

FALL 2022: SAFETY AND CULTURE

Volume 30, Number 4 • Fall 2022

Introducing the Issue Editor, P. Maxwell DeWitt



P. Maxwell DeWitt, MD, JD

VSA welcomes P. Maxwell DeWitt, MD, JD, as this edition's Issue Editor of the VSA Update.

Max practices at Johnston Willis Hospital, with Commonwealth Anesthesia Associates, and is Chairman of the Institutional Review Board and Chairman of the Ethics Committee.

Prior to attending medical school at VCU, Max attended University of Virginia and William and Mary School of Law. Max then practiced law as a member of the litigation and white-collar crime teams at McGuire-Woods, Kaufman and Canoles, and Hunton Andrews Kurth.

Max maintains an active law license and lives in Richmond with his wife, three kids, and golden retriever.

Feature Article



Leadless Pacemakers: A New Perioperative Management Challenge

By LCDR Henry DeYoung, MD^{1,2}
and Mike Saccocci, DO, MPH^{3,4}

¹Naval Medical Center Portsmouth,
Department of Anesthesia, Pain, and
Critical Care Medicine

²Naval Biotechnology Group, Portsmouth,
Portsmouth Virginia

³Partner, ACV Inc., Roanoke, Virginia
VSA Region 5 Co-Director

⁴Assistant Professor, Department of
Surgery, VTC-SOM, Roanoke, Virginia

Disclaimer: The views expressed in this material are those of the authors and do not necessarily reflect the official policy or position of the U.S. Government, the Department of Defense, or the Department of the Army, Navy, or Air Force.

We are military service members. This work was prepared as part of our official duties. Title 17 U.S.C. 105 provides that "Copyright protection under this title is not



LCDR Henry DeYoung, MD



Mike Saccocci, DO, MPH

available for any work of the United States Government." Title 17 U.S.C. 101 defines a United States government work as a work prepared by a military service member or employee of the United States government as part of that person's official duties.

Introduction

The Micra, Nanostim (recalled by FDA for battery failure), and Avier devices are lead-

Continued on page 8

Inside This Edition:

SAFETY AND CULTURE

President's Message: Anesthesiologists – Patient Safety Crusaders	3	The Role of Diversity, Equity, and Inclusion Efforts Within the Field of Anesthesiology.....	12
From the Issue Editor: Navigating Malpractice Litigation	4	Meet Your Legislator: Sen. Ghazala Hashmi, PhD	14
The Arts: Healthy Greetings	5	COVID-19, Reflecting on Values and Policies.....	16
New Awareness Campaign Launches.....	6	Legislative Update	17
Self-CARE for Anesthesiology Residents: Dunn and Colleagues Awarded Foundation for Anesthesia Education and Research (FAER) Education Grant	7	Members Corner: Stephen P. Long, MD.....	17
Medication Errors: Intrathecal Injection of Tranexamic Acid and Other Medication Mix-ups	10	ASA Board of Directors Meeting Recap.....	18
		Opinion: Solving the Provider Shortage	19



UPDATE

VSA Executive Board

Marie Sankaran Raval, MD
President

Craig Stopa, MD
President-Elect

Brooke Trainer, MD, FASA
Secretary

Casey Dowling, DO, FASA
Treasurer

Jeffrey Green, MD, MSHA, FASA
Immediate Past President
ASA Director

VSA Residents and Fellows Section Board

Peter Cooper, MD
President
CA-2, UVA Health, Charlottesville

Jack Craven, JD, MD, MBA
Vice-President
CA-2, VCU Health, Richmond

Administrative Office

VSA
2209 Dickens Road
Richmond, VA 23230-2005
Phone: (804) 565-6356
Fax: (804) 282-0090
vsa@societyhq.com • www.vsahq.org

Stewart Hinckley
Executive Director
stewart@societyhq.com

Andrew Mann
Association Executive
andrew@societyhq.com

Angela Puryear
Association Administrator
angela@societyhq.com

Newsletter Editors

Editor
Brooke Trainer, MD, FASA
brooke@vsahq.org

Issue Editor
P. Maxwell DeWitt, MD, JD

The **VSA Update** newsletter is the publication of the Virginia Society of Anesthesiologists, Inc. It is published quarterly. The VSA encourages physicians to submit announcements of changes in professional status including name changes, mergers, retirements, and additions to their groups, as well as notices of illness or death. Anecdotes of experiences with carriers, hospital administration, patient complaints, or risk management issues may be useful to share with your colleagues. Editorial comment in italics may, on occasion, accompany articles. Letters to the editor, news and comments are welcome and should be directed to: Brooke Trainer, MD • brooke@vsahq.org.

© Copyright 2022 Virginia Society of Anesthesiologists, Inc.

SAVE THE DATES



VSA ANNUAL MEMBERSHIP MEETING

1:00 pm - 2:00 pm
Saturday October 22, 2022
Hilton Riverside New Orleans
Email vsa@societyhq.com if you plan to attend

VSA ANNUAL MEMBERSHIP MEETING & LEGISLATIVE DINNER

Monday January 23, 2023
Sam Miller's Restaurant
1212 E. Cary St, Richmond, VA 23219
Email vsa@societyhq.com if you plan to attend

Donate to the VaSAPAC

Your contributions make a difference!



Federal and State law require VaSAPAC to use its best efforts to collect and report the name, mailing address, and name of employer of individuals whose donations exceed \$100 in an election cycle. Contributions are not tax deductible.



President's Message

Anesthesiologists – Patient Safety Crusaders

By: Marie Sankaran-Raval
VSA President



Dr. Marie Sankaran Raval
VSA President

We have all been there—healthy patient, vital signs stable. And then something changes. It could be anything...a drop in blood pressure, a loss of end tidal carbon dioxide, or a drop in oxygen saturation. And then

we go into detective mode; searching out the problem, fixing it and ultimately saving our patient. We are our patient's anesthesiologist, advocate and safety crusader.

Anesthesiologists have been at the forefront of patient safety for decades. The Anesthesia Patient Safety Foundation (APSF) was created in 1985. It is a nonprofit corporation dedicated to keeping all patients undergoing anesthesia safe.

Their vision, "That no patient shall be harmed by anesthesia care" is at the forefront of their multiple initiatives. They work to:

1. identify safety measures to improve anesthesia,
2. advocate for anesthesia patient safety worldwide, and
3. provide education regarding anesthesia patient safety culture.

APSF is an independent organization, made up of various stakeholders including physicians and drug and equipment manufacturers, that troubleshoot preventable adverse clinical outcomes.

In 1984, E.C. Pierce, Jr., MD, the president of the American Society of Anesthesiologists (ASA), created the Committee on Safety and Risk Management. He also assembled the Symposium on the Prevention of Anesthesia Mortality and Morbidity, and thus, the APSF was founded.

The APSF quarterly newsletter is read globally and serves to educate the anes-

A culture of safety is essential to create a respectful environment where teams can learn from mistakes and near misses, ultimately driving improvement in anesthesia practice.

sia community regarding safety concerns, news and opinions. The APSF sponsored research grants provide funding for projects aimed at improving anesthesia patient safety concerns. The APSF has been recognized as a leader in patient safety and was used as the model for the National Patient Safety Foundation created by the American Medical Association in 1996.

As medicine and anesthesia continue to evolve, it is incumbent upon us to examine and learn from our mistakes. A culture of safety is essential to create a respectful environment where teams can learn from mistakes and near misses, ultimately driving improvement in anesthesia practice.

We encourage you to read this issue dedicated to patient safety. In one piece, we review three case studies related to medication errors and discuss possible measures to prevent these mistakes.

Another article addresses healthcare disparities, which place patients at a disadvantage and the diversity, equity and inclusion (DEI) efforts in anesthesia aimed at improving patient outcomes.

Lastly, we would like to highlight the VSA's Rest Assured campaign, aimed at raising awareness regarding anesthesia practice in the Commonwealth.

And as always, feel free to reach out to us at the VSA with any concerns and know that we are here, crusading for you and for the safety of our patients.

Navigating Malpractice Litigation

By P. Maxwell DeWitt, MD, JD

VSA Issue Editor

Commonwealth Anesthesiology Associates
Richmond, VA



P. Maxwell DeWitt, MD, JD

The concept of being the subject of medical malpractice litigation is abhorrent to doctors. Unfortunately, statistics indicate that most of us will be sued for malpractice at some point in our career. *N Engl J*

Med. 2011 August 18; 365(7): 629-636. While the majority of lawsuits do not result in payment of any kind (*N Engl J Med.* 2011 August 18; 365(7): 629-636), the journey through litigation remains daunting and the possibility of being sued induces fear and leads to providers practicing defensive medicine. In Virginia, we enjoy a modicum of protection from the extremes of litigation. This minimal protection is provided by both the statutory requirement of expert certification prior to filing and the statutory cap on medical malpractice damages. Also, while the procedural aspects of a malpractice lawsuit are academic and impersonal, as a surgical colleague of mine recently commented, malpractice litigation feels shockingly personal to the defendant doctor. Compounding the angst is the fact that, during litigation, it can feel like we are being blamed for outcomes that are out of our control.

My goal in writing this editorial is to offer some basic strategies that doctors can utilize in order to mitigate the negative impact that lawsuits have in our lives and careers. Toward that end, I sought the insight of two seasoned, respected litigators, one a plaintiff's lawyer and one a defense lawyer, and both good friends of mine. Jonathan Petty spent ten years doing malpractice defense and has since spent over a decade representing plaintiffs in malpractice cases with the firm Phelan Petty. Todd Anderson has represented medical providers in malpractice cases for over twenty years and practices



First, while the term “frivolous lawsuits” gets thrown around frequently, by the time a doctor in Virginia becomes aware of a lawsuit, it is certainly no longer frivolous. As mentioned above, Virginia courts require that an expert certifies the legitimacy of a medical malpractice case before it can be filed.

at the law firm of Herbert & Satterwhite. I hope that their insights and ideas serve to increase your understanding of the process and thereby reduce the fear that accompanies being part of a medical malpractice lawsuit.

At the outset, it is important to debunk two commonly held myths about malpractice litigation. First, while the term “frivolous lawsuits” gets thrown around frequently, by the time a doctor in Virginia becomes aware of a lawsuit, it is certainly no longer frivolous. As mentioned above, Virginia courts require that an expert certifies the

legitimacy of a medical malpractice case before it can be filed. Mr. Petty pointed out that for every malpractice case that he files, he fields and weeds out dozens of inquiries from patients who think they have a case. Second, the idea that juries reach verdicts out of sympathy for the injured party is also a fallacy. According to Mr. Petty, jurors in Virginia always receive an instruction from the judge admonishing them not to allow sympathy to determine the outcome. Mr. Petty also noted that jurors actually tend to defer, and give the benefit of the doubt, to the defendant doctor in the majority of cases.

Mr. Petty offered this advice regarding handling depositions and the following insights about behavioral aspects of the litigation journey. He pointed out that, while animosity between opposing parties is expected, decorum and polite behavior go a long way toward bolstering a defendant doctor's testimony. As a rule, Mr. Petty finds that defendant doctors tend to be better prepared for trial testimony than for depositions. He has been surprised by how often doctors are caught off guard during their deposition. He pointed out that reliance on medical records is obviously necessary and acceptable, but that a total lack of familiarity with the care in question destroys the doctor's credibility. Mr. Anderson agreed, adding that, in Virginia, a defendant's deposition can be read or played at trial, therefore a physician should

Continued on page 5

Malpractice Litigation, *from page 4*

anticipate that his testimony, and demeanor, during a deposition likely will be seen by the jury. Finally, Mr. Petty advises that doctors frequently hurt their cause by trying to step into the lawyers' world, using legal jargon and attempting to control the legal process. He suggested that doctors should focus exclusively on the medical aspects of the litigation, and not attempt to intervene or opine on legal matters.

Mr. Anderson provided insights regarding communication within medical practices and hospitals as well as some general survival techniques for defendant doctors. Throughout his twenty-plus years as a malpractice lawyer, Mr. Anderson has seen first-hand how devastating lawsuits can be to doctors of all specialties, commenting that some clients are brought to tears during the litigation journey. While he realizes that putting a pending lawsuit out of one's mind is impossible, he stressed that doctors need to realize that the litigation experience will be very long, and that there will be seemingly endless periods during which nothing

appears to be happening. This stagnation can be frustrating to professionals who are accustomed to immediate action. However, doctors need to trust their counselors and the litigation process.

Importantly, and irrespective of whether there is pending litigation, he stressed that doctors need to assume that any communication they have involving a patient will be discovered and evaluated at some point. To that end, he stressed that doctors need to keep communication about patients professional, clinical, and care-directed, and to absolutely avoid any blaming or judgmental language. This advice to avoid judgmental language includes casual, post-operative conversations, quick comments at nurses' stations or in hallways or break-rooms. The instinct to engage in cathartic self-absolution or hyperbole needs to be avoided, as any communication, whether conversations or texts or email, will eventually be viewed by the patient and any lawyers who become involved. Obviously, there are exceptions regarding quality improvement and attorney-client privilege, but

doctors should not assume those exceptions apply unless they have assurance from a risk management professional or an attorney. Mr. Anderson stressed that every conversation not protected by some special exception is legally discoverable, and that attorneys are very adept at finding everyone who has any knowledge about a particular patient or incident. Further, he stated that unexpected outcomes occur, but whether overheard or later discovered, patients and families will remember comments and behavior which are patient-focused and directed at achieving the best clinical outcome. Therefore, a good bedside manner may be the best means to avoid litigation altogether.

I hope that this editorial provides some helpful insight into how lawyers view defendant doctors' behavior, and some guidance as to how to prepare for and deal with malpractice litigation. Many thanks to Mr. Petty and Mr. Anderson for their kind efforts and great advice. Questions, comments, or experiences from readers are welcome.

The Arts

Healthy Greetings

By Jaikumar Rangappa, MD, LTC, DABA, FACA

Retired US Army

September 1, 2020



Dr. Jaikumar Rangappa

In India all greet & say "Numaskar"
To friend, stranger, son, or daughter
Greet with folded hands near or far
Two Sanskrit words -Numha-Aakar
"Numha" says complete surrender
To an Almighty as formless (Aakar).

A form of greeting the world over
As Indians socially meet & gather
NO TOUCH way as cordial greeter
In folded hands, a graceful manner
Used anytime in sadness, laughter.

Health care providers MUST practice
Touchless greeting with no prejudice
With all in a hospital, ER or any office,
Handshake transfer bugs which crawl
From doctor to nurse to patient in hall.

Now in this age of the C-19 pandemic
Need to social distance from the sick
Not washing hands, running to clinic
Dirty or clean greet with folded magic

Avoid bug spread that cause epidemic
Wear protective mask when in public.
MERSA and other infections will be reduced
Obama Care won't bust if preventive care used
If my point is very clear all of us can surely agree
Greeting with clean folded hands keeps all Healthy.

New Awareness Campaign Launches



VSA is working to increase public awareness of the role anesthesiologists play in patient care, starting with a larger-than-life approach along Interstate 95 in Virginia's capital.

Billboards in Richmond kicked off our "Rest Assured" campaign, featuring Virginia anesthesiologists alongside real patients who have benefited from their care. Viewers are directed to our new RestAssuredVA.com website with patient stories and resources.

Through the fall, we're expanding our reach into digital and print advertising. We're investing in a variety of key outlets to reach our target audience, including Virginia Business, Blue Ridge Outdoors, Washingtonian, Facebook and a variety of content published by the Virginia Hospital and Healthcare Association.

How can you help amplify our campaign?

When you see one of our ads, please mention it and pass it along. Also be on the lookout for a social media toolkit we're producing for you. This will make it easier to share our campaign on your personal and business social media outlets (LinkedIn, Facebook, Twitter). We also hope you'll include it in any of your email newsletters or websites.

Our campaign is grounded in an October 2021 survey we commissioned on public understanding of anesthesiologists. We aim to reach decision-makers, parents, lawmakers, patients facing surgery and Virginia health care influencers in key markets.

VSA has contracted Jason Roop of Springstory public relations and content marketing to help define and roll out the messaging. He's focused on strengthening public awareness about anesthesiologists as leaders of the patient care team — physicians who provide expert, vital attention before, during and after surgery.



VSA billboard on I-95



VSA billboard in Richmond's Carytown district

Self-CARE for Anesthesiology Residents: Dunn and Colleagues Awarded Foundation for Anesthesia Education and Research (FAER) Education Grant

By Lauren K. Dunn, MD, PhD

University of Virginia
Charlottesville, VA



Lauren K. Dunn, MD, PhD

Medicine, and particularly the field of anesthesiology, carries a high burden of psychological stress that may lead to adverse physical and mental health effects and burnout.

Physician burnout is associated with impaired social relationships and increased risk for depression and suicide¹ and may jeopardize patient safety and quality of care.² Anesthesiologists report some of the highest rates of burnout (41% report high rates and 59% report moderate burnout)³ with younger, early-career anesthesiologists and those with young children at especially high risk.^{3,4}

Among anesthesiology residents, incidence of burnout ranged from 41-51% while risk of depression ranged from 12-22% in recent studies.^{4,5} Education during residency training on how to cope with and reduce stress is essential to prevent the loss of early career anesthesiologists and improve well-being in our specialty.⁴

The 2020 COVID-19 pandemic brought unprecedented challenges for anesthesiology and critical care physicians including increased clinical workloads, longer shifts, and disruption to sleep and work-life balance, all contributing to increased levels of physical and mental fatigue, stress and burnout.⁶ COVID-19 also disrupted resident education with physical distancing requirements necessitating a shift to asynchronous online learning and limited opportunities for in person education and face-to-face interaction.⁷

Our group at the University of Virginia was recently awarded at 2021 Foundation for Anesthesia Education and Research (FAER) Research in Education Grant for our project titled “Bundle of Love: The Effect of Self-

The goal of our study is to characterize physical and psychological factors associated with resident well-being using ecological momentary assessment and to determine the effect of a self-CARE education bundle on well-being indicators.

CARE (Compassion, Appreciation, Rest, and Exercise) on Anesthesiology Resident Wellness”, which was designed to address the need for novel tools and interventions to support physician health and wellness.

Our research team includes Lauren Dunn, MD, PhD (principal investigator), Edward Nemergut, MD (project mentor), Julie Huffmyer, MD and Bhiken Naik, MBCh. The goal of our study is to characterize physical and psychological factors associated with resident well-being using ecological momentary assessment and to determine the effect of a self-CARE education bundle on well-being indicators.

This multi-institution study has currently enrolled over 100 anesthesiology residents from five residency programs including the University of Virginia, University of North Carolina, Beth Israel Deaconess, University of Kentucky and West Virginia University.

For the study, which is co-sponsored by OURA Health, participants receive an OURA ring activity tracker to monitor their sleep and activity and are asked to complete short weekly health and wellness questionnaires on their personal smart phone. Participants randomly receive a self-CARE education bundle designed in collaboration with Marissa Knox, PhD, a psychologist and teacher at the University of Texas at Austin who specializes in mindful self-compassion.

The education bundle consists of training

in mindful self-compassion through a series of 6 podcast recordings, an online community forum and daily ecological momentary intervention to improve physician well-being and reduce burnout.

Knowledge gained from this study will identify factors associated with resident well-being and help us to design approaches to teaching and supporting well-being in anesthesiology residency training and practice.

References

1. Kuhn CM, Flanagan EM. Self-care as a professional imperative: physician burnout, depression, and suicide. *Can J Anaesth.* 2017;64(2):158-168.
2. Rathert C, Williams ES, Linhart H. Evidence for the Quadruple Aim: A Systematic Review of the Literature on Physician Burnout and Patient Outcomes. *Med Care.* 2018;56(12):976-984.
3. Sanfilippo F, Noto A, Foresta G, et al. Incidence and Factors Associated with Burnout in Anesthesiology: A Systematic Review. *Biomed Res Int.* 2017;2017:8648925.
4. Sun H, Warner DO, Macario A, Zhou Y, Culley DJ, Keegan MT. Repeated Cross-sectional Surveys of Burnout, Distress, and Depression among Anesthesiology Residents and First-year Graduates. *Anesthesiology.* 2019;131(3):668-677.
5. de Oliveira GS, Jr., Chang R, Fitzgerald PC, et al. The prevalence of burnout and depression and their association with adherence to safety and practice standards: a survey of United States anesthesiology trainees. *Anesth Analg.* 2013;117(1):182-193.
6. Sasangohar F, Jones SL, Masud FN, Vahidy FS, Kash BA. Provider Burnout and Fatigue During the COVID-19 Pandemic: Lessons Learned From a High-Volume Intensive Care Unit. *Anesth Analg.* 2020;131(1):106-111.
7. Martinelli SM, Chen F, Isaak RS, Huffmyer JL, Neves SE, Mitchell JD. Educating Anesthesiologists During the COVID-19 Pandemic and Beyond. *Anesth Analg.* 2020.

Leadless Pacemakers, from page 1

less pacemaker (LP) systems recently approved by the FDA (approval in 2016, 2020, and 2021 respectively) that are becoming more and more common among patients in the United States.^{1,2,3} Of these, the Micra is the most commonly encountered.²

These devices offer significantly fewer complications over traditional transvenous permanent pacemakers (TV-PPM), including reduced rates of thrombosis, endocarditis, cardiac tamponade, lead fracture, and valvular injury. Additionally, patients avoid sustaining a scar from placement.⁴

LP systems pose unique challenges compared to traditional TV-PPM. Despite increasing use, studies and guidelines on the best management strategies are lacking.^{2,5} Here we discuss many of the considerations and strategies to manage patients with Micra leadless pacemaker devices.

Background

The Micra VR and AV are single chamber LPs, implanted into the right ventricle endocardium via a transfemoral venous approach. At approximately 0.8cm³, they are 93% smaller than traditional pacemaker generators.⁶⁻⁹

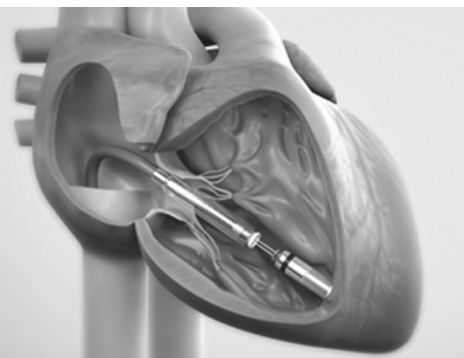
LP devices provide pacing, sensing, and rate modulation. The Micra VR device has 4 total functional modes (VVI, VVIR, VOO, OVO), and the Micra AV has 7 total functional modes (VVI, VVIR, VOO, OVO, VDD, VDI, ODO). Both LP devices also have an off function, accelerometer-based rate modulation, and are conditionally appropriate for MRI.^{2,7,8}

The Micra VR and AV devices have 12 and 8-13 year battery lives respectively. Both devices utilize single right ventricular pacing which can lead to left ventricular dyshconrny. The Micra AV device has the additional advantage of accelerometer based mechanical and synchronous atrial sensing.

The mechanical atrial contraction strength is detected via the device's accelerometer. AV synchronous pacing does reduce single right ventricular pacing. This does, however, improve ventricular filling, stroke volume, and cardiac output in patients who are in normal sinus rhythm with high degree AV block. Most importantly, neither device responds to ring magnet placement.²

Anesthetic Considerations

Patients with LP require similar screening



to those with TV-PPM. A thorough review of the patient's medical history, indications for pacemaker placement, current mode, degree of dependence, interrogation history, and last cardiology visit are critical.^{2,10}

Perioperative management of LP and specifically the Micra device has not yet been addressed by The Heart Rhythm Society/American Society of Anesthesiologists in an updated guideline.⁵ For this reason, changing rates or reprogramming to an asynchronous mode necessitates an electrophysiologist or field representative.^{2,7,8,9, 11,12,13}

Similar to TV-PPM, LPs respond to electromagnetic interference (EMI) with potential problems like unintended pacemaker inhibition, inappropriate response to electrical noise, and delivery of inappropriate pacing or shocks.^{2,13-15} EMI can result from electrocautery, electroconvulsive therapy, shockwave lithotripsy, magnetic resonance imaging, and transcutaneous nerve stimulators for postoperative pain.¹⁶

Pacemaker device field representatives have been known to advise anesthesiologists to place a commercial ring magnet over their TV-PPM generators to induce asynchronous mode operation. In this mode, the pacemaker ignores spurious input from sources such as electrocautery or nearby radio-frequency interference in the operating room.⁵

As previously stated, ring magnet application has no effect on the Micra devices.² This is due to the absence of a hall sensor and intracardiac location.¹³

While magnet response differs from traditional TV-CIED, whether asynchronous pacing is required for an LP device is based upon similar patient and surgical characteristics. These include pacemaker dependency, use of electrocautery and type electrocautery, and location of surgery.

For all patients with LP devices and surgical scenarios, the surgeon should be

informed about the unique aspects of the LP device. If possible, they should be encouraged to use bipolar electrocautery or a harmonic scalpel. Return electrode pads should be at least 15cm from the pacemaker.

Regardless of electrocautery type, surgeons should also be encouraged to use short intermittent irregular bursts with the lowest possible energy.^{2,13} Postoperative patients likely require interrogation if monopolar electrocautery was used, patient had signs of hemodynamic instability, and for cardiothoracic surgery, ablation procedures, or cardioversion. All pacemaker dependent patients likely require postoperative interrogation or specialist evaluation.¹³

For pacemaker dependent patients who require surgery above the umbilicus, reprogramming to an asynchronous mode is necessary.¹³ If these patients require emergency surgery below the umbilicus they likely do not require reprogramming.

That said, similar considerations include traditional TV- PPM, grounding pads should be placed so that return electrical currents do not pass near the Micra, and avoidance of monopolar electrocautery whenever possible.²

Patients with low pacing burden or those who are non-pacemaker dependent require the same or similar considerations as they too can experience bradycardia and hypotension. Reprogramming in these patients may not be necessary as an R-on-T phenomenon may result and could be higher risk than EMI.

For these patients, the decision to have the device reprogrammed should be individualized depending on previously mentioned factors such as location of surgery, electrocautery type, etc., and risk factors should be minimized whenever possible.²

Continued on page 9

In pacemaker dependent patients requiring emergency surgery above the umbilicus where device reprogramming is not possible, special consideration should be given to this delicate situation. These patients may be in VVI mode which can lead to frequent bradycardia and hypotension requiring close monitoring.²

Additional interventions to mitigate perioperative risk include having temporary pacing and defibrillation equipment in the operating room. Intraoperative hemodynamic monitoring should include manual pulse checks and pulse oximetry. Doppler pulse detection and invasive arterial monitoring may also be necessary.²

Specific surgeries such as cardiac and thoracic surgeries pose unique considerations. For the Micra AV device, mechanical sensing for AV synchronous pacing may be ineffective. Tissue displacement during surgery may cause the Micra device to pace the ventricle in an asynchronous fashion to the sinus node.

Cardiac surgery concerns are related to line placement, intracardiac catheters, and support devices that could lead to pulmonary embolization. This is particularly of concern if placement was within the previous few months.²

Previous Reports

Several case reports, case series, and other reports have been published on the perioperative management of LP. While management strategies varied, no cases of EMI occurred.^{7,9,13,15} Mickus et al. 2016 reported a patient undergoing tracheostomy who was non-pacemaker dependent without pacemaker reprogramming. Short burst bipolar electrocautery was used and defibrillation/temporary pacing equipment were also readily available. The patient did not sustain any complications.⁷

In one case series of 6 patients requiring 7 separate procedures, none of the patients received device reprogramming. Only 1 of the patients was pacemaker dependent. Monopolar electrocautery was frequently used.

No instances of EMI were detected.¹⁵ In another case report, a patient with pacemaker dependency underwent successful kidney-pancreas transplant after pacemaker reprogramming without complication.¹³

Conclusion

As leadless pacemaker devices are becoming more common, Anesthesiologists should familiarize themselves to ensure the safest perioperative conditions possible. Surgeons should be informed of the unique considerations for these devices. If possible, field representatives or an electrophysiologist should be consulted prior to surgery to discuss the need for and reprogramming to asynchronous pacing.

Finally, if patients require emergency surgery and asynchronous pacing is desired, but not possible, all the measures to limit EMI should be pursued.

References

1. Bhatia N, El-Chami M: Leadless pacemakers: a contemporary review. *J Geriatr Cardiol* 2018; 15:249–53
2. Cody J, Graul T, Holliday S, Streckenbach S, Hussain N, Dalia AA, Cronin B, Hargrave J, Augoustides JG, Essandoh M: Nontransvenous Cardiovascular Implantable Electronic Device Technology—A Review for the Anesthesiologist 2021; 35:pp 2784–91
3. Han JJ: The Aveir Leadless Pacing System receives FDA approval 2022; 46:pp 1219–20
4. Reynolds D, Duray GZ, Omar R, Soejima K, Neuzil P, Zhang S, Narasimhan C, Steinwender C, Brugada J, Lloyd M, Roberts PR, Sagi V, Hummel J, Bongiorni MG, Knops RE, Ellis CR, Gornick CC, Bernabei MA, Laager V, Stromberg K, Williams ER, Harrison Hudnall J, Ritter P: A Leadless Intracardiac Transcatheter Pacing System 2016; 374:pp 533–41
5. Crossley GH, Poole JE, Rozner MA, Asirvatham SJ, Cheng A, Chung MK, Bruce Ferguson T, Gallagher JD, Gold MR, Hoyt RH, Irefin S, Kusumoto FM, Moorman LP, Thompson A: The Heart Rhythm Society (HRS)/ American Society of Anesthesiologists (ASA) Expert Consensus Statement on the Perioperative Management of Patients with Implantable Defibrillators, Pacemakers and Arrhythmia Monitors: Facilities and Patient Management: Executive Summary 2011; 8:pp e1–18
6. Chan KH, McGrady M, Wilcox I: A Leadless Intracardiac Transcatheter

Pacing System 2016; 374:p 2604

7. Mickus GJ, Soliman GI, Reed RR, Martin AK: Perioperative Management of a Leadless Pacemaker: The Paucity of Evidence-Based Guidelines. *J Cardiothorac Vasc Anesth* 2016; 30:1594–8
8. Medtronic Micra Pacemaker 2019; 49:pp 167–167
9. Essandoh M: Perioperative Management of the Micra Leadless Pacemaker 2017; 31:pp e97–8
10. Practice Advisory for the Perioperative Management of Patients with Cardiac Implantable Electronic Devices: Pacemakers and Implantable Cardioverter-Defibrillators 2020: An Updated Report by the American Society of Anesthesiologists Task Force on Perioperative Management of Patients with Cardiac Implantable Electronic Devices: Erratum. *Anesthesiology* 2020; 132:938
11. Cronin B, Essandoh MK: Perioperative Interrogation of St. Jude Cardiovascular Implantable Electronic Devices: A Guide for Anesthesiologists 2018; 32:pp 982–1000
12. Cronin B, Dalia A, Nguyen Q-S, Sandoval K, Birgersdotter-Green U, Maus T, Essandoh MK: Perioperative Interrogation of Medtronic Cardiovascular Implantable Electronic Devices: A Guide for Anesthesiologists. *J Cardiothorac Vasc Anesth* 2020; 34:2465–75
13. Banik R, Karuppiah S, Prielipp R: Anesthetic consideration for patients with micra leadless pacemaker 2020; 23:p 493
14. Misiri J, Kusumoto F, Goldschlager N: Electromagnetic interference and implanted cardiac devices: the medical environment (part II). *Clin Cardiol* 2012; 35:321–8
15. Gifford J, Saleem M: Evaluation of surgical electromagnetic interference in leadless pacemakers. *HeartRhythm Case Rep* 2018; 4:570–1
16. Thompson A, Mahajan A: Perioperative management of cardiovascular implantable electronic devices: what every anesthesiologist needs to know 2013; 116:pp 276–7

Medication Errors: Intrathecal Injection of Tranexamic Acid and Other Medication Mix-ups

Source: PPM Anesthesia & the Law, Issue 44, May 2017

Reprinted with permission by Preferred Physicians Medical

By Tracey A. Dujakovich
Senior Claims Attorney
Preferred Physicians Medical
Overland Park, KS

Medication errors continue to cause serious patient harm, including catastrophic brain damage and death. Medication errors may also create significant liability exposure for anesthesia professionals. As highlighted in the following case studies, claims and litigation involving allegations of medication errors are both challenging to defend and frequently result in significant settlements.

Case Study One

A 59-year-old female was scheduled for a total right hip replacement performed under spinal anesthesia. Two certified registered nurse anesthetists (CRNAs) participated in the anesthesia tray set up. One CRNA was drawing up the various medications into syringes and preparing the anesthesia tray, while the other CRNA was responsible for initialing and dating each syringe. The medication syringes in question were reportedly marked with a white label for bupivacaine and gray label for the tranexamic acid (an antifibrinolytic).

In preparing the patient for surgery, the CRNA assigned to the case administered the spinal injection. Shortly thereafter, the patient complained of some lower back and buttock itching. As the patient was being prepared for surgery, the nurses attempted to place a urinary catheter but had trouble doing so due to the patient's leg movements and resistance. The anesthesia team then decided to convert to a general anesthetic. The patient also experienced some bouts of hypertension that were treated with increased levels of anesthetic. The patient exhibited continued leg twitching despite the administered paralytics.

At the end of the procedure, the patient did not arouse as expected. Following transfer to the PACU, the patient, who was still not

awake, began to experience seizure-like activity. The supervising anesthesiologist called for a neurological consult and a CT was performed which was normal. The patient was given Dilantin, Versed, and propofol to alleviate her tonic/clonic activity. She was subsequently placed in a barbiturate coma to stop the activity and was on continuous EEG monitoring.

Shortly after this incident, one of the CRNAs involved in preparing the syringes performed a Google search for "bupivacaine/spinal seizure-like activity" that returned an abstract of a research article entitled "Inadvertent Administration of Tranexamic Acid into Spine," which matched the patient's symptoms. The CRNA immediately printed the abstract and provided it to the supervising anesthesiologist. Based on the review of the abstract of the article and the patient's symptoms, the supervising anesthesiologist believed the patient likely received an intrathecal injection of tranexamic acid instead of bupivacaine.

The hospital conducted a prompt investigation of the incident but was unable to determine which CRNA was responsible for causing the suspected medication mix-up. Following multiple consults and tests over several days, the anesthesia practice group and the hospital jointly informed the patient's husband a medication mix-up likely had occurred. The patient sustained significant neurologic injuries and was transferred to a rehabilitation facility. The patient was ultimately able to return home but was anticipated to require home healthcare for the remainder of her life.

The patient's husband sued the two CRNAs, the supervising anesthesiologist, the anesthesia practice group, and the hospital. After considerable litigation discovery and with the consent of the providers, the lawsuit was eventually settled on behalf of all of the anesthesia defendants within the available \$2,000,000 insurance policy limits. The hospital proceeded to trial and a jury

returned a verdict in favor of the plaintiff for \$8.5 million.

Risk Management Analysis

The anesthesia group implemented a new policy immediately after this devastating incident requiring that all spinal tray medications be checked by a second provider prior to administration. The policy also mandates that bupivacaine and other spinal medications should not be opened or prepared until the time of actual administration.

It is recommended that anesthesia professionals consider working with the facility pharmacy to minimize medication errors, e.g., if possible tranexamic acid should be mixed by the pharmacy in an IV bag and not accessible as a vial to anesthesia care givers.

Case Study Two

A 41-year-old male presented for pain management for exacerbation of low back pain and failed back syndrome. The patient's history included two previous back surgeries. The patient was to undergo a caudal epidural steroid injection followed by epidurography. The anesthesiologist personally retrieved the contrast dye to be utilized for the procedure. There were no apparent complications with the injection or the procedure and the patient was discharged.

Approximately 3 hours post-discharge, the patient's caregiver called the anesthesiologist and reported that the patient was in severe pain. The anesthesiologist instructed the caregiver to take the patient to the emergency room (ER) immediately. Approximately 30 minutes later, the anesthesiologist received a call from the ER physician inquiring about the procedure the patient had undergone. Shortly after this phone call, the patient coded and could not be resuscitated.

Following the incident, the anesthesiologist discovered that the radiopaque diag-

Continued on page 11

Medication Errors, from page 10

nostic agent for this procedure was Hypaque dye, which is contraindicated for use in the epidural space. Serious adverse effects from an epidural injection of Hypaque dye include convulsions and death. Despite the dangers associated with the inadvertent use of the drug, the hospital's practice for handling this radiological medication was to remove the medication from its packaging, discard the medication insert, and place the medication in a bin in a common area.

The patient's wife and daughter sued the anesthesiologist, the anesthesia practice group, and the hospital. The allegations against the anesthesiologist included not reviewing the dye's package insert, improperly administering Hypaque dye in the caudal epidural injection, failing to recognize and diagnose the patient's condition when contacted by the ER physician, and failing to communicate to the ER physician the recommended treatment for an epidural injection.

The allegations against the hospital included removing the package insert, storing Hypaque dye in a common area where it was readily available, and failing to have appropriate policies and protocols in place requiring the pharmacy to check off on the proposed procedure and use before the dye was administered.

No anesthesia experts reviewing the case could support the administration of Hypaque dye in the epidural space. The experts were also critical of the hospital for failing to have appropriate policies and protocols in place to prevent the inadvertent administration of a contraindicated contrast dye in the epidural space.

Defense counsel estimated a potential jury verdict range from \$5 million to \$7 million. The estimated settlement range was \$1.5 million to \$2 million for the anesthesiologist and the anesthesia practice group. Based on a lack of expert support and defense counsel's evaluation, including the potential for a jury verdict in excess of the insurance policy limits, the case was settled on behalf of the anesthesiologist and the anesthesia practice group for \$1,850,000. The hospital also entered into a settlement with the plaintiffs for a confidential amount.

Risk Management Analysis

The hospital's practice of removing the

medication from the packaging, discarding the medication insert and placing the medication in a bin in a common area set the stage for this catastrophic medication error. Anesthesiologists and anesthesia departments should work closely with their practice facilities to develop departmental protocols for the prescription, storage, preparation, administration, and documentation of medications, especially those that pose a significant patient risk.

Case Study Three

A 28-year-old female received a spinal anesthetic for a caesarean-section delivery. The spinal was uneventful, and the supervising anesthesiologist asked the CRNA to administer Reglan. Shortly after the administration, the patient said that she was not feeling right, and her blood pressure increased significantly. The anesthesiologist treated her symptoms, and the baby was delivered with no complications.

The patient was transferred to the ICU and was kept there for one day with mild hypoxia and pulmonary edema. The symptoms resolved and she was discharged home. The anesthesiologist believed that the patient was administered phenylephrine instead of Reglan. It was determined the patient likely received a dose of phenylephrine 100 times the usual dosage. According to the anesthesiologist, both phenylephrine and Reglan used at the hospital had similar packaging, thus increasing the likelihood of a medication mix-up. The patient and her husband were informed of the suspected medication error.

The patient and her husband sued the anesthesiologist, the CRNA, the anesthesia practice group, and the hospital. The patient alleged the medication error caused cardiac damage and hypoxia resulting in brain damage measurable on neurological testing. The patient's treating neuropsychologist opined that the patient was impaired in executive functioning, learning, memory, and motor functioning.

The patient's economist expert valued lost earnings, home services, future lost earnings, and medical expenses at \$2,213,900. Based on defense counsel's evaluation of the facts, counsel indicated that the case would likely be submitted to a jury as a case of admitted liability by all the defendants with evidence of damages over \$2 million. Based

on those facts and evidence, defense counsel recommended settlement. The parties participated in mediation and the case settled on behalf of the CRNA for \$450,000.

Scope of the Problem

Historically, medical literature and retrospective studies addressing medication errors in the anesthesia workplace have been limited and consisted of self-reported incidents. However, according to one study, medication errors in the perioperative setting occurred in nearly half of all operations, and one in 20 perioperative medication administrations included some type of medication error. More than one third of these errors led to patient harm, and the remaining two thirds had the potential for patient harm. Other studies have cited medication errors as the most common cause of patient injuries in hospitals occurring in an estimated 1.5 million patients in the United States annually.

Causes of Medication Errors

Unlike other patient care areas such as inpatient units and outpatient clinics, the perioperative setting typically has fewer systems and safeguards to avoid medication errors. Anesthesia professionals frequently select, prepare, label, and administer medications without pharmacy review of medication orders, electronic clinical decision support, and secondary checks by other providers. The absence of adequate systemic medication safety practices in the perioperative setting continues to cause patient injury.

Other system-related causes of medication errors may include the high-stress, time-sensitive nature of the operating rooms (ORs), distractions from various sources, different locations for medication storage, use of distal instead of proximal port to inject medications, and repetitive task designs that encourage automatic behavior and lack of attention.

Patient Safety Strategies to Prevent Medication Errors

In 2010, the Anesthesia Safety Patient Foundation (APSF) convened a consensus conference of 100 stakeholders to develop a new paradigm to reduce medication errors

Continued on page 15

The Role of Diversity, Equity, and Inclusion Efforts Within the Field of Anesthesiology

By Steven Bradley, MD, LCDR, USN MC
Assistant Professor of Anesthesiology
Uniformed Services University of
Health Sciences
Bethesda, MD



Steven Bradley, MD, LCDR,
USN MC

Background

In 2003, the Institute of Medicine published, “Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care”. This seminal report examined the etiology and impact of

racial and ethnic healthcare disparities and provided recommendations for solving the problems identified¹. Since then, implementation of diversity, equity, and inclusion (DEI) efforts has grown exponentially.

Over time, academic medicine began to recognize and encourage further research into this field. Although further research is needed, medicine and its siloed specialties must effect meaningful change. What are these disparities, and how do they present in the field of anesthesiology? How can they be solved, and what is the role of DEI efforts?

The Social Determinants of Health

Healthcare disparities present as differences in access and differences in the quality of care that is linked to social, economic, racial, or environmental disadvantage. It is important to understand the etiology of these disparities. Social determinants of health have been identified that, although largely external to the hospital, play a significant role in disparate health outcomes². Economic stability, education access and quality, health care access and quality, employment and housing stability, and other social contexts impact health outcomes for vulnerable populations³. It is important to note that these determinants of health may impact patients independent of their racial or ethnic identity. However, Black and Hispanic populations are more significantly impacted than their White counterparts.



Fortunately, research is beginning to highlight these disparities in care. Once identified, the focus can now shift to mitigation and prevention.

Healthcare Disparities Specific to Anesthesiology

Within the field of anesthesiology, racial and ethnic disparities exist in multiple ways. One study found Black parturients were twice as likely to receive general anesthesia for cesarean delivery when compared to White parturients⁴. Another study showed Black patients undergoing coronary artery bypass grafting and total hip arthroplasty were at increased risk of blood transfusions when compared to White patients, despite controlling for comorbidities⁵. There is worse perception and management of pain in Black patients compared to their peers⁶, and Hispanic patients were less likely to receive a regional adjunct for hip and knee surgeries when compared to White patients⁷.

Fortunately, research is beginning to highlight these disparities in care. Once identified, the focus can now shift to mitigation and prevention. As previously noted, the etiology of healthcare disparities is complex and multifactorial. These issues must

be addressed from the bedside, patient-care level, all the way up to the professional society level.

Strategies To Effect Change

Starting at the bedside, anesthesiologists must recognize the impact of the social determinants of health on their individual patients. Realize that poor access or an underfunded educational system contributes to decreased health literacy. Are we easily frustrated when a patient does not understand the ramifications of a general anesthetic or is concerned about paralysis from an epidural? This is an opportunity to effect change.

Perhaps there is a language barrier in the context of a busy operating room schedule with limited time for effective preoperative evaluations. Recognize that systemic constraints are increasing the risk of a disparate outcome and resist the urge to push forward with a patient who may not fully understand the anesthetic plan or their options. Realize that the poorly optimized patient may be underinsured or come from a low socioeconomic status, leading to increased risks of delays, cancellations, or poor outcomes. Realize that a case cancellation may result in a patient needing to take additional days off work, worsening any preexisting economic hardship. Although there may not be an opportunity to directly effect change on a systemic level, understanding the broader

Continued on page 13

context will likely allow for additional empathy and potentially improved bedside manner, which is crucial to maintaining patient-physician relationships with populations that have been historically marginalized by organized medicine⁸.

From a departmental level, initiatives should be developed that provide education on social determinants of health, implicit and explicit bias, and cultural sensitivity. Anesthesia departments should work to understand the racial and cultural milieu of the surrounding community. They should value diversity within their employees, as this contributes to improved patient satisfaction, communication, and cultural awareness⁸.

A diverse healthcare workforce has been associated with improved healthcare delivery and patient outcomes⁹. Safe spaces should be cultivated where open, honest discussions can be had. Academic departments are responsible for training future generations of anesthesiologists and should certainly understand the significance of maintaining a diverse workforce. These departments should prioritize and cultivate faculty that provides representation and mentorship to our future colleagues from various backgrounds.

Professional societies develop practice guidelines and compile consensus statements. It is imperative that the leadership of these organizations does not remain a homogenous reminder of the past. Diverse backgrounds and perspectives are needed to ensure these practice guidelines and consensus statements are developed in the best interests of the clinicians and the patients they will serve. Professional organizations and societies anchor the goals and priorities of their members. They represent and reinforce the true values of an organization and it is imperative that they work to close the outcome gaps left by healthcare disparities.

The Need for Widespread DEI Efforts in Anesthesiology

Across academic medicine, DEI initiatives continue to grow. However, academic medicine represents less than half of the currently practicing anesthesiologists. Small groups and practice management corporations should glean from the research that

has been produced surrounding healthcare disparities in anesthesiology. The recommended initiatives should be implemented across all practice models to improve the quality of care provided. In addition to continuing medical education, groups may consider following the lead of the American Board of Anesthesiology by hiring DEI consultants¹⁰ to ensure the needs of diverse patients and staff are being met.

Conclusion

A discussion of the etiology of healthcare disparities in America requires a deep, critical investigation into a dark history; a history that includes structural and systemic racism, slavery, and discrimination. The effects of this sordid past continue to impact healthcare to this day.

As anesthesiologists, in addition to ensuring the provision of safe anesthesia care, it is also our responsibility to identify and mitigate healthcare disparities. Focusing on DEI efforts is focusing on our most vulnerable patients, the patients that depend upon us the most.

References

1. Institute of Medicine (US) Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care. Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care. Smedley BD, Stith AY, Nelson AR, editors. Washington (DC): National Academies Press (US); 2003. PMID: 25032386.
2. Estime, Stephen R. MDa; Lee, Helen H. MD, MPHb; Jimenez, Nathalia MD, MPHc; Andreae, Michael MD, MBAd; Blacksher, Erika PhD; Navarro, Renee MD, PharmDf Diversity, equity, and inclusion in anesthesiology, International Anesthesiology Clinics: Fall 2021 - Volume 59 - Issue 4 - p 81-85 doi: 10.1097/AIA.0000000000000337
3. Healthy People 2030, U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Retrieved [date graphic was accessed], from <https://health.gov/healthypeople/objectives-and-data/social-determinants-health>
4. Butwick AJ, Blumenfeld YJ, Brookfield KF, Nelson LM, Weiniger CF. Racial and Ethnic Disparities in Mode of Anesthesia for Cesarean Delivery. *Anesth Analg*. 2016 Feb;122(2):472-9. doi: 10.1213/ANE.0000000000000679. PMID: 26797554; PMCID: PMC4724639.
5. Qian F, Eaton MP, Lustik SJ, Hohmann SF, Diachun CB, Pasternak R, Wissler RN, Glance LG. Racial disparities in the use of blood transfusion in major surgery. *BMC Health Serv Res*. 2014 Mar 11;14:121. doi: 10.1186/1472-6963-14-121. PMID: 24618049; PMCID: PMC3995741.
6. Green CR, Anderson KO, Baker TA, Campbell LC, Decker S, Fillingim RB, Kalauokalani DA, Lasch KE, Myers C, Tait RC, Todd KH, Vallerand AH. The unequal burden of pain: confronting racial and ethnic disparities in pain. *Pain Med*. 2003 Sep;4(3):277-94. doi: 10.1046/j.1526-4637.2003.03034.x. Erratum in: *Pain Med*. 2005 Jan-Feb;6(1):99. Kaloukalani, Donna A [corrected to Kalauokalani, Donna A]. PMID: 12974827.
7. Memsoudis SG, Poeran J, Zubizarreta N, Rasul R, Oppenheimer M, Mazumdar M. Anesthetic Care for Orthopedic Patients: Is There a Potential for Differences in Care? *Anesthesiology*. 2016 Mar;124(3):608-23. doi: 10.1097/ALN.0000000000001004. PMID: 26771909.
8. Diallo, Mofya S. MD, MPH*; Tan, Jonathan M. MD, MPH, MBI, FASA†; Heitmiller, Eugenie S. MD, FAAP‡; Vetter, Thomas R. MD, MPH§ Achieving Greater Health Equity: An Opportunity for Anesthesiology, *Anesthesia & Analgesia*: February 2, 2022 - Volume - Issue - 10.1213/ANE.0000000000005937 doi: 10.1213/ANE.0000000000005937
9. Cohen JJ, Gabriel BA, Terrell C. The case for diversity in the health care workforce. *Health Aff (Millwood)*. 2002 Sep-Oct;21(5):90-102. doi: 10.1377/hlthaff.21.5.90. PMID: 12224912.
10. <https://www.goodstockconsulting.com/>

Reflections on Medicine and Politics Through the Lens of Poetry

By Sen. Ghazala Hashmi, PhD
district10@senate.virginia.gov



Sen. Ghazala Hashmi, PhD

Whether through mythology, lore, or cultural traditions, the arts of medicine, healing, prophecy, and poetry are often seen as intertwined. Perhaps best known to us in Western culture are mythic figures, such as Apollo and Athena,

who combine their potent medicinal knowledge with the power of art, song, and poetry.

In both a figurative and literal sense, the sciences and the arts are mutually dependent; to heal the physical self that is experiencing pain and suffering, one must acknowledge its relationship to the mental and emotional self, whose healing often comes through the resonant beauty of words, meditation, prayer, and poetry.

The intertwined nature of medicine and poetry is not limited to our mythic traditions. Some modern and contemporary healers have brought the same sensibilities into their practices. The New Jersey pediatrician, William Carlos Williams, remains a powerful figure who helped to define modern American poetry in the 20th century. John Stone, cardiologist at Emory University, crafted his practice of medicine into poetic contemplations. Walt Whitman, who broke new poetic ground throughout his life, translated his spiritual anguish about the American Civil War into nursing wounded and dying soldiers in medical tents. Kate Granger originated the “Hello My Name Is” campaign for compassionate care in hospitals and channeled her own journey through cancer into a contemplation about life. Neurosurgeon Paul Kalanithi’s remarkable *When Breath Becomes Air*, published posthumously, is a lyrical examination of the interconnections of the physical, spiritual, and emotional.

So how does this intersectionality of medicine, healing, poetry, and art translate into

The ancients understood that the practices of leadership and medicine are deeply intertwined with the resonance of a poetic awareness of ourselves and our world.

good governance and the work of crafting legislation? That leap is sometimes more difficult to make, and yet the intersectionality has long been there.

The British poet Percy Bysshe Shelley (1792 - 1822) stated that poets are “the unacknowledged legislators of the world.” The role of poets, songwriters, and the bards, even in our time, is to expose the realities of life itself, to explore the full depths of the human experience, to challenge the authority of those in power, and to be the voice of their generation. In actuality, politics and poetry have never been far removed from each other. Every social and political movement of significance has been accompanied by its share of poets who record, memorialize, and amplify those movements.

While poets often stand outside of the political process and offer its critique, exposing its flaws and hypocrisies or lauding its triumphs, poetry also enters the process, compels it forward, and advocates for social change. Political leaders have long understood the power of words and feared the judgments of poets. Shakespeare navigated political waters with care as he exposed the vulnerabilities and human frailties of the powerful. Revolutionary movements such as the Arab Spring, a wave of pro-democracy protests that took place in the Middle East and North Africa in 2010 and 2011, are sites of outpouring of poetic and artistic expressions.

At times, the poetic and the political become one, as the artist is drawn to political leadership. Major poets like Aimé Césaire (Martinique), Léopold Senghor (Senegal),

Václav Havel (Czechoslovakia/Czech Republic), and Pablo Nerudo (Chile) were either elected or appointed to political roles. Similarly, American leaders have understood essential purpose of poetic expression in their own speeches. Our most powerful communicators have been those who tapped into the wellspring of expressive and universal ideas; the speeches of John F. Kennedy, Barack Obama, Martin Luther King, Jr., Abraham Lincoln, and Ronald Reagan all come easily to mind.

What are the connection points between medicine, politics, and poetry? Healing is one connection point. At the greatest point of psychic pain for our country, Lincoln’s “Second Inaugural Address” delivers a poetic, rhythmic awareness of the woundedness of a nation and charts a path forward: “With malice toward none; with charity for all; with firmness in the right, as God gives us to see the right, let us strive on to finish the work we are in; to bind up the nation’s wounds; to care for him who shall have borne the battle, and for his widow, and his orphan—to do all which may achieve and cherish a just, and a lasting peace, among ourselves, and with all nations.”

Articulation of a narrative is a second connective point. Physicians understand the power of the narrative. What patients do not say is often more powerful than what they share. The healer must listen carefully to the narrative and provoke its areas of silence. Together, physician and patient develop a more complete narrative of the physical conditions. In the same way, legislation and government budgets are the narratives of social and economic conditions. The development of laws define values, empowers some, and marginalizes others. Who is missing from that narrative is just as important to recognize as who is visible. For example, women are invisible within the text of the American Constitution, receiving no mention at all, and that absence has been profoundly important.

A critical third connective point is the identification of universal human experiences. The poetic lens helps us all to transcend

Continued on page 15

Medication Errors, from page 11

in the OR with the following recommendations:

Standardization

- High alert medications (such as phenylephrine and epinephrine) should be available in standardized concentrations/diluents prepared by pharmacy in a ready-to-use form (bolus or infusion) that is appropriate for both adult and pediatric patients. Infusions should be delivered by an electronically controlled smart device containing the medication library.
- Read-to-use syringes and infusions should have standardized, fully compliant machine-readable labels.

Technology

- Every anesthetizing location should have a mechanism to identify medications before drawing up or administering them (e.g., bar code reader) and a mechanism to provide feedback, decision support, and documentation (e.g., automated information system).

Pharmacy/Prefilled/Premixed

- Routine provider-prepared medications should be discontinued whenever possible.
- Clinical pharmacists should be part of the perioperative/OR team.
- Standardized pre-prepared medication kits by case type should be used whenever possible.

Culture

- Establish a “just culture” for reporting errors, including near misses, and discussion of lessons learned.
- Establish a culture of education, understanding, and accountability via a required curriculum, CME/CE, and dissemination of dramatic stories in the APSF Newsletter and educational videos.
- Establish a culture of cooperation and recognition of the benefits of APSF paradigm within and between institutions, professional organizations, and accreditation agencies.

References

1. Nanji, K.C., Patel, A., Shaikh, S., Seger, D.L., & Bates, D.W. Evaluation of perioperative medication errors and adverse drug events. *Anesthesiology*, 2016; 124:24-43.
2. Butala, BP, Shah VR, Bhosale GP, Shah RB. Medication error: Subarachnoid injection of tranexamic acid. *Indian J Anaesth* 20212; 56:168-70.
3. Institute for Safe Medication Practices (ISMP): Key Medication Errors in the Surgical Environment – PSQH. 2016; available at <http://www/psqh.com/analysis/ismp-key-medication-errors-in-the-surgical-environment/>
4. Eichhorn, J.H. APSF Hosts Medication Safety Conference. Consensus Group Defines Challenges and Opportunities for Improved Practice. *APSF Newsletter*, Spring 2010. Reprinted with APSF permission.

A global pandemic,
essential surgery, or
welcoming a new life:

**I WAS MADE FOR
THESE MOMENTS.**



American Society of
Anesthesiologists™

Made for
This Moment

Legislator, from page 14

our historical moment and brings into sharp relief the universality of experiences and our place within the broad context of the human journey. The art of medicine draws its ideals around compassion in care and empathetic healing practices from this universality of experience. Similarly, the art of good governance focuses on the depth and breadth of our shared experiences in order to define the ideals of democratic engagement.

The arts of medicine, politics, and poetry are interconnected on these values of healing, narratives, and the human experience. If government is to be the vehicle by which the public good is supported and enhanced, then the broad contexts of poetic sensibilities have to be engaged within that process.

The ancients understood that the practices of leadership and medicine are deeply intertwined with the resonance of a poetic awareness of ourselves and our world.

COVID-19, Reflecting on Values and Policies

By **Shilen Thakrar, MD**,
Assistant Professor
and **Jack Craven, MD, JD, CA-2**
Resident
VCU Department of Anesthesiology



Shilen Thakrar, MD



Jack Craven, MD, JD, CA-2

Where intellectual debate, medical science, and cooperative management intersect lies healthcare policy. Covid-19 has brought policy issues to the forefront.

At some level, healthcare systems have always had to make important decisions, but in our heavily opinionated atmosphere—they are subject to more criticism than ever.

Perhaps healthcare systems themselves are worthy of some level of empathy. After all,

they will be subject to condemnation for making policies which previously would have been respected.

As we have progressed through the pandemic, our testing and precautions seem to be decreasing overall, but the fundamental act of weighing risks and benefits will continue. Moreover, because there is no guarantee that the next variant will be less severe—we may need to revisit the same issues in the future.

Imagine a usual Monday, except that amid the early Covid crisis all “elective” surgeries have been suspended per hospital policy.

Thinking beyond ourselves and selflessly understanding the big picture, considering the multitude of factors that go into a decision, is a different level of heroism.

It is ordinary, and extraordinary.

Yet, a young woman who suffered from infertility for years is scheduled for oocyte retrieval under anesthesia and subsequent in vitro fertilization. How long should she and her partner defer their dream of having a child? How much say should the operating room staff have in the decision to delay cases?

It is fundamentally a question of whose best interest we should serve. How do we address the staff who have obtained vaccination waivers? How do we ensure hospitals are financially viable so they can continue providing care? What about a patient who has undergone a mentally, emotionally, and financially exhaustive process?

In the above example, the patient would have been self-administering potent hormones, which she personally financed, to prepare for follicle extraction. The diagnostic workup, the time commitment, and the stress associated with assisted reproduction can affect an individual’s sense of well-being and cause serious side effects. Not to mention the adverse impact of any potential delays associated with family planning.

We can’t blame healthcare providers who early on, took a firm stance against all elec-

tive surgeries. At the outset of the pandemic, we had to preserve our personal protective equipment and care for our employees and their families. However, healthcare workers serve patients. That’s what motivates us and what drives us to continue doing what we do.

Patients have families too. Clearly, not all procedures are elective and not all elective procedures can wait indefinitely. Therefore, it has come as no surprise that policies have started to change. Suffice it to say, every case needs to be reviewed and considered on a case-by-case basis. Indubitably, we must draw a line in the sand, or we could find an exception to any situation.

To argue for patient autonomy until it directly impacts us is contradictory and an insincere departure from patient-centered care. Wasn’t that the argument against paternalistic models of care in the first place? What gives us the right to decide on behalf of a patient or their care team without fully knowing their history or circumstances?

It is easy to provide care when we aren’t asked to give anything. Thinking beyond ourselves and selflessly understanding the big picture, considering the multitude of factors that go into a decision, is a different level of heroism. It is ordinary, and extraordinary. It is not flashy, nor does it pictorially show up on the front page of Newsweek. However, it is what patients, who have placed their faith and trust in us, have come to expect.

Policy decisions are difficult to make and require consideration of how bright lines will affect individual patients. Such choices require empathy that some may not be prepared to give on the heels of a pandemic. However, if we insist that we are the guardians of the moral high ground for healthcare, we must push ourselves to see what others are experiencing. After all, it is not much of a sacrifice to care for patients only when it is convenient for us.

Become a Contributor to the *VSA Update*

Please send your story or feature ideas about your colleagues, your practices, or issues facing anesthesiologists to

Brooke Trainer, MD, *VSA Update* Editor
at brooke@vsahq.org



Legislative Update

By Lauren Schmitt

Commonwealth Strategy Group

It's been a productive summer of meeting with legislators and educating them on the importance of the physician-led patient care team for anesthesia care.

VSA board members have been taking the time out of their busy schedules to sit down with legislators (both in-person and via Zoom) to discuss this important topic. We've had great meetings and really enjoyed our discussions with policy makers. If you are interested in meeting with your Delegate or Senator, please reach out to us ASAP and we will help you do so.

We also spent the last few weeks participating in the Medical Society of Virginia's advocacy process for legislative proposals. We are pleased that MSV has chosen our proposal as one of their top priorities for the 2023 legislative session.

Our proposal was for MSV (and the House of Medicine) to advocate for an increase in Medicaid reimbursement rates for all physicians up to 80% of Medicare. The most recent budget increased the rate to 80% for primary care providers, which was urgently needed. We are hopeful that the legislature will recognize the need to improve reimbursement rates for all physicians in 2023.

One thing we consistently hear from our members is the need for licensure of Certified Anesthesiologist Assistants in Virginia. There is a shortage of all anesthesia providers in Virginia and adding this level of provider to the team would be a huge help. We are talking to our hospital colleagues and researching whether this is something we could pursue in the near future.

VaSA PAC

Thank you to everyone who has contributed to our PAC this year. If you haven't



Contribute today!

contributed yet this year, please consider doing so! Now is the time to replenish our VaSA PAC.

A strong and robust PAC demonstrates VSA's leadership and investment in the political and policy process. Your support is crucial to our advocacy success! Contributions to the PAC will help raise the visibility and profile of anesthesiologists, connect us to new and returning legislators, and continue to build productive relationships with key General Assembly members.

As always, we continue to support members of the legislature who care about issues affecting our profession and our patients. We support both parties and their leadership through individual legislator and caucus events.

Members Corner

Stephen P. Long, MD

President, Commonwealth Spine and Pain Specialists | Richmond, VA



Stephen P. Long, MD

Dr. Stephen P. Long is a 1982 Phi Beta Kappa graduate of Randolph-Macon College and 1986 graduate of Virginia Commonwealth University's School of Medicine, where he completed two

years of surgical residency followed by an anesthesiology residency at the Medical College of Virginia Hospitals.

He completed his fellowship in Anesthesiology and Pain Medicine at the Medical College of Virginia Hospitals in 1991 and served on the faculty as an Associate Professor until 1998 when he formed his private practice, Commonwealth Spine and Pain Specialists, where he is currently President and Partner. He continues as an Associate Clinical Professor of anesthesiology at VCU, where he

still actively teaches medical students.

Long has been active in many national and community organizations, including previous membership on the boards of directors of the American Society of Anesthesiologists, the Virginia Society of Anesthesiologists (past president), and has been an examiner for the American Board of Anesthesiology.

Long has received numerous honors, including International Men of Distinction, Outstanding Young Men of America, Who's Who in American Medicine and Health Care, Who's Who in the World, Consumer Research Council "America's Best Anesthesiologist/Pain Doctor", and Richmond Magazine's Top Pain Specialist 2000-2022. He is distinguished as one of US News and World Report's Top Pain Specialists. In 2001 he received the Patrick Henry Award from Governor James Gilmore.

He currently serves on the Board of Trustees of Randolph-Macon College as Vice-Chair. From 2000-2004 Dr. Long served

on the Virginia Commonwealth University Board of Visitors and the VCU Health System Board until 2006.

From 2011-2015 he served on the University of Virginia Board of Visitors where he chaired the Educational Policy Committee and the Medical Center Operating Board for the UVA Health System. He remains on the UVA Health System Quality Committee.

On July 1, 2022, Gov. Glen Youngkin reappointed him to the University of Virginia Board of Visitors. He will serve as chairman of the UVA Health System Quality Committee. He will also serve on the UVA Health System Audit committee and the Building and Grounds Committee.

He has a strong commitment to quality and safety and improvement of healthcare systems and management. While at UVA, he is dedicated to improving the rankings of the hospital, clinical services, and professional staff.

ASA Board of Directors Meeting Recap

By Jeffrey A. Green, MD, MSHA, FASA
*ASA Director for Virginia
Richmond, VA*



*Jeffrey A. Green, MD,
MSHA, FASA*

The ASA Board of Directors' second meeting of 2022 was held in Rosemont, Illinois August 20 and 21. The Mid-Atlantic caucus met on Saturday morning to discuss issues of importance for our region and to

go over the four board review committee reports.

Next, the Board met for the opening session with overviews by the ASA leadership. Topics included new guidelines for the development of ASA public statements on future current events, a financial update on

the ASA and ASAPAC, a review of a new revenue growth strategy proposal from the administrative council, and remarks from the incoming AMA President Elect, anesthesiologist Jesse Ehrenfeld.


Then the Board discussed a significant amount of items of business to consider in each of the four Board review committees. Items of interest in the Administrative Affairs committee included approval of moving \$4M of reserves into a restricted fund for the new revenue growth strategy. This to increase non-member, non-dues revenue streams to enhance ASA's business operations and approval of a stronger ASA statement on the US Supreme Court Dobbs decision with compromise language crafted by the chairs of the ASA caucuses. This discussion included vigorous testimony and Board member engagement.

In Professional Affairs, the Board approved updated practice guidelines on preoperative fasting and on monitoring

of neuromuscular function. The Scientific Affairs committee heard testimony to approve the statement on surgical attire and the Financial Affairs committee approved an updated budget.


In the afternoon strategy session, the Board discussed the status of ASA's advocacy efforts, the payment progress initiative, DEI strategy and membership. During the President's reception at the end of the day, ASA's outstanding lobbyist Manuel Bonilla was recognized for his 25 years of service to ASA.

As your Director for Virginia, I was honored to represent your interests at the Board meeting and look forward to serving when the Board next meets during Anesthesiology 2022 in New Orleans. As always, if the ASA or VSA could be doing anything better to help your practice or represent your concerns, please let me know.



REGISTER NOW!

the
ANESTHESIOLOGY
annual meeting
American Society of Anesthesiologists®
NEW ORLEANS | OCTOBER 21-25, 2022



virginia society
of anesthesiologists

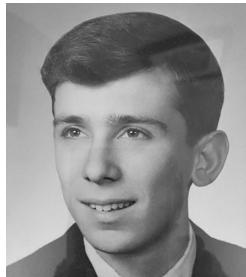
Annual VSA Membership Meeting
1:00 pm - 2:00 pm on Saturday October 22, 2022
Hilton Riverside New Orleans

There will be coffee and New Orleans themed deserts and snacks. E-mail vsa@societyhq.com if you plan to attend.

Solving the Provider Shortage

By Paul Rein, DO

Retired



Paul Rein, DO

I've been a practicing anesthesiologist since 1982 in Virginia. My first six and-a-half years were spent at the Medical College of Virginia, aka VCU. I left MCV to go into private practice on

June 1, 1986, at Riverside Regional Medical Center in Newport News.

We were an all-physician practice. We covered one hospital, a level 2 trauma center with residencies in Family Practice and OB-GYN. We did about 12,000 cases per year along with 3,000 deliveries. A few years later, the practice of anesthesia began to change, as free-standing ambulatory surgery centers were created. The changes in the number of sites we provided our services rapidly grew.

What exactly changed as we evolved? In 1986, when I began private practice on the Peninsula, we had five hospitals. Those five hospitals were where 100% of the anesthesia providers worked. All the surgeries, including all ambulatory surgery cases, were performed in these five institutions.

One of the big things that changed was cataract surgery. Cataract surgery went from a 45-minute case, with a relatively big incision, to what we have now - a 10-minute case requiring simply sedation, with an occasional retrobulbar block. Along with that change, our population has been aging, and living longer, stimulating more need for surgery.

For example, we now have 15% of our population (340 million people) age 65 and older. In 1970, we had 9% of our population (200 million people), aged over 65. In actual numbers, that is over 30,000,000 more people today over age 65 as compared to 1970. That translates into more surgery need.

Along with cataract surgery, many more

Today, more than ever, we need to increase the number of anesthesia providers in the Commonwealth. Getting licensure for CAAs will not cost the CRNAs one job. What it will do is give us the ability to have more providers.

procedures are being done outside the hospital. We now have plastic surgery centers, GI offices, free standing orthopedic surgery centers, oral surgery done in office, and free-standing ambulatory surgery centers created by hospital organizations. This has led to a higher need of anesthesia providers on the Peninsula where I still live, work, and practice. Where we once had only five locations, we now have 19, which equates to an additional 14 locations that require anesthesia providers. Needless to say, this has led to "a ton" more operating rooms requiring anesthesia providers.

Now let's look at Virginia. We are one of the states that still has a certificate of need (CON) law. That means, to open up certain surgical facilities, or to build new hospitals, the organization needs to get a CON from the state government. While some health-care providers might complain about this, I have seen the downside for there not being a CON required.

Several years ago, I was on an ASA committee and one of the jobs of that committee was to do consultations to groups/facilities about various issues. We went to North Dakota, a state without CON law, and the anesthesia group and the hospital were having severe coverage issues, as there were surgery centers and practices everywhere doing cases, which were robbing providers from the hospital. It was a huge problem.

In Virginia we are experiencing a severe

shortage of anesthesia providers. Some of the shortage is due to the fact that private groups are disappearing faster than being created. In its place are hospitals who are contracting with national provider groups.

Not a lot of people are happy with this model, and many facilities have reduced operating rooms and hours, which is causing a big problem. The loss of the private practice of anesthesiology is another problem for another day, but it is a BIG problem.

What can we do in Virginia? It's actually quite simple. There are 20 states in the USA where a Certified Anesthesia Assistant (CAA) can practice. We tried a few years ago, and lost because the Certified Registered Nurse Anesthetists (CRNA) organizations were stronger lobbyists than the VSA and VAAA.

Today, more than ever, we need to increase the number of anesthesia providers in the Commonwealth. Getting licensure for CAAs will not cost the CRNAs one job. What it will do is give us the ability to have more providers. Granted, they will need to be supervised, but so do CRNAs in Virginia.

I have recently spoken with Senator Tommy Norment, and asked him if there had been any requests by the VSA to reopen the process of getting CAAs certified in the Commonwealth? A quick NO.

Well, it is my opinion that now is the time for the VSA to reopen the process, and we need to be strong. We need to convince the legislators this is not a turf war meant to eliminate the CRNA, but rather an access problem which increases the number of anesthesia providers available to divert a crisis. A crisis such as local hospitals having to transfer patients because they don't have enough anesthesia providers (yes that's for real).

This time when we do it, we need to not be afraid of the nurse anesthetist organizations. Again, think about why? We have so many more locations, and there is a way to get the providers in the Commonwealth, without losing any of our current providers.

LET'S DO IT!!!



2209 Dickens Road • Richmond, VA 23230-2005

Pre-Sort First Class
U.S. Postage
PAID
Permit No. 2929
Richmond, VA

SAVE THE DATE FOR

VSA's Annual Membership Meeting & Legislative Dinner

Monday January 23, 2023

Sam Miller's Restaurant

1212 E. Cary St, Richmond, VA 23219

5:00 pm..... Membership Meeting

6:30 pm.....Dinner with Legislators

Join us for a great meal, hear the latest about VSA and ASA business, and talk with your legislators about issues important to you and the practice of anesthesiology.