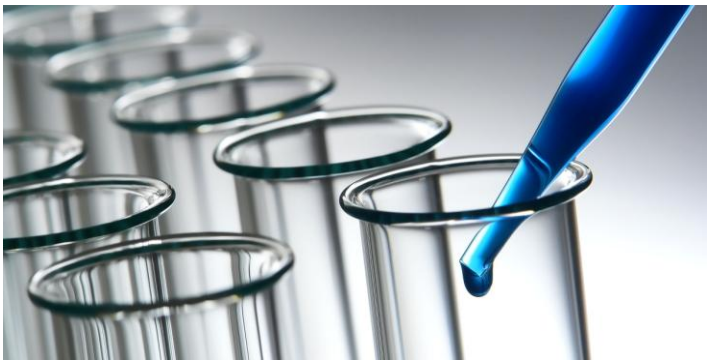
1) PROSPECT: a randomized trial looking at how probiotics prevent severe pneumonia and endotracheal colonization

Studies that will be restarted:

1) DEPPART: an observational study of the prediction of time of death and description of physiological function during the dying process following withdrawal of life-sustaining therapy
2) BALANCE: antibiotic duration in patients with bacteremia required for clinical effectiveness (7 vs. 14 day antibiotic treatment)

Future Direction:

1) CanTBI: database of biological/serum samples from TBI patients to create a database of molecular biomarkers of mild, moderate, and severe TBI
2) TBI Blood Brain Barrier: MRI and serum samples to show evidence of BBB disruption
3) CISS2: use of allogenic mesenchymal stromal cells in septic shock patients
4) CT/Brain Death Study: a prospective evaluation of using CT perfusion as the ancillary test of choice for neurological determination of death in ICUs



"What we know, cures; what we are, heals." ~*Dr. David Kuhl*~

Changes to our Critical Care Family: Welcomes! & Thank You's!

We have had a few new hires and additions to our ICU family since our last edition. **WELCOME!**

- **3A New Staff:** Kelly Grady RN
- **RT New Staff:** Maria Bou-Habib

With the coming of new staff we have seen some amazing members of our family leave. A BIG **thank you** for your dedication and hard work! You will be missed!!

- **5.2 Goodbyes:** Both Tamara Mitterer and Walter Somers have accepted new positions within QEII HSC. 5.2 wishes them the best of luck in their new endeavors!

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