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2015 ACEP ELECTIONS PREVIEW

MEET THE BOARD OF DIRECTORS CANDIDATES

Each October at ACEP's annual Council meeting, the ACEP Council elects new leaders for the College. The Council, which represents all 53 chapters, 33 sections of membership, the Association of Academic Chairs in Emergency Medicine, the Council of Emergency Medicine Residency Directors, the Emergency Medicine Residents' Association, and the Society for Academic Emergency Medicine, will elect the College's President-Elect, four members to the ACEP Board of Directors, the Council Speaker, and the Council Vice Speaker. This month, we'll meet the President-Elect candidates. In September, we'll meet the Board of Directors candidates, and in October, we'll meet the candidates for Council positions.

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STRONG STANCE FOR PHYSICIANS

Dr. Stack talks doc shortages, APPs, and his teenage path to the presidency

On June 9, 2015, Steven J. Stack, MD, FACEP, was sworn in as President of the American Medical Association (AMA)—the first emergency physician to hold that office. Dr. Stack recently spoke with ACEP

Now Medical Editor-in-Chief Kevin Klauer, DO, EJD, FACEP, about the projected physician shortage, the role of advanced practice providers, and how he developed his speaking skills.

Check out the May and June issues of ACEP Now or visit ACEPNow.com to read the first two parts of this conversation.

DR. KEVIN KLAUER: What are your thoughts on where the AMA thinks the physician shortage is going and what it might be able to do to impact that? As a related question, has the AMA really taken a position on advanced practice providers, such as advanced practice nurses who are pushing for autonomous practice? There are physicians who are threatened by that in particular when there are initiatives to have advanced practice nurses who have completed doctoral programs claim the title of doctor.

DR. STEVEN STACK: There are three parts here. The first one is there is a physician shortage. The physician shortage will get worse, and it's unacceptable. Apart from the other

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What Will Your Legacy Be?

Dr. John Proctor on why he joined the
Wiegenstein Society—and why you
should, too SEE PAGE 8



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THE BREAK ROOM

Smart Moonlighting

I was very surprised when I read Dr. Silman and Dr. Chen's article, "Don't Get Caught in a Moonlighting Trap" [June 2015], particularly the comment, "A single-coverage practice setting is probably not the best place for a first-time moonlighter." The problem with working in a single-coverage practice is that residents have not completed the minimal training to be an emergency medicine specialist. They do not meet the minimal requirement for the job. Yes, I know that a good third-year resident may be better in the ED than a family doc or even some board-certified emergency physicians, but that is irrelevant. Solo moonlighting is a clear statement that you should be allowed to practice before completing a residency, ie, that further training may be nice but is not essential.

This is really the equivalent of an indefensible ethical statement: "I have had enough training to not endanger my patients." If you doubt this, pray that you do not make a mistake (we all make mistakes) during your moonlighting. Your ATLS, ACLS, BLS, and PALS merit badges will not be enough. The malpractice attorneys are not stupid, and they will eat you alive over this.

Residents need to be honest. The reason to moonlight is to make money. Do it in a protected double-coverage environment. Get your solo experience after your training—and even then almost all ED groups require a period of double coverage before allowing new graduates to work alone.

—Mark Hauswald, MD, FACEP
Telluride, Colorado

State Licensing Woes

[In response to "Feel Like a Criminal? Compact to the Rescue," April 2015]

My own experience with licensing authorities in two states highlights the incomprehensibility of state medical boards' rules sometimes.

1. When I left Texas in 2007 after eight years of being licensed there, which required original-source notarized documentation, and then considered a return to Texas, I was told by TSBME [the Texas State Board of Medical Examiners] that I would have to redo the entire process, including the original documents that Texas had itself used in 1999 to license me there to begin with! I asked the TSBME if that means that they don't trust their own process for initial and ongoing licensure, valid through my departure in 2007. The response was, "The rules are the rules!"

2. When I considered moving to Tennessee recently, the Tennessee State Board told me that, because I had done a fellowship 26 years ago in Tennessee, I would have to provide 26 years' worth of documentation of my CME activity, and pay 26 years' worth of licensing fees, to get re-licensed in Tennessee. I told the Tennessee Board that since these items would not have been required if I had never set foot inside Tennessee to begin with, their policy makes no sense—to require less documentation because I had never previously been there! Response? None ... complete silence and lack of response.

—John G. Boulet, MD
Huntsville, Alabama

From ACEP Now.com

[In response to "Emergency Medicine's Role in Prescription Opioid Abuse," July 2015]

The Institute of Medicine report of 2011, "Pain in America," declared: the are 100 million Americans in pain. Opiophobia has replaced oligoanalgesia as the current Monday morning quarterback topic.

Unintended consequences abound. Addiction by other substances is not managed by ERs. Car dealers are not expected to screen customers for speeding tendencies.

Heroin has become a massive problem because it is cheap and accessible—why?

We were blamed for undertreating pain, ER overcrowding, now this. We must stand FOR patients, and give up our role as scapegoats for societies' ills.

—Mark Ibsen, MD

The author might have given some consideration to the fact that not all pain medications are opiates. Another unaddressed issue is what percentage of these prescriptions are being written for chronic or recurring complaints vs. new diagnoses. What percentage are being written for medically inappropriate conditions?

When ED physicians address these questions at the same time they will be in a much better position to argue that limits on prescribing are harmful and intrusive.

—Derek McCalmont, MD

Thank you so much for this timely article. The pendulum has, indeed, swung too far in the minds of influential people on this topic. Treat acute pain with meds that work, using good judgment and appropriate, modest prescriptions while attempting to avoid the social profiling that got the oligoanalgesia ball rolling in the first place.

—Rob Oelhaf, MD

WHAT ARE YOU THINKING?



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NEWS FROM THE COLLEGE

Dr. Kathy Shaw Named 2015 ED Director of the Year

Blue Jay Consulting and the Emergency Medicine Foundation announced in July that Kathy Shaw, MD, MSCE, of The Children's Hospital of Philadelphia (CHOP) has been named 2015 Emergency



Dr. Shaw

Department Director of the Year. The award recognizes and celebrates emergency physician leaders who demonstrate exemplary collaborative relationships with nursing and other departments to implement and improve operational and clinical standards based on evidence-based practice.

Dr. Shaw started her career more than 30 years ago as a resident at CHOP and now serves as chief of the division of emergency medicine at CHOP and professor of pediatrics at the University of Pennsylvania School of Medicine in Philadelphia. In her role at CHOP, she is a practicing physician and leader of a large group of academic faculty, and she oversees the quality of care for 90,000 children annually. She is also associate chair for quality and patient safety for the department of pediatrics, where she is responsible for improving and monitoring the quality and safety of clinical

care of more than 400 physicians and in promoting their academic development.

An international leader in the field of pediatric emergency medicine and patient safety and quality, Dr. Shaw earned the award for two decades of collaborative leadership and tireless efforts to improve the care of children in one of the country's busiest emergency departments.

Some of the initiatives she has pioneered at CHOP include the development of clinical pathways, multidisciplinary bedside rounding, safety huddles, and nurse practitioners as frontline ordering clinicians.

Dr. Shaw was an early leader in clinical pathways development, a way to keep patients safe by standardizing evidence-based

care. To date, she has championed 30 clinical pathways that are accessible to all health care providers who want to follow the most updated evidence-based guidelines for the care of children.

During a recent sabbatical, Dr. Shaw earned certificates in patient safety and quality from the Institute for Healthcare Improvement and Northwestern University Feinberg School of Medicine in Chicago. She is involved nationally and internationally in educating practicing physicians and has received multiple awards recognizing her abilities as an educator and researcher.

Dr. Shaw is also a prolific writer, having published more than 100 articles, chapters, and reviews. She serves as associate editor

for both the *Textbook of Pediatric Emergency Medicine* and *Annals of Emergency Medicine* and is on the editorial board for *Pediatric Emergency Care*.

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CAN'T-MISS EVENTS

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NOV. 2-9, 2015	Emergency Medicine Basic Research Skills (EMBRs) Workshop Session 1	Dallas	www.acep.org/embrs
NOV. 16-20, 2015	ED Directors Academy Phase 1	Dallas	www.acep.org/edda
MARCH 8-10, 2016	Advanced Pediatric Emergency Medicine Assembly	Lake Buena Vista, Florida	www.acep.org/pem
MARCH 14-18, 2016	Teaching Fellowship Session 2	Dallas	www.acep.org/tf
APRIL 3-5, 2016	EMBRs Workshop Session 2	Dallas	www.acep.org/embrs
MAY 15-18, 2016	Legislative Advocacy Conference	Washington, D.C.	www.acep.org/lac

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RSD Becomes... COMPLEX REGIONAL PAIN SYNDROME

Managing complex regional pain syndrome

BY JAMES DUCHARME, MD,
CM, FRCPC

Complex regional pain syndrome (CRPS), previously known as reflex sympathetic dystrophy (RSD), is a chronic neuropathic pain condition that can arise from trauma of any kind. It can be the result of something as minor as a blood draw that initiates a reaction. The condition arises more frequently than many emergency physicians may realize: roughly 3 percent of patients suffering a Colles fracture develop CRPS. Often the traumatic event cannot be remembered, and CRPS has been associated with trauma happening anywhere from a day to a year after the event. Its most consistent feature, however, is how often physicians fail to make the diagnosis on initial presentation. Furthermore, our lack of understanding about how to manage the severe pain that occurs

during acute flare-ups of this chronic condition worsens the suffering that many patients with CRPS endure over decades.

Early Diagnosis Is Key

As can be seen with diabetic neuropathy, CRPS has both a sensory and an autonomic dysfunction. Unlike patients with diabetic neuropathy, both will be present from the start. Not only do patients suffer from intense pain that does not correspond to a specific nerve distribution, they also suffer visible changes as the result of their autonomic dysfunction.

Initially, the involved painful area (usually part of an extremity) becomes red, warm, and edematous; it is often initially misdiagnosed as cellulitis. The presence of severe allodynia (pain induced with a nonpainful stimulus such as light touch) should make the physician consider the true diagnosis. It is very important that CRPS be diagnosed early on because active treatment can reverse and eliminate the condition. Treatment includes neuropathic analgesics (eg, tricyclics, gabapentinoids) combined with active physiotherapy and mindfulness. Many patients who develop this condition will come to the emergency department with their painful condition when it begins, so the emergency physician needs to be able to diagnose and refer appropriately. I personally diagnose two to three new cases per year in my emergency medicine practice.

Failure to treat within the first weeks of symptom onset will allow the physical changes to start. The involved area will develop dystrophic skin changes: a shiny, thin, erythematous appearance. Underlying muscles atrophy so that the involved area becomes wasted in appearance over time. Typical burning neuropathic pain persists. If left untreated (or if poorly treated), CRPS can spread, involving larger parts of the body.

Treating Flare-ups

Patients will also present to the emergency department because of an acute flare-up of their chronic pain. CRPS can become acutely more painful because of N-methyl-D-aspartate (NMDA) activity and hyperresponsiveness to NMDA. NMDA is a neurotransmitter present in the dorsal horns and spinothalamic tracts, and it is the number-one initiator of wind-up in acutely painful conditions. With CRPS flare-ups, it is almost as if wind-up starts over again. The burning pain becomes acutely worse; pain is severe and unresponsive to almost all analgesics. Opioids will not control the pain of a flare-up unless given in a quantity that would make the patient somnolent. Opioids should not be considered a first-line treatment in this situation. It is recognized that many patients with CRPS ask

for opioids for their severe pain. As with any patient asking for opioids when suffering from a chronic pain condition, this can create distrust and a stressful environment. Increasingly, national patient groups are educating patients that opioids will not be effective.

Given the cause of the pain flare-up, the treatment needs to be directed at stopping the NMDA activity. This is best accomplished with ketamine, an NMDA antagonist. A patient can only receive intravenous ketamine in a hospital environment, so emergency physicians need to be able to recognize and treat these severe pain flare-ups.

Treatment Is Straightforward:

1. Initial bolus of 0.2–0.3 mg/kg of ketamine infused over 10 minutes. Giving this dose as an IV push will produce a high rate of dissociative side effects (up to 75 percent of patients) and should be avoided. Almost diagnostic is the patient's response: severe pain should be resolved by the end of the 10-minute bolus.
2. An infusion of ketamine (0.2 mg/kg/hr) for four to six hours. Although the medical literature for this is almost nonexistent, clinical experience has shown that an infusion of this duration resets the NMDA activity to baseline. Patients can return home on their usual medications, with the expectation that the flare-up, which can normally last weeks, will be over. Return rates for the same flare-up after ketamine treatment approach zero. For readers who feel four to six hours is too long, I encourage them to try shorter periods (two or three hours) and publish their results. No discharge prescription from the emergency department will be required.

Patients do not require admission, and they should not receive opioids. They do require the acute ketamine intervention, or they will suffer severe pain for weeks as a result of the flare-up. To date, there is no other effective treatment for a CRPS pain flare-up. Some researchers have studied an infusion of 5 mg/kg of lidocaine over a 60-minute period as an alternative treatment plan, but results are variable. Referral of newly diagnosed patients to physiotherapy and a comprehensive pain program is critical.

With better understanding of CRPS, emergency physicians will know when and how to intervene. Concern over drug seeking should be allayed, allowing appropriate care to be provided. ☛



DR. DUCHARME is clinical professor of medicine at McMaster University in Hamilton, Ontario.



Hands of a patient with early CRPS, before atrophic changes set in. Inset: Feet of a patient with more advanced CRPS, which show clear skin atrophic changes.

A young boy with short brown hair, wearing a white lab coat over a light blue button-down shirt and khaki pants, stands next to a large, tall wooden podium. He has a blue stethoscope around his neck and is holding the tubing with his right hand. The podium has two microphones on top. The background is a plain, light gray.

STRONG STANCE FOR PHYSICIANS

ILLUSTRATION/PAUL JUESTRICH PHOTOS SHUTTERSTOCK.COM

CONTINUED FROM PAGE 1

explanations in the system, there is a dire need for more doctors, real doctors, physicians, and doctors of osteopathic medicine. I believe it was the Association of American Medical Colleges that just came out with a research piece that projected—even in a rosy case scenario where other clinicians, nurse practitioners (NPs), physician assistants (PAs), and others play a bigger role—over the next decade a shortage of 45,000 or more physicians.¹ That's even with all of these other clinicians coming into the system and doing more. We're creating more medical schools, and we're graduating more medical students, but the federal government is the funder for graduate medical education and residencies, and they refuse to add more money to the pool to create more slots. It's been frozen for a very long time, and in fact, both parties have introduced cuts to graduate medical education funding. They are not only *not* adding to it, they are 180 degrees in the wrong direction and ready to cut. Unfortunately, there is no interest from other participants. Thus far, the graduate medical education community has been unable to come up with a new approach to fix that, and it has to be fixed. The AMA, through its advocacy, continues to press for the need to expand residency slots because, in this year's match we just finished, around 1,100 U.S. medical grads did not match. I'll give you a story to make that even worse. There are young adults who have graduated from schools like Johns Hopkins, which is ranked as the best medical school in the country most years, who did not match. Now, if you can get into college and get into the best medical school in the United States after college and you can't match at the end of that, we've got a problem. If the smartest people in the nation can't finish their training and have to go to work at a restaurant waiting tables or drive a taxi to get through their next year while they hope they can match the following year, it's really a horrible situation. It is utterly unacceptable, but it's not been easy to find a way to fix that structure. Something every bit as profound as what we're doing for reforming medical schools will probably need to happen in the residency and fellowship training world, but it's a difficulty where a path to do so has not yet materialized.

When we talk about the other clinicians, it is a problem, and patients should never be confused in the clinical setting about the qualifications of the people caring for them. It's not offensive to say that it's an undeniable truth that physicians, by the duration and intensity of their training, are the most highly educated and trained clinicians in the health care system. That's just a reality. In terms of years spent in study and hours spent during those years in study and experience, we are the most highly trained. Patients should not have someone else come into their room or be at their bedside and hold themselves out in a way that is confusing to them, that a clinician who might otherwise be a very intelligent and capable person is somehow a doctor in the parlance that patients understand to be an MD or DO as a medical doctor. We have had a campaign in place for a number of years called Truth in Advertising and have enacted laws in various states to require that every clinician providing bedside patient care is required to

wear a visible photo identification badge that displays their credentials and that, in all advertisements, they have to clearly display their proper credentials. They can't have false or misleading representation that they are physicians in the context that you or I understand it as an MD or DO. That would confuse patients. There are 19 states that have enacted legislation consistent with the AMA's Truth in Advertising campaign. There's a long way to go, but that's not bad so far for a six-year process.

So what is their role? You and I work with PAs, PharmDs [doctors of pharmacy], advanced practice nurses, and others. It's not that we don't have respect for our colleagues and do not work well with them, but their professional societies' push for enhanced autonomy flies in the face of everything in the modern era that supports team-based care.



Because the application didn't ask for a date of birth, they just signed me up. By the end of my four years, they had already made me secretary of the chapter before I was even 18 and technically allowed to be a member of the Toastmasters. Due to an illness, the district president invited me to step in as the district secretary in northeastern Ohio. By doing that, I went every other week and associated with people multiple decades older than me who did public speaking on a regular basis."

It's all well and good to say that they're part of a team, but some are pushing to go out and hold themselves as independent, and that is inconsistent with all of the current thinking about the value of team-based care, of which physicians are a part and from whose participation all of them benefit. We are not supportive of progressively more expanded autonomy because we feel this would expose patients to risks if not done in a very thoughtful and careful way.

KK: It's nice to know that the AMA has taken a specific, fairly hard line on this and is really focused on supporting its membership. Steve, it always amazes me how well-thought-out your responses are. You deliver a message with a significant amount of intellectual detail even when you have a limited amount of background information. How were you able to become such a great orator, such a great speaker, and deliver an award-winning message every time?

SS: When I was in eighth grade, I got the opportunity to participate in a community outreach program by Toastmasters International, which is a nonprofit organization committed to advancing people's public speaking and leadership skills. I guess I've always been precocious, and I asked, "Hey, I like this. Can I be involved more? Can I do more?" One thing lead to the next, and the chapter sponsored me when I was in high school for all four years to be part of the chapter. They had to do it that way because the bylaws said I was not allowed to be a member until I was 18, and so they had to sneak me in at the age of 14. Because the application didn't ask for a date of birth, they just signed me up. By the end of my four years, they had already made me secretary of the chapter before I was even

tional mentors and friends over the years and have been supportive.

KK: I've seen you do it successfully many times, and as much as I'd like to say that it is a learned skill, it can be refined, it is really part of your DNA. Note to the Toastmasters: it's time to expand your membership to 14 years and older.

SS: When the Boros sisters came to my eighth grade, I said to them at the end, "This is fun. I wish I could do more."

They said, "Well, you can. We're going to have a District 10 conference, and the international president is coming as a guest to give us an award to recognize us. Why don't you come along to tell us your story about what you learned?" Well, I sat at the head table and was talking with the international president, Helen Blanchard. I said, "Gosh, I wish I could do more," and she said, "It's funny you should say that. When I joined, the bylaws said that you had to be a man and women were not allowed, but the application didn't have an area where you had to write your gender, so the club said, 'We'd be happy to have you—just put your first initial.'" She signed up as H. Blanchard, and she was a woman in an organization that said you have to be a man.

She told me, "You know what? If it worked for me, our application doesn't include a field for your date of birth. I don't see why, if the chapter wants you, you don't just sign up because it doesn't ask you how old you are." So when you talk about somebody who's able to have an inspirational impact on someone who now uses those skills every day, you never know when you're going to have a positive impact. I bet that woman would have been shocked to hear that I still know her name and tell that story.

KK: Well, she made quite a difference with that one piece of advice for you. It's amazing. So in recap, you're the first emergency physician to be the head of the AMA, you're the second-youngest president of the AMA, and I will say now after hearing your story, you are the first rule breaker to be the president of the AMA.

SS: Don't get me in trouble, but yeah. ☺

Reference

1. IHS Inc. The complexities of physician supply and demand: projections from 2013 to 2025. Association of American Medical Colleges. March 2015.

STRENGTHEN EM'S VOICE IN THE AMA

Do your part to help strengthen ACEP's voice in the AMA House of Delegates by casting your specialty ballot for ACEP. Visit ama-assn.org/go/join or call (800) 262-3211 to activate your AMA membership, then cast your ballot to have ACEP represent you in the AMA House of Delegates.

What Will Your Legacy Be?

Dr. John Proctor on why he joined the Wiegenstein Society—and why you should, too

Between regulatory burdens of health care reform, the quality movement, and ICD-10—on top of increasingly busy emergency departments—it can be tough to look beyond the next patient and the end of this shift to think of the growth and future of the specialty. And that's where the Emergency Medicine Foundation (EMF) steps in.

EMF is dedicated to ensuring emergency medicine's bright future through its grants and awards programs, which support both the career development of emergency medicine researchers and innovative research that ultimately improves the care that patients receive in the emergency department.

There are many ways that ACEP members contribute their time and money to the EMF, and one is through joining the Wiegenstein Legacy Society. Named in honor of John Wiegenstein, MD, one of ACEP's founders, the Society recognizes individuals and their families who include the EMF in their estate plans.

Recently, Wiegenstein Society member and EMF Board member John Proctor, MD, MBA, FACEP, sat down with the Chair of the EMF Board of Trustees, Vidor E. Friedman, MD, FACEP, to discuss the work the EMF is doing for emergency medicine and why he chose to include the Foundation in his will. Here are some highlights from their conversation.

Visit www.emergencymedicinefoundation.org to learn more about the Foundation's activities and how you can get involved.

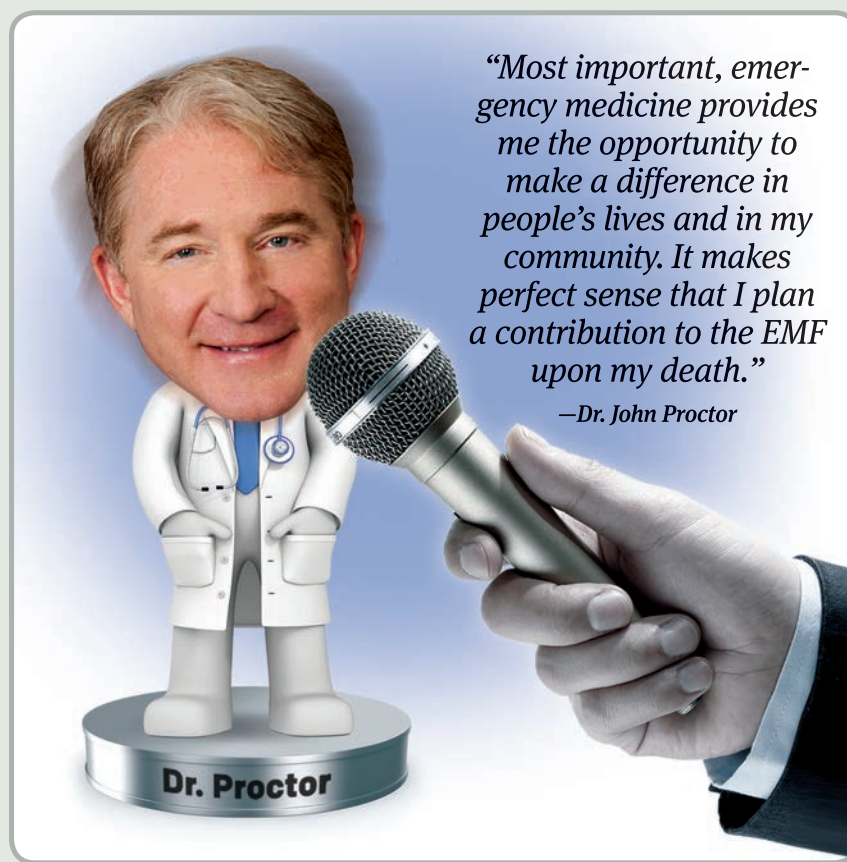
VF: Tell us about your service to the EMF.

JP: I've served the EMF Board for about five years, and I'm currently in my second year as Secretary Treasurer. It's been an honor to serve the EMF Board. I've certainly gotten more from that experience than I've provided back to EMF.

VF: We appreciate your service. You've done a great job. How long have you been at TeamHealth, and what is your role there?

JP: I began my career at Vanderbilt University Medical Center, where I served as director of emergency department operations under Dr. Corey Slovis. I joined TeamHealth in 1996, serving as emergency department medical director for an urban emergency department in Nashville, Tennessee. I've served as a regional medical director for over a decade, and my current position is president of TeamHealth, Emergency Medicine Central Group.

VF: Why did you decide to join the Wiegenstein Society at this time in your life?



"Most important, emergency medicine provides me the opportunity to make a difference in people's lives and in my community. It makes perfect sense that I plan a contribution to the EMF upon my death."

—Dr. John Proctor

ILLUSTRATION/PAUL JUESTRICH; PHOTOS SHUTTERSTOCK.COM

JP: It's something I considered doing a number of years back. I honestly procrastinated and then got around to it. The crux of the decision is that I'm simply giving something back to my specialty, emergency medicine, that gives so much to me. Most important, emergency medicine provides me the opportunity to make a difference in people's lives and in my community. It makes perfect sense that I plan a contribution to the EMF upon my death.

VF: It's wonderful that you've done this, John. In my own case, I knew John Wiegenstein, and it seems appropriate that we do something in his honor. What is it about the work and the mission of the EMF that resonates with you in a way that you wanted to make this request in your estate planning?

JP: I'm a fan of the EMRAP [Emergency Medicine: Reviews and Perspectives podcast] series. (I have no financial interest in EMRAP.) In EMRAP, they have a regular

paper chase and other segments that emphasize the lack of hard medical evidence to support many of our management treatment decisions in the emergency department in the course of a shift. EMF's financial strength is growing by leaps and bounds, as you well know as a leader in EMF. Its growing financial strength positions it to fund research making important impacts on evidence-based emergency medicine practice and quality going forward in the near term and the far term. I encourage every emergency physician to join you and me and other Wiegenstein Society members in the inclusion of the EMF in estate planning.

VF: We've built an endowment over the last few years, and you've been instrumental in that. As we start to have some return from the legacy society, can you think of some topics or items of research or education that you think might be appropriate for these funds to be used for?

JP: Early in my career as an academic emergency physician, I was involved in some limited clinical research, but I want to point out I am not a researcher. The areas that I have seen EMF already begin funding are around what quality really means in emergency medicine. Operational efficiency and patient experience of care—what do those really mean to the quality of care that we provide? Where is that right balance between pure quality, as we view it and believe it to be, and those other measures that outside organizations label as quality? There's a ton of work that can be done in those areas.

VF: What are one or two big takeaways from your time on the EMF Board?

JP: First, early on as a Board member of EMF, I was surprised to see the amount of research that had been performed. I felt like we weren't broadcasting the work that we were doing well enough. The addition of Tanya Downing as our Director of Foundation Development has made big improvements in how public we are about the work that's being accomplished. The second thing that I learned is that there's a significant difference between "purist" research and research around the topics that I mentioned before, like research around workforce and other topics that matter in the operational world of emergency medicine. EMF is positioned to strike as close as possible to the perfect balance between funding both of those.

VF: I think you are right. It's really important that we do both quantitative research, that bench research we need to do that proves things, but also the qualitative research to explore how emergency medicine interacts with patients, patient flow, and dynamics of the department. That whole qualitative aspect makes our lives and our patients' lives better. If you were going to tell ACEP members one thing that they may not know or understand about EMF, what would it be?

JP: EMF is an organization that serves the practicing emergency physician. I'm confident that the mission and goals of EMF are to fund research that really matters and makes a difference in the quality that we're able to provide and the means and methods by which we derive that quality.

VF: John, once again, we really appreciate your service on the Board of Trustees, and we're very grateful for your joining the Wiegenstein Society and making a request in your estate. Thank you very much for taking the time to talk to us today.

JP: Thank you. It's an honor to be able to serve. ☺

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A NEW SPIN



DRINKING FROM THE FIRE HOSE

Welcome to your first year on the Board of Directors

by STEPHEN ANDERSON, MD, FACEP, AND JON MARK HIRSHON, MD, MPH, PHD, FACEP

In the beginning, through perseverance, dedication, and plain luck, you find yourself nominated to run for the national Board of Directors of ACEP. Wow, what an honor. After the initial angst of worrying who really loves you and strategizing your campaign, the first thing that hits you are the emails. You are included on the Board's e-list and get to "peek through the keyhole" at all the correspondence among the present Board and staff. It's intimidating in several ways: sheer volume, the brilliance of the conversation, and the importance of the content. You wonder how anyone keeps up, but the breadth of knowledge, diversity, and importance of the topics suck you in; you get hooked. You want to get right in the deep end but realize you're not going anywhere without your floaties on.

Seemingly, though months actually go into preparation, all of a sudden, the Council meeting is called to order, and you don't sleep for 48 hours. You try your hardest to prove you can talk intelligently, both in small groups and before the Council, without tripping over the one question you fear will alienate entire states. You pray your passion, commitment, and drive will somehow emerge and shine enough compared to the other outstanding candidates, who are your friends and colleagues.

Now you sweat, through the election itself, and find yourself being congratulated by all the people you've always looked up to, who insist you never needed to worry. Then Sonja Montgomery, ACEP's governance operations director and every Board member's guardian angel, reminds you that at 7 a.m. Monday, your butt belongs to her.

So the work begins, like a deluge from a fire hose.

The Hard Work Begins

The rest of Scientific Assembly is a blur as you run from one meeting to another. At least once, you look down at your schedule, thinking you're finally on time for a meeting, only to realize you're actually triple booked, and this wasn't even one of the three! Next, they ease you in at the Board retreat, where you begin to stop worshipping your colleagues on the Board and instead simply become impressed with their work ethic, knowledge, and experience. Somewhere in this opening orientation, you discover

The fire hose pressure is on high. ...We struggled to digest a 254-page informational agenda and another 219-page action item agenda to review for the April Board meeting.

er they are your newest circle of best friends. That's a good thing, too, because you email them several times a day and now start to rendezvous with them all over the map several times a month.

The leaders on the Board start off telling you not to feel pressured, but the high standard they set makes you want to jump right in. Like it or not, the assignments and topics of ownership (ie, committee liaison and other project assignments) get dispensed early on, and you are now responsible to represent the Board and ACEP.

Early in spring comes your advocacy schooling, a trip to Washington, D.C., to really understand the public policy and public affairs division of ACEP. When we say schooling, we mean it. The "gotcha" journalism team primes you for on-screen media events, while Gustavo Mottola, the Italian image consultant who works with ACEP during the Legislative Advocacy Conference, gives you a full dressing down with his critical but totally necessary fashion critique. If you remember you did this to help your patients and fellow emergency physicians, as well as to become a better physician, spokesperson, and overall person, you realize how much fun it really is.

The fire hose pressure is on high. We received approximately 1,500 emails in the first

six months and struggled to digest a 254-page informational agenda and another 219-page action item agenda to review for the April Board meeting, weaved in between multiple conference calls, meetings, flights, etc. You spend hours wandering in airport parking lots, trying to remember where you parked this time. Of course, your clinical schedule hasn't changed; you're still doing the same number of clinical hours (days, nights, and weekends). Hopefully, you can catch a little time with the family this week (though with three teenaged girls at home, maybe the ED will be calmer).

You Find Your Footing

By midway through the first year, the most noticeable paradigm shift is that people seek you out. Mind you, it becomes somewhat easier to be found because the ACEP staff is the best in the business. However, you still pinch yourself some nights in Washington, D.C., during the Legislative Advocacy Conference and Leadership Summit when you realize the chair of such-and-such came to find you.

You get asked to visit chapters, residencies, and all sorts of congregations, and you quickly realize that the top-five issues in every group are the same, maybe in slightly different priority. When you keep your ears open, you actually hear more solutions than whining. The trick is to learn what is possible and which dreams haven't yet matured to the level of Board action. There is no lack of spirit in our College membership, so every mountain is surmountable.

It's a great thing to be soaked daily by this deluge. Before you know it, the next Council meeting is rapidly approaching. Now, the homework triples, and the 30 emails a day all have attachments requiring urgent responses. The one relief as winter approaches this year is you get to watch the next round of Council candidates try to bubble with bravado while they peek through the keyhole—that and you get to pinch yourself again that you are actually sitting at the table. For all the work and travel, we wouldn't trade it for any other job, except for caring and advocating for the at-risk, sickest patient of the night. We are, after all, emergency physicians. ☺

The authors are members of the ACEP Board of Directors. **DR. HIRSHON** is professor in the departments of emergency medicine and of epidemiology and public health at the University of Maryland School of Medicine in Baltimore. **DR. ANDERSON** is emergency attending at MultiCare Auburn Medical Center in Auburn, Washington.



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2015 ACEP ELECTIONS PREVIEW



MEET THE BOARD OF DIRECTORS CANDIDATES

CONTINUED FROM PAGE 1



BOARD OF DIRECTORS

The following are candidates for the ACEP Board of Directors. They responded to the following question:

How do your skills, background, knowledge, or unique abilities complement the existing members of the Board?

Vidor Friedman, MD, FACEP (Florida)

Current Professional Positions: Florida Emergency Physicians, Maitland

Internships and Residency: emergency medicine residency, Michigan State University, East Lansing

Medical Degree: MD, University of Cincinnati College of Medicine (1986)

✓ The Board is made up of a diverse group of individuals, each with a unique set of strengths. My experience in community practice, medical staff leadership, legislative advocacy, and clinical teaching allows me to see issues from many perspectives. Having been an owner in two different emergency medicine practices has given me a great deal of experience in consensus building among strong personalities, a useful skill on any board! As chief of staff at my hospital, I worked hard to improve collaboration among a diverse, and divided, medical staff. I chaired the Federal Governmental Affairs Committee from 2009 to 2011 while the Patient Protection and Affordable Care Act was being hotly debated in Congress and among our membership! I then went on to help create the Emergency Medicine Action Fund to augment ACEP's capacity in the regulatory lobbying arena.

As chair of the Emergency Medicine Foundation, I have pushed to increase our corporate partnerships and expanded our portfolio to include health policy research.

I understand that organizations, like

people, must evolve and that the status quo should be questioned regularly to make sure it is still accomplishing its goals in the best possible way. It is also vital that an organization cultivate its new leaders. In Florida, I started FCEP's Leadership Academy and have been very supportive of ACEP's Leadership Development Committee.

To quote John Quincy Adams, "If your actions inspire others to dream more, learn more, do more, and become more, you are a leader."

William Jaquis, MD, FACEP (Maryland)

Current Professional Positions: chief, integrated services, LifeBridge Health (emergency medicine, radiology), Baltimore; chief, emergency services, LifeBridge Health; regional medical director, EmCare

Internships and Residency: emergency medicine residency, Mt. Sinai Hospital, Cleveland
Medical Degree: MD, Medical College of Ohio (1989)

✓ Having trained in Ohio and worked in Chicago for nine years and now in Baltimore for 14 years, I have a range of experience across many settings. As chief of a system that sees 150,000 patients a year, I have a broad range of familiarity of trauma centers, stroke centers, cardiac centers, and other aspects of emergency medicine in both teaching and community hospitals with the range of responsibility that a chief of service requires. As a clinician, I feel the joys and frustrations that drive future direction. My work at the chapter level has led me through the presidency, and through my advocacy work, I was appointed to other roles in the state. One of those roles is as a commissioner on the Health Resources Commission, which funds grants to health-related efforts through local health agencies. That role has broadened my perspective on the underserved communities and resources outside the hospital.

Nationally, I have worked with the College for two decades, serving on the Board the last three years. That progression of work has al-

lowed me to serve in many capacities and to gain a good understanding of the resources and needs of the College. I feel well positioned to understand the needs and dynamics of the Board and to continue that work.

The leadership I provide at the Board level relates to two specific areas. The first is the ability to listen. Our membership contains a wide variety of skills from a diverse background. The intelligence, drive, and knowledge of those members never cease to amaze me. As I have approached my roles related to the many section, committees, and task forces I have joined, I am better able to learn from our members. My role is to advocate for them and further the great work they are doing. The second skill is that of direction. My leadership experience allows me to give guidance to our members and the Board on issues not moving forward. By listening and creating connections, I am able to provide practical solutions to get to a better outcome.

Finally, I believe through my experience and continuous drive to learn more about leadership, advocacy, and policy, I am able to provide strategic direction. It is important to not only see the next step but the future beyond and to find a course that will allow us to thrive in the long term.

Christopher S. Kang, MD, FACEP, FAWM (Washington)

Current Professional Positions: attending physician, emergency medicine, Madigan Army Medical Center, Tacoma, Washington; institutional review board; staff physician, Olympia Emergency Physicians, LLC, Providence St. Peter Hospital, Olympia, Washington

Internships and Residency: emergency medicine, Northwestern University, Chicago
Medical Degree: MD, Northwestern University (1996)

✓ The next decade will mark a dynamic and historic time of opportunity for our College as we transition from fighting for acceptance by the members of the house of

medicine to now being increasingly recognized as one of their leaders. As the practice, delivery, and remuneration of health care become more complex and determinative, it is vital that the College has visionary leaders. My background, skills, and knowledge would add diversity to the Board of Directors to continue advancing our profession and patient care.

While living in several countries, I learned to appreciate different cultures, values, and concepts. During my service in the United States Army, I observed and practiced medicine in multiple settings around the world, from austere environments and the back of ground and air ambulances to rural facilities and modern medical centers. I was also the medical project director for an ACEP grant that visited and evaluated the disaster preparedness of dozens of hospitals across the country. With this background, I can represent our colleagues with diverse experiences, practice settings, and priorities.

As a military officer, I became proficient with strategic planning and management—analyzing the context of a situation, setting common objectives, identifying resources, foreseeing contingencies, and adjusting plans in response to a changing environment. As research director, I objectively assess study proposals, review current literature, and critically evaluate data. As a result of these skills, I have learned to rapidly interpret and effectively employ those observations and results.

I work at a federally operated medical center and for a democratic group in a community hospital. Both jobs provide me firsthand experience working in contrastive employment models. They also afford me insight into the opportunities and challenges resulting from the implementation of the Affordable Care Act. As President, I led the Washington Chapter as it transitioned from a small to medium chapter and emerged as a leading College resource for several critical initiatives, including championing patient access to care, safeguarding network adequacy and fair payment, repudiating psychiatric boarding, curtailing opioid-related



deaths, and advocating for user-oriented clinical health information systems. These experiences make me uniquely qualified to help chapters with their state challenges and ACEP's efforts to coordinate national leadership around these issues.

Mark Rosenberg, DO, MBA, FACEP (New Jersey)

Current Professional Positions: chairman, emergency medicine, chief, geriatric emergency medicine, chief, palliative medicine, and chief, population health, St. Joseph's Healthcare System, Paterson, New Jersey

Internships and Residency: internship and nonaccredited residency, emergency medicine, Metropolitan Hospital, Philadelphia

Medical Degree: DO, Philadelphia College of Osteopathic Medicine (1978)

✓ My professional career spans 35-plus years of experience as an emergency physician, including bedside ED physician, administrator, advocate, educator, and business owner. My unique abilities can be divided into three specific areas: leadership, advocacy, and innovation.

- My **leadership** skills have been demonstrated throughout my career, most recently as a successful chairman of emergency medicine at St. Joseph's Healthcare System in Paterson, New Jersey. This is an academic, urban ED in which I oversee care to more than 165,000 patients annually.

- As current President of New Jersey ACEP, I lead the chapter's **advocacy** efforts, focusing on out-of-network billing (fair compensation for emergency care) and opioid legislation. I also serve on the New Jersey governor's Advisory Committee on Trauma and the New Jersey Legislative Task Force to address psychiatric overcrowding.

- As an **innovator**, I have developed one of the nation's first geriatric emergency departments as well as an emergency department-based palliative medicine program and remain as chief of both programs.

Additionally, I have learned that collaboration is vital to success in this health care environment, inviting diverse stakeholders to collaborate and design programs, policies, and procedures to improve care. An example of this would be as chair of ACEP's Geriatric Section (2011–2012). With the ACEP

President's approval, I worked with members of ACEP, American Geriatrics Society, Society for Academic Emergency Medicine, and Emergency Nurses Association to identify the essential components of a geriatric ED. This was quite an accomplishment due to the varied interests of the individual associations. However, through collaboration over a two-year period, we developed the "Geriatric Emergency Department Guidelines," which have been published in each organization's professional journal.

Similar to the current ACEP Board members, in my everyday practice of emergency medicine, I support the mission and values of the College. My unique abilities not only complement the Board but also expand its capabilities in terms of leadership, advocacy, and innovation.

Bradley J. Uren, MD, FACEP (Michigan)

Current Professional Positions: clinical assistant professor, University of Michigan Medical School, Ann Arbor

Internships and Residency: internship and residency, emergency medicine, University of Michigan Medical School, Ann Arbor

Medical Degree: MD, University of Michigan Medical School (2002)

✓ I can bring the perspective of a young physician and diversity of experiences to the ACEP Board.

I was born and raised in rural Michigan, where the ED was a five-bed facility in a hospital with 60 inpatient beds. It was there that I first shadowed physicians in a professional setting as I explored a medical career. Seeing the role of the ED in a small community, as the first critical intervention, led directly to my choice of specialty. The emergency physician is always there, 24-7, in those communities when urgent and emergent needs arise. They are the embodiment of the most highly skilled acute care physician.

Those years were formative, and throughout my time in Michigan College of Emergency Physicians (MCEP) leadership, I used my hometown as a touchstone and point of comparison when considering the impact of changes in legislation, funding models, and workforce issues. Increasingly, the ED is the indispensable component of the health care system in communities and must be preserved and considered in any changes in practice.

While in residency, in 2003, I joined ACEP's State Legislative/Regulatory Committee, serving continuously and chairing for the last three years. I also chaired MCEP's legislative committee and lead Michigan's 911 Network. I have had innumerable interactions with federal and state policy makers, both legislative and regulatory, and testified before our state legislature. In addition to working on a state Medicaid workgroup for emergency medicine, I currently work with Blue Cross Blue Shield of Michigan on an emergency physician-led quality initiative.

I also believe that emergency physicians have a unique body of knowledge they should share with the public. I have given numerous media interviews about EM-related issues (over 14 in 2015). I have penned letters to the editor and op-eds on issues related to emergency medicine and public health in Michigan. I believe that raising our specialty's visibility will benefit our members, our specialty, and, ultimately, our patients.

In summary, I believe I bring the viewpoint of a young physician tempered by the experience of both ACEP and chapter leadership. I offer the balanced perspective of a university-based academic hospital employee with the heart of a small-town physician. My experience in academic settings is matched by dedication to EDs in places like my hometown. I believe that this duality and diversity of experience, as well as my ability to consider the opposing viewpoint, make me an ideal candidate for the ACEP Board of Directors.

James M. Williams, DO, MS, FACEP (Texas)

Current Professional Positions: attending emergency medicine physician, Covenant Medical Center, Lubbock, Texas; clinical assistant professor, Texas Tech University Health Sciences School of Medicine, Lubbock; physician quality review board, committee member, Covenant Medical Center, Lubbock; attending emergency medicine physician, Texas Health Harris Methodist Hospital Southlake, Dallas; advisor, clinical and player development, US Lacrosse

Internships and Residency: surgery internship, general surgery, Brooke Army Medical Center, Fort Sam Houston, Texas; residency, Brooke Army Medical Center

Medical Degree: DO, Philadelphia College of Osteopathic Medicine (1991)

✓ I am uniquely qualified to serve and complement the Board with my proven leadership, integrity, and commitment.

Starting with more than nine years of military service and continuing nonstop since then, I have successfully served my fellow doctors, patients, and communities in numerous leadership positions. My military experience included tours in Germany and Bosnia, where I served deployed troops and played a pivotal role in village outreach. A few of my leadership positions over the past couple of decades include serving as army commander; Texas College of Emergency Physicians President; co-chair of a five-hospital quality review committee; clinical professor; hospital chief of staff; and board member of my family's church, children's school, and local businesses.

Like you, I am a practicing emergency physician who serves our patients in the pit, days, nights, weekends, and holidays. This provides us credibility when speaking with legislators and stakeholders, and that's one of the many reasons I am very active with both the state and federal legislatures, advocating on behalf of our doctors and patients. Additionally, I have served as a medical and health consultant to local and national media, communicating our service message to positively promote our profession.

I recently fought on behalf of emergency physicians in Texas to maintain our tort reform. I coordinated efforts of the Texas Medical Association, TMLT (insurance carrier for most Texas physicians), TAPA (a patient and physician access advocacy group), the American College of Emergency Physicians, and local hospitals to file amicus briefs on their behalf against plaintiff attorneys in New Mexico who argued care given in Texas is subject to New Mexico tort laws. This is a critical case in supporting patient access to care and has implications nationally.

It is also important to note that I will bring geographic diversity to the Board. While most current Board members and other candidates live on the east and west coasts, I am in Texas and can provide a voice for our central and southern states.

I want to be our sure our needs and concerns are shared and heard. I will be your voice on the Board. Thank you for your consideration, and I ask for your vote so I can work with our current and new members to be an advocate for you, our patients, and our specialty. ☺



DR. MILNE is chief of emergency medicine and chief of staff at South Huron Hospital, Ontario, Canada. He is on the Best Evidence in Emergency Medicine faculty and is creator of the knowledge translation project the Skeptics' Guide to Emergency Medicine (www.TheSGEM.com).

HOCUS POCUS: We Have a Diagnosis

Point-of-care ultrasound for skull fractures

by KEN MILNE, MD

CASE: A 21-month-old girl presents after a witnessed fall off a chair onto a tile floor. She hit her head and cried immediately. There was no loss of consciousness, and she vomited once. She has a frontal hematoma, and her parents are concerned about a serious head injury.

QUESTION: Can emergency physicians be trained to use point-of-care ultrasound (POCUS) to rule in or rule out skull fractures in children?

BACKGROUND: Children fall, hit their head, and often present to the ED. There has been a push to decrease exposing young brains to ionizing radiation. Decision rules such as the Pediatric Emergency Care Applied Research Network (PECARN) computed tomography (CT) head rules (see Figure 1) help reduce the number of CT scans done on patients with minor head injury. However, the presence of skull fractures is associated with a more than four times increased risk of an intracranial injury.

Ultrasound has been found to have good accuracy when performed by clinicians for various types of fractures.¹ POCUS has been found to be equal or superior to plain films and even bone scans involving fractures of some flat bones like the sternum.^{2,3} Thus, it makes sense to consider the use of POCUS to identify skull fractures in children.

Several authors have investigated using POCUS for diagnosing pediatric skull fractures. The sensitivities from these studies

range from 82 percent to 100 percent and specificity from 94 percent to 100 percent.^{1,4,5}

RELEVANT ARTICLE: Rabiner JE, Friedman LM, Khine H, et al. Accuracy of point-of-care ultrasound for diagnosis of skull fractures in children. *Pediatrics*. 2013;131(6):e1757-1764.

- **Population:** Patients 21 years old or younger presenting to the ED with suspected skull fracture undergoing CT scan.
- **Intervention:** POCUS in the ED. Physicians received a 60-minute training session (a 30-minute didactic session to learn how to use ultrasound to evaluate the skull for fracture and a 30-minute hands-on practical session).
- **Comparison:** CT scan.
- **Outcome:** Test characteristics (sensitivity, specificity, PPV, NPV, +LR, and -LR).

AUTHORS' CONCLUSIONS: "Clinicians with focused ultrasound training were able to diagnose skull fractures in children with high specificity."

KEY RESULTS: There were 69 children suspected of having a skull fracture in this study, with a mean age of 6.4 years. The prevalence of fracture was 12 percent (8/69).

- **Sensitivity 8 percent** (95 percent CI, 53-98 percent)
- **Specificity 97 percent** (95 percent CI, 89-99 percent)
- **Positive predictive value 0.78** (95 percent CI, 0.45-0.94)
- **Negative predictive value 0.98** (95 percent CI, 0.91-1.0)

When used along with a clinical decision instrument like PECARN, POCUS can be a useful adjunct for detecting skull fractures and further risk-stratifying minor head injuries.

- **Positive likelihood ratio 26.7** (95 percent CI, 6.7-106.9)
- **Negative likelihood ratio 0.13** (95 percent CI, 0.02-0.81)

EBM COMMENTARY: This is the largest single study looking at the topic of POCUS for diagnosing pediatric skull fractures. However, it still was a rather small study as demonstrated by the wide 95 percent confidence intervals.

There was a single false-negative patient (missed fracture) who had a fracture adjacent to the hematoma. The authors describe the patient with the missed fracture as only requiring observation and no specific treatment.

There were two false positives in the study. One false positive was by a novice scanner but was over-read as negative by a more senior clinician. This suggests training may be important to ensure accuracy. The second false positive was reported positive by both physicians reading the scan, which was not noted on CT. However, CT is not a 100 percent sensitive test either, and the patient may have had a true positive on ultrasound and false negative on CT.

BOTTOM LINE: Emergency physicians can be taught POCUS to identify pediatric skull fractures with high specificity. When used along with a clinical decision instrument like PECARN, POCUS can be a useful adjunct for detecting skull fractures and further risk-stratifying minor head injuries. However, serious intracranial injuries can occur without fracture, and the sensitivity of ultrasound for fracture is not yet sufficient to use it as the sole method for detecting injury and making treatment and disposition decisions.

CASE RESOLUTION: Instead of ordering a CT, you decide to use POCUS to look for a skull fracture and combine this with the PECARN rule.

Mom is able to hold her daughter on her lap while you gently scan over and around the frontal hematoma. You are not able to identify a fracture. The parents are reassured and happy to avoid doing a CT scan at this time. The child is observed for a few hours in the ED as per the PECARN rule. They are discharged home with clear instructions to return if the clinical picture changes.

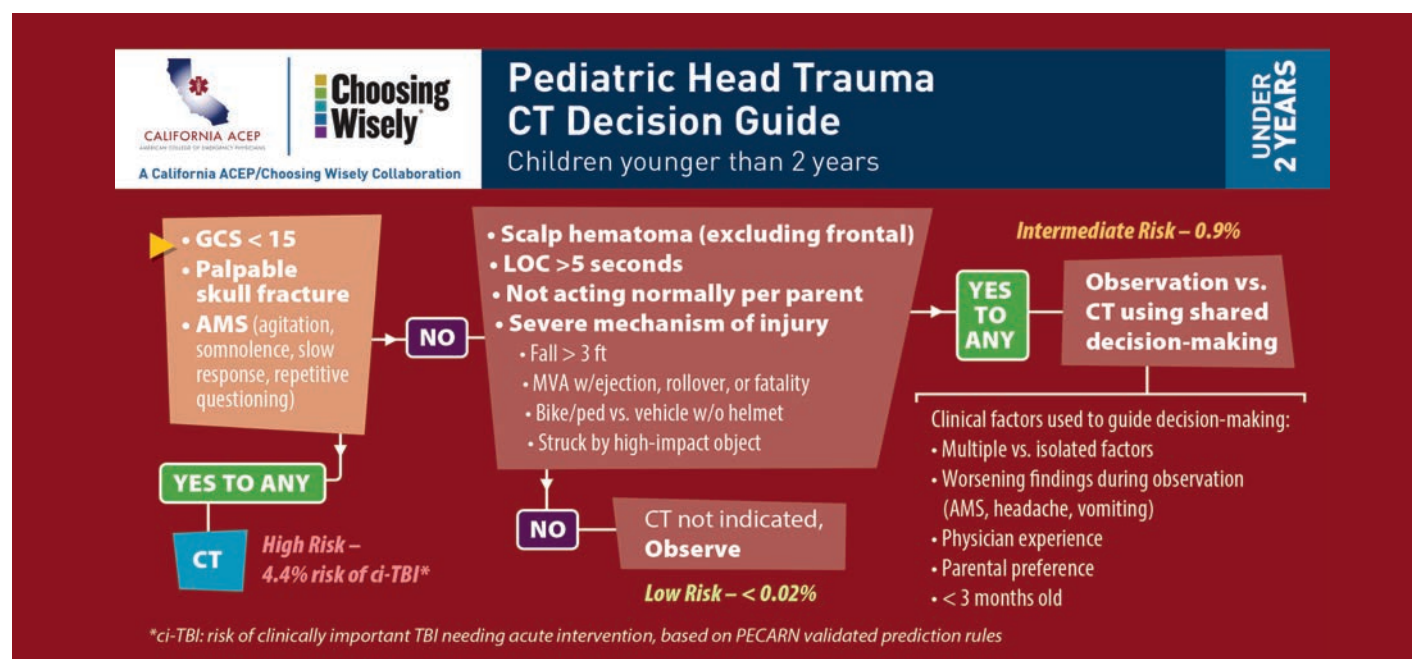
Thanks to Greg Hall, MD, who is faculty member at McMaster University in Hamilton, Ontario, and part of the Best Evidence in Emergency Medicine group, for his help with this review.

Remember to be skeptical of anything you learn, even if you learned it on the Skeptics' Guide to Emergency Medicine. ☺

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Figure 1. PECARN Head Trauma Prediction Rules



AVOID THE HAZARDS
OF EM PRACTICE:
FAQs FROM YOUNG
PHYSICIANS

WHAT I WISH I KNEW...

LYNN SCHERER is the EM physician assistant residency program director at Einstein Medical Center Elkins Park and President of the Society of Emergency Medicine Physician Assistants.

DR. HALLUSKA-HANDY is medical director of the PA residency program and assistant residency director for the EM physician residency training program at Einstein Medical Center Elkins Park.

A Perfect Partnership

Tips for collaborating with advanced practice providers

by LYNN SCHERER, MS, PA-C, AND MARIA HALLUSKA-HANDY, MD



Alison L. Smith, MD, MPH, is a resident in the emergency department at the University of Utah in Salt Lake City. Jordan Celeste, MD, is president of the Emergency Medicine Residents' Association and an emergency physician in Florida.

The relationship between a physician and a physician assistant (PA) is unquestionably valuable to the patients they treat and the departments they work in, and it can be critical to the delivery of excellent emergency medical care. It is, however, a relationship that is developed and refined with time and effort by both practitioners. The best way to describe that relationship is teamwork. Lynn Scherer, MS, PA-C, and Maria Halluska-Handy, MD, have been teammates at Einstein Medical Center Elkins Park in Elkins Park, Pennsylvania, for 13 years and describe how this great relationship was developed and is maintained. Ms. Scherer is the EM physician assistant residency program director, and Dr. Halluska-Handy is medical director of the PA residency program and assistant residency director for the EM physician residency training program.

Ms. Scherer: I had already been a practicing emergency medicine PA when I first met Dr. Handy, who had recently completed her residency and came to work at our institution. I have found through my years of practice that physicians often arrive at a hospital never having worked with PAs and are unclear how their roles are synergistic and what expectations should exist. For me personally, I find the greatest asset to developing a great working relationship with a physician is trust. A physician may not know the level of my medical knowledge, typically has concerns if I know what I don't know, or may or may not be sure what the supervisory requirements are as they differ in every state and often from site to site.

Upon meeting Dr. Handy, we discussed my training and experience and the supervisory requirements, and I presented all patients to her until she felt comfortable with my medical knowledge and diagnostic approach. This is the foundation on which our team rapport was built. Because of our close working relationship, this process is now typically brief.

Over the years, we have learned to work synergistically to care for patients with varying diagnoses, from simple ankle sprains to more acutely illnesses. In every scenario, I trust that the physician I am working alongside is always available to discuss a complicated clinical presentation or to offer additional expertise. We are colleagues working together as a team, based on trust, to better care for the patients we see every day.

Dr. Halluska-Handy: A great relationship between a physician and a PA is developed and maintained through good communication, respect, trust, and humor. It starts on the very first day you work together. It is important that both the physician and PA know where the other is coming from, what their prior experience is, and to set the parameters for how they will work together.

When I work with PAs for the first time, I try to get to know them a little bit and find out about their prior clinical experience and their comfort level for different types of cases. Depending upon their level of experience, I let them know up front that for the first couple of shifts together, I will want to hear about and see many of their patients. This is a critical step in developing a basis for trust and performing a certain amount of due diligence.

Once I am comfortable with their level of clinical skill and judgment, I let PAs know that I am happy to hear about any case they wish to discuss and that I very much value their ability to know when to involve me in a case. Always keeping the lines of communication open between the physician and PAs is crucial. I let them know that I am always available for questions and that I will never

be upset to be asked to see a patient, whether it is a case of diagnostic uncertainty or a patient-satisfaction issue.

In my practice environment, if PAs were not there, it would simply mean many more patients I would be required to see independently. Working with PAs means the patients are getting better care because they are being seen more expeditiously, getting more time with the provider, and, in some cases, getting the benefit of two providers' clinical assessments.

A great working relationship means that the expectations have been clearly expressed, that the respect for the PAs' level of education and clinical skills allows the physician to trust PAs in acknowledging what they know and don't know, and to be able communicate without hesitation when they need physician involvement and support. 📞

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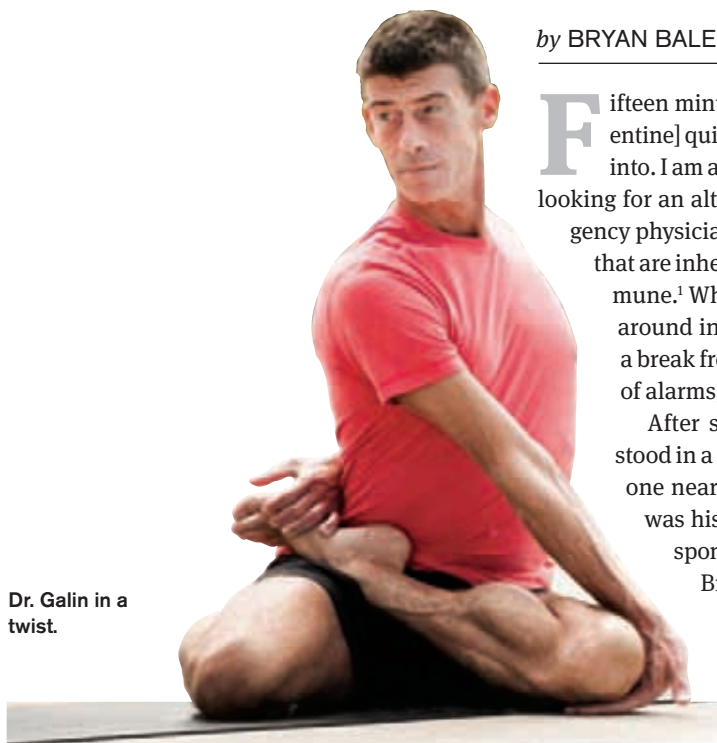
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Emergency Yoga

by BRYAN BALENTINE, MD, FACEP, AND SHAWN GALIN, PHD



Dr. Galin in a
twist.

Fifteen minutes into my first yoga class, I [Dr. Balentine] quickly wondered what I had gotten myself into. I am a fairly open-minded individual and was looking for an alternative way to exercise. We, as emergency physicians, are all keenly aware of the stresses that are inherent to our profession, and I am not immune.¹ What could be more relaxing than sitting around in a circle and chanting “om”? I needed a break from the surrounding clinical symphony of alarms, beeps, and interruptions.

After some basic stretches, the small class stood in a circle. The instructor gestured to someone near me who responded, “Sun,” as if that was his new name. The person next to me responded, “Moon.” It was now my turn. “Uh, Bryan” was my response. A few giggles followed in the room. Apparently, we were standing in a circle that did not allow everyone to spread their arms and then touch their toes at the same time without bumping into

a neighbor. Alternating the stretch (Sun and Moon) next to your neighbor prevented “full-contact” yoga. I smiled.

Two years later, I’ve developed a deeper appreciation for yoga, flexibility, and a greater ability to simply relax in most situations. I could not remember the last time I could touch my toes, but now I can—and grab the bottom of my feet. From a practical standpoint, my 43-year-old body can hop up from the floor easier after playing with my young children. Clinically, I am more aware of posture while sitting at work. My chair angles at 90 degrees rather than the previous somewhat reclining position and kyphotic posture. How many patients with back pain do you see a day with surgical histories? I like my spine without scars.

While I benefit from numerous yoga instructors, I spend more time with Shawn Galin, PhD. He is course director for endocrinology at the local medical school and an associate professor of critical care medicine, and he enjoys a passion for yoga. I learned of his background in medical education just before joining the ACEP Well-Being Committee. After sharing my experiences with him on how yoga positively impacted me at work and home, we shared articles and research. PubMed



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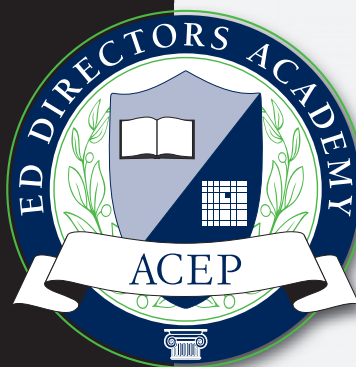
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Practicing yoga in an everyday setting can be as simple as noticing and observing one's posture when seated, standing, or even lying down. For physicians, being mindful of how weighted down their white coats are can be a form of yoga. To lighten the lab coat and decrease the forward shoulder pull and subsequent kyphosis is, in a sense, practicing yoga.

contains almost 3,000 articles on yoga, but our goal in collaboration is to focus on a few areas that can impact you now.^{2,3}

The Breath and Stress

As in life, proper breathing is very important in yoga practice.^{4,5} In fact, the ability to breathe properly and control one's breath can have profound effects on both mental and physical status. When the breath is shallow, a common side effect of stress, blood is not oxygenated properly, which impairs mental function and promotes physical fatigue. Stress can cause shortness of breath and anxiety. These changes in breathing patterns are mediated through the sympathetic nervous system as part of the fight-or-flight response.^{6,7} As you get more anxious, your breathing muscles fatigue and cause even more shortness of breath and anxiety. Thus, stress can create a vicious, perpetuating cycle.

Most yoga classes focus on breathing techniques, or pranayama, that help practitioners slow down their breath. A recent article in *The Wall Street Journal* titled "Breathing for Your Better Health" reports the benefits of abdominal breathing and notes that they are the direct result of vagal stimulation.⁸ Slower breathing stimulates the vagus nerve, which runs from the brainstem to the abdomen. The vagus nerve, as part of the

parasympathetic nervous system, is responsible for the body's rest-and-digest activities. In contrast, rapid, shallow breathing is associated with the sympathetic nervous system. The article goes on to report that vagus nerve activity can cause the heart rate to decrease as we increase the length of our exhalations. This is, in part, due to the vagus nerve's release of acetylcholine, which slows down heart rate and digestion.⁹ This highly suggests people can actually alter their physiological response to stress simply by altering their breathing. Taking long, deep breaths with conscious observation of the length of exhalation can promote vagal stimulation, resulting in a sense of calm rather than chaos.

Posture

Although meditation and pranayama are core components to the practice, yoga is more commonly associated with asanas, or postures. There is a common misconception that people need to be flexible in order to attend a yoga class when, in fact, the opposite is true. Yoga is designed to increase both strength and flexibility by synchronizing breathing with physical movement through various postures. It is not uncommon for someone to notice an improvement in posture within weeks of starting a yoga practice.¹⁰

Noticing postural habits soon becomes second nature to a yoga practitioner. Standing taller, sitting up straighter, and walking with a straight spine are all common benefits of a regular yoga practice. Practicing yoga in an everyday setting can be as simple as noticing and observing one's posture when seated, standing, or even lying down. For physicians, being mindful of how weighted down their white coats are can be a form of yoga. To lighten the lab coat and decrease the forward shoulder pull and subsequent kyphosis is, in a sense, practicing yoga.

My growing yoga practice triggered a wonderful journey, from a comical introductory class where I thought I would

receive a new celestial name to networking with PhDs in endocrinology and joining the ACEP Well-Being Committee. The ever-apparent stresses of our profession levy a remarkable toll on our wellness unless an appropriate negating response is initiated. While I do not exist in a constant calm mode at work, yoga allows me to relax more, provide better care, and extend my longevity in medicine. ☸

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Dr. Balentine in tree pose.

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The Changing Landscape of Direct Oral Anticoagulants



by RYAN PATRICK RADECKI, MD, MS

Much has changed in the realm of oral anticoagulation over the past few years. Beginning with the approval of dabigatran (Pradaxa), a direct thrombin inhibitor, patients received their first viable long-term alternative to warfarin. Subsequently, factor Xa inhibitors arrived on the market, initially featuring rivaroxaban (Xarelto) and apixaban (Eliquis). Now, edoxaban (Lixiana, Savaysa) has received FDA approval, and betrixaban is undergoing phase III trials. Experience with these classes of medications continues to increase, with several important new developments regarding safety and indications.

Dabigatran

The most striking recent developments involve dabigatran. Dabigatran was initially hailed as a tremendous advance over warfarin, with a simple dosing schedule and lacking the requirement for ongoing laboratory monitoring of anticoagulant effect. However, despite its initial appeal, it was soon discovered that many patients were knowingly placed at untoward risk.¹ Legal proceedings against Boehringer Ingelheim in the United States resulted in a \$650 million settlement to compensate patients harmed by dabigatran, and just as important, discovery revealed an array of documents describing the manufacturer's internal analyses.

While dabigatran was marketed as not requiring ongoing monitoring, the documents indicate Boehringer was aware that plasma levels of the drug were, in fact, quite variable depending on individual physiologic and genetic features. The internal analyses described fivefold variability in plasma levels, and dose adjustment based on plasma levels and monitoring could further reduce bleeding by 30 percent to 40 percent compared with warfarin. However, it was further determined that reporting the benefits of such testing "could result in a more complex message and a weaker value proposition." Translation: maximizing profits trumps maximizing patient safety. The importance of plasma level variability and monitoring is most evident when comparing the phase III trial populations with the target prescribing population. The pivotal RE-LY trial described the use of dabigatran in a population mostly younger than 75 years of age, but Boehringer's marketing data indicate 30 percent of patients prescribed dabigatran are 80 years of age and older.² The reduced renal excretion of the elderly results in supratherapeutic serum levels and unintended elevation of bleeding risk. Internal and regulatory approval documents reveal concerns regarding such risk that may have been specifically minimized by Boehringer representatives.

The bleeding risks associated with dabi-



gatan have been of particular concern because, in contrast to warfarin or factor Xa inhibitors, there is no reliable pharmacologic reversal strategy. The only reported mechanism for reliable attenuation of its clinical effect has been hemodialysis. Now, such a development is on the horizon; an antibody fragment has reached phase III trials. Interim results from the RE-VERSE AD trial demonstrate rapid reduction of serum dabigatran levels following idarucizumab administration, although the pharmacologic effects seem to be durable only up to approximately 24 hours.³ Generally, this should be clinically adequate, however, as the half-life of dabigatran is typically 12 to 14 hours. The cost of such an antidote is likely to be quite high. Do you recall the more than \$2,000 per vial price tag of CroFab? Frankly, the best strategy would simply be avoidance of dabigatran in the first place.

Andexanet Alfa and Aripazine/Ciraparantag

While prothrombin concentrate complexes appear to be viable reversal agents for the factor Xa inhibitors, development of alternative agents proceeds apace.⁴ Portola Pharmaceuticals, the same company pursuing development of betrixaban, is investigating andexanet alfa in phase III trials. Andexanet alfa is a recombinant factor Xa derivative with

a higher affinity for the factor Xa inhibitors than native factor Xa. Therefore, circulating anticoagulants will preferentially bind andexanet alfa rather than native factor Xa. Substantially fewer data are currently available regarding this treatment than idarucizumab, but preliminary indications are favorable.

A third potential treatment for life-threatening bleeding with direct oral anticoagulants (DOACs) is aripazine/ciraparantag (PER977). Originally developed as a reversal agent for heparin and fondaparinux, this molecule also appears to have clinically relevant activity for dabigatran and the oral factor Xa inhibitors. Administration of PER977 seems to improve bleeding and measures of coagulation assays, but this appears to be related to a pro-coagulant effect rather than a specific antidote mechanism. The future of this treatment is much more uncertain.

Other Concerns

At least one published meta-analysis calls into question the need for any agent-specific antidotes.⁵ These authors pooled bleeding events for 11 trials of the DOACs compared with warfarin and found case fatality for major bleeding events was nearly halved despite readily available reversal strategies for vitamin K antagonists. A major caveat, unfortunately, from this analysis is the data

are derived solely from sponsored trials, and several authors declare conflicts of interest with pharmaceutical manufacturers.

Finally, even though the majority of our clinical concerns with the DOACs to this point have related to treating adverse effects, there is an increasing role for emergency physicians as prescribers. The most robust reporting at this point involves rivaroxaban, which is entering use at many centers as a discharge medication directly from the ED following diagnosis of deep venous thrombosis or pulmonary embolism. In small observational studies, patients discharged on rivaroxaban have been followed for recurrence and bleeding complications up to a year, and neither major bleeding nor failure of therapy has been observed.⁶ Apixaban can possibly be used interchangeably with rivaroxaban, but the role for edoxaban, with specific indications for use only in those with reduced renal function, is less clear.

Each manufacturer is also pursuing additional clinical trials in attempts to expand indications for each anticoagulant. Trials are under way with dabigatran and the factor Xa inhibitors in the context of percutaneous coronary intervention, during catheter ablation for atrial fibrillation and expanded secondary prevention of acute ischemic stroke. The factor Xa inhibitors are being evaluated for use in heart valve replacement, prevention of cardiac events in the context of heart failure, antiphospholipid syndrome, and new venous thromboembolism treatment and prophylaxis indications. These may generate additional circumstances in which emergency physicians are called upon to initiate treatment with these medications.

The promise of a future with safer anticoagulation is near, whether through real-world data, safer use, further clinical trials, or the development of specific antidotes. Be aware of your institution's plan for reversal of life-threatening bleeding from these anticoagulants, and just to keep it simple, point folks away from dabigatran whenever possible. ⚡

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The Efficient ED Doc

Optimizing the emergency department starts with individual performance

One of the most reliable assessments in medicine is a physician's blink response to patients. Emergency physicians are highly reliable at predicting admit/go home, sick/not sick.

by SHARI WELCH, MD, FACEP

In this column, we will look at making the department efficient at the micro level by optimizing workflow at the provider level.

In a piece published in *The New Yorker* titled "Personal Best," Atul Gawande, physician, writer, and visionary, observed that many highly paid professionals employ the services of a personal coach to improve their skills and performance. From the concert violinist to the professional tennis player, the drive and quest for professional improvement becomes a way of life. By comparison, emergency physicians, who participate in one of the longest and most expensive education and training regimens, typically get a two-hour orientation to their emergency department and begin their professional careers. We do very little to enhance practice performance over time.

Consider this: Though most physicians (and nurses, for that matter) in a group can tell you the most efficient physician in the practice, we do little to explore and cross-pollinate that efficiency. The strategies utilized by these efficient providers are not analyzed and disseminated. This is a lost opportunity.

Efficient physicians cultivate habits that move them to higher levels of practice efficiency. Two of the most important practices for the efficient physician are:

1. **Touch It Once:** This concept, borrowed from lean manufacturing, employs the notion that a task is most efficiently completed when it is done in one encounter. Examples of this applied to the work of the emergency physician include:

- Check all labs and imaging that are available at the time of log on.
- As you begin making sense of a situation and then diagnosing, order all tests at once. Avoid constant add-ons.

2. **Limit Interruptions:** This is a challenging area for emergency physicians as it can be difficult in our unscheduled environment, but here are a few ideas that help limit workflow interruptions:

- Inform team members of your plan for each patient so they need not interrupt you for information.
- Train staff to avoid interruptions when you are on the phone or performing computer tasks.
- Develop nonverbal communication methods to facilitate workflow, including computerized and visual cues (flags, whiteboard communications, lights, etc.).

Emergency physicians have to be continually assessing and reassessing the department and their patients to be certain that patient flow and workflow are optimized. Running the board periodically to see what



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needs to be done is an efficiency strategy for the individual physician. Since the short-term memory can only hold seven items at a time, lists, prompts, and reminders are also a good idea.

Another practical idea for emergency physicians is to "tee up the discharges." One of the most reliable assessments in medicine is a physician's blink response to patients. Emergency physicians are highly reliable at predicting admit/go home, sick/not sick. We are even good at predicting whether a patient will survive an intensive care unit admission or not. Take advantage of this by getting the paperwork ready for a patient you anticipate will go home. This strategy has been noted among efficient emergency physicians.

In most work settings, there is a period when efficiency and productivity improve, then efficiency levels off with little additional improvement over time. Most physician groups do not assess whether physicians have optimized their workflow and efficiency, and a physician performance coach is unheard of in the ED. But is it an idea whose time has come?

Consider these ideas to improve personal practice performance:

1. Catalog the habits of the most efficient

physicians in the group and make them available to the practice at large.

2. Have the most efficient physicians observe other physicians and offer strategic ideas for improving efficiency.
3. Ask the health unit clerk (HUC) for ideas to improve physician efficiency and share these ideas.
4. Survey the nursing staff for ideas that would improve the efficiency of physicians.
5. Meet with information technology experts to review computer support for workflow and identify, at the individual physician level, areas where efficiency could be improved.
6. In particular, explore the possibility of optimizing information technology support for workflow in the form of order sets (including discharge prescription sets for the most commonly treated conditions).

Each of us can improve our practice in emergency medicine. It requires that we be open to the idea of continuous improvement, coaching, and retraining in the elements of our practices. Don't your patients deserve your personal best? 🏃



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The New Wave of Asthma Management

Using end-tidal capnography to follow the progress of your next asthmatic patient

by TERRANCE MCGOVERN, DO, MPH, AND JUSTIN MCNAMEE, DO

The clinical exam is inherently subjective from one provider to another, but it has even been shown that individual physicians are not consistent with their own assessment of wheezing on auscultation.¹ Peak expiratory flow rate, or peak flow, is another modality that has been extensively used in EDs to quantify the extent of a patient's asthma exacerbation and response to treatment. The downside to peak flow is that it is highly dependent on the patient's ability to properly perform the test and to consistently reproduce the test. Some investigators have explored the use of end-tidal capnography as a means of monitoring a patient's response to treatment because it eliminates the patient cooperation variable to obtain an accurate assessment.

Capnometers were initially used in submarines in World War II but now are found in nearly every ED in the country.² A capnogram in a normal, healthy adult consists of a few separate phases (see Figure 1). Phase I occurs during the beginning of exhalation where the majority of the air is dead space, and hence, very little carbon dioxide is released, resulting in a relatively flat portion of the curve. As the patient continues to exhale, the mixed air has an increased carbon dioxide concentration, and subsequently, the capnography curve begins a steep incline; this is called Phase II. The plateau Phase (Phase III) has a decreased slope, with only a small increase in CO₂ concentration, and peaks at the end-tidal point. This part of the capno-

gram represents the expiration of alveolar air and remains nearly horizontal because of the homogeneity of alveolar ventilation within healthy lungs.³ Once the patient begins inhalation (Phase 0), the end-tidal drops precipitously and ends the waveform. In a healthy patient, the angle formed (α) from Phase II to Phase III is approximately 110 degrees, and the angle formed between Phase III and 0 (β) is typically about 90 degrees.⁴

pired first. On the other hand, the regions of the lung with a greater degree of obstruction will have a higher P_aCO₂ and will have delayed emptying. Some authors refer to these differences in expiration of CO₂ during an asthma exacerbation as desynchronization.^{3,5} The desynchronization of alveolar emptying causes changes within the capnogram waveform; the slope of Phase II decreases, the slope of Phase III increases as the more highly obstructed

and a capnogram was recorded (nasal cannula sampling capnometry). Once the attending physician felt comfortable that the patient was "fit for discharge," another set of these parameters was ascertained. The investigators did not find a significant ($P=0.35$) change in the slope of Phase II of the capnogram between pre- and post-treatment. However, they were able to find a significant ($P<0.001$) decrease in the slope of Phase III and a significant

When asthmatics present with a severe attack, their waveform changes in such a manner that it begins to resemble a shark fin. The bronchoconstriction of the small airways during an asthma exacerbation causes a decrease in alveolar ventilation in different regions of the lung.

When asthmatics present with a severe attack, their waveform changes in such a manner that it begins to resemble a shark fin (see Figure 2). The bronchoconstriction of the small airways during an asthma exacerbation causes a decrease in alveolar ventilation in different regions of the lung. Each portion of the lung is associated with its own ventilation-perfusion ratio (V:Q) that subsequently determines its respective P_aCO₂. During expiration in an asthma exacerbation, the areas of the lung with less bronchoconstriction have a lower P_aCO₂ and will preferentially be ex-

pired first. On the other hand, the regions of the lung with a greater degree of obstruction will have a higher P_aCO₂ and will have delayed emptying. Some authors refer to these differences in expiration of CO₂ during an asthma exacerbation as desynchronization.^{3,5} The desynchronization of alveolar emptying causes changes within the capnogram waveform; the slope of Phase II decreases, the slope of Phase III increases as the more highly obstructed

One of the larger investigations into capnographic waveforms and peak flow meter measurement was in 2009.⁶ One hundred patients with acute asthma exacerbations were enrolled in the study. Prior to receiving any therapy, a peak flow measurement was taken

($P<0.001$) decrease in the α angle.⁶ Despite these noteworthy changes in the Phase III slope and α angle, there was poor correlation between these indices and the changes in peak flow pre- and post-treatment. Yaron et al made it a little bit easier by looking only at the slope of Phase III and its relation to bronchospasm in the ED.⁷ Similar to the previous study, they found a significant decrease in the slope of Phase III from 0.27 ± 0.05 to 0.19 ± 0.07 ($P<0.005$) between pre- and post-treatment with 2.5 mg of albuterol. Unlike the previously discussed study from Nik Hisam-

Figure 1. Normal, healthy capnogram.

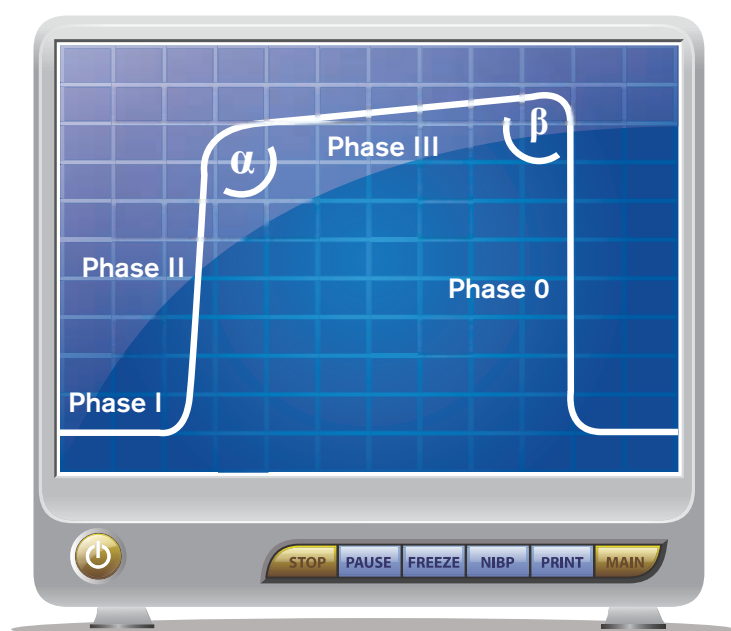
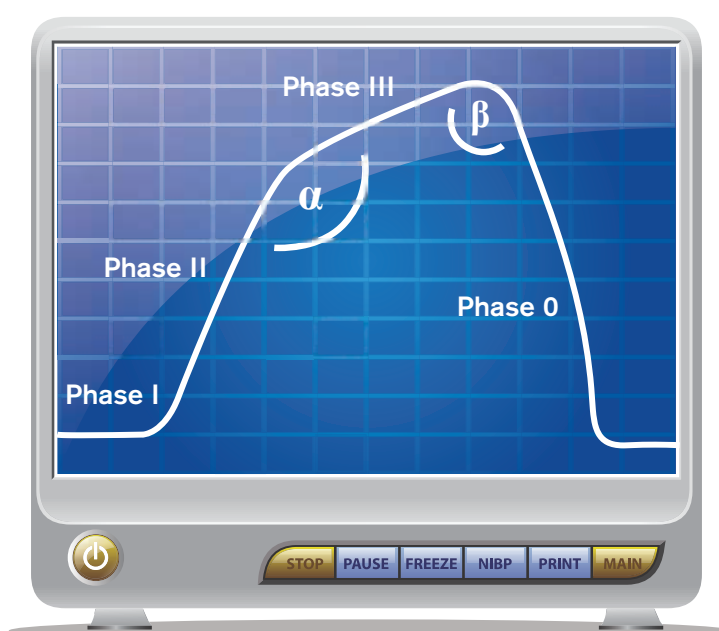


Figure 2. Bronchospasm on capnogram.



uddin et al, they were able to show a correlation ($r=0.84$) between the slope of Phase III to the log of the predicted peak flow.⁷ How does this hodgepodge of numbers actually pertain to clinical medicine? Let's use a clinical case with capnograms and apply these ideas to help decide on the most appropriate disposition of the asthmatic patient.

The Case

A 45-year-old female with an extensive history of asthma presents to the ED with the complaint of having an asthma exacerbation. Her respiratory rate is 24, and she is mildly hypoxic (91 percent) on room air and has moderate inspiratory and expiratory wheezing that is scattered among all lung fields along with subcostal accessory muscle use. Before the respiratory therapist gets an albuterol/ipratropium bromide treatment going, you attempt to get a peak flow. The patient blows into the peak flow only to get 125 L/min, but you notice she isn't using it correctly. You choose not to delay treatment any further and quickly obtain a baseline capnogram prior to the treatment. Figure 3 (top) shows her initial end-tidal capnogram. Subsequently, Figure 3 (bottom) is after 10 mg of albuterol, 0.5 mg of ipratropium bromide, and 60 mg of prednisone. Despite the fact that her respiratory rate normalized, her wheezing nearly resolved, and her overall clinical status vastly improved, when you obtain a peak flow post-treatment, her best is only 150 L/min. Does she need to be admitted because of the peak flow measurements? You instead obtain a post-treatment capnogram and compare it to the pre-treatment result. Even with the naked eye, you can see the improvement in her end-tidal capnogram going from a shark fin appearance pre-treatment to a more normal waveform post-treatment. Taking into account the entire clinical picture and capnogram, the patient is discharged home.

Using end-tidal capnography to monitor asthma exacerbations is not something new. You et al did one of the first investigations into capnography's utility in asthma in 1992.⁸ Since then, many of the other studies have been making attempts to correlate these end-tidal indices with peak flow measurements. Peak flow measurements are largely dependent on the diameter of larger airways, whereas the capnogram is more dependent on the

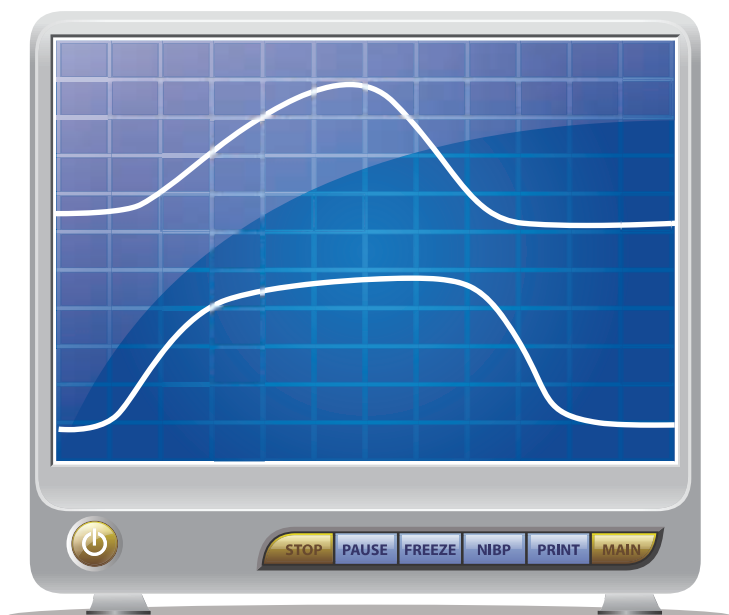
The focus of using a capnogram as an assessment tool in asthmatics is not on the numeric end-tidal value but more so to evaluate the changes in the waveform morphology.

smaller airways; this may make it difficult to correlate the two values.^{6,7} With the improved accessibility of end-tidal monitors in nearly all EDs, why not hook your next asthmatic patient up to the monitor, take a look at the waveform, or even print it out prior to giving any treatments? Although more studies need to be performed and the results validated before this becomes the standard of care for asthmatics, the days of huffin' and puffin' into peak flows may be a thing of the past. ☺

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Figure 3. Top capnogram is before any intervention, and bottom is after treatment for the patient's asthma.



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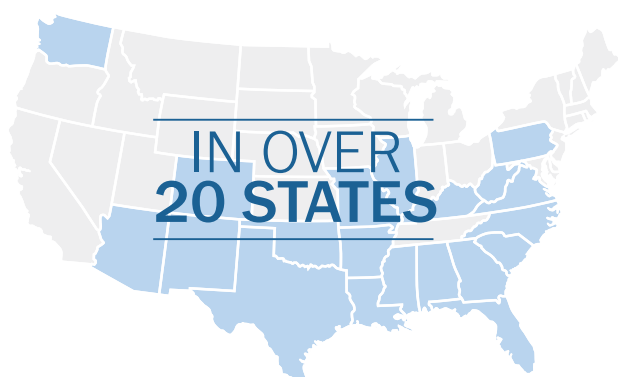
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Don't Miss TeamHealth's Physician Reception

Tuesday, October 27 | 7 pm | Museum of Science, Boston

Enjoy a big-time evening at a world-class museum in Boston! Join TeamHealth for our Annual Physician Reception during ACEP 2015. Explore the interactive exhibits at The Museum of Science, Boston—one of the world's largest science centers and New England's most attended cultural institution. Plus we'll have delicious Boston cuisine, an open bar and dance floor. It's the formula for fun!

Please visit our ACEP booth #609 to get your free ticket for this event.

RSVP at www.MYEMCAREER.com/boston by October 15th to automatically register to win a Boston Prize Pack.

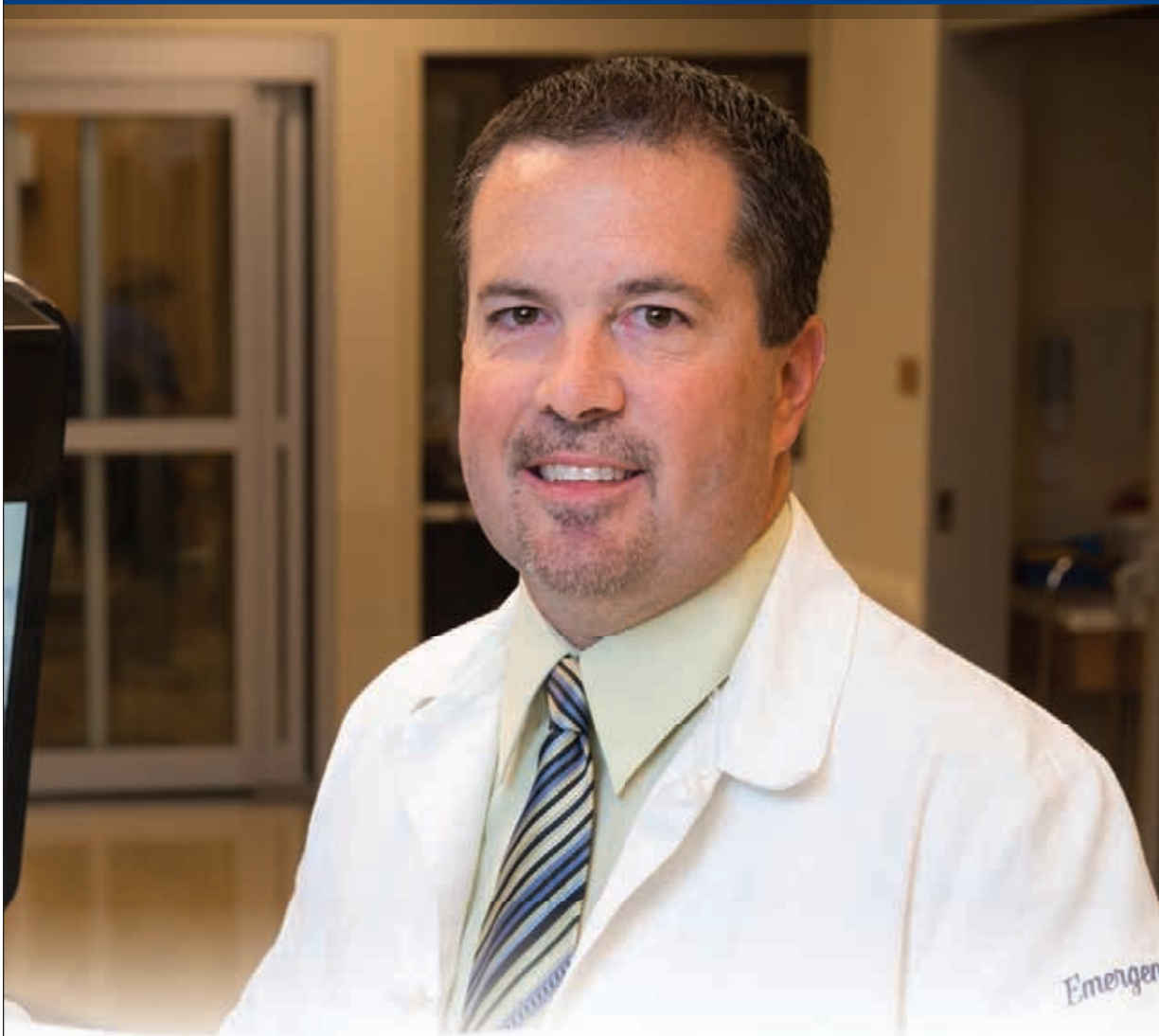


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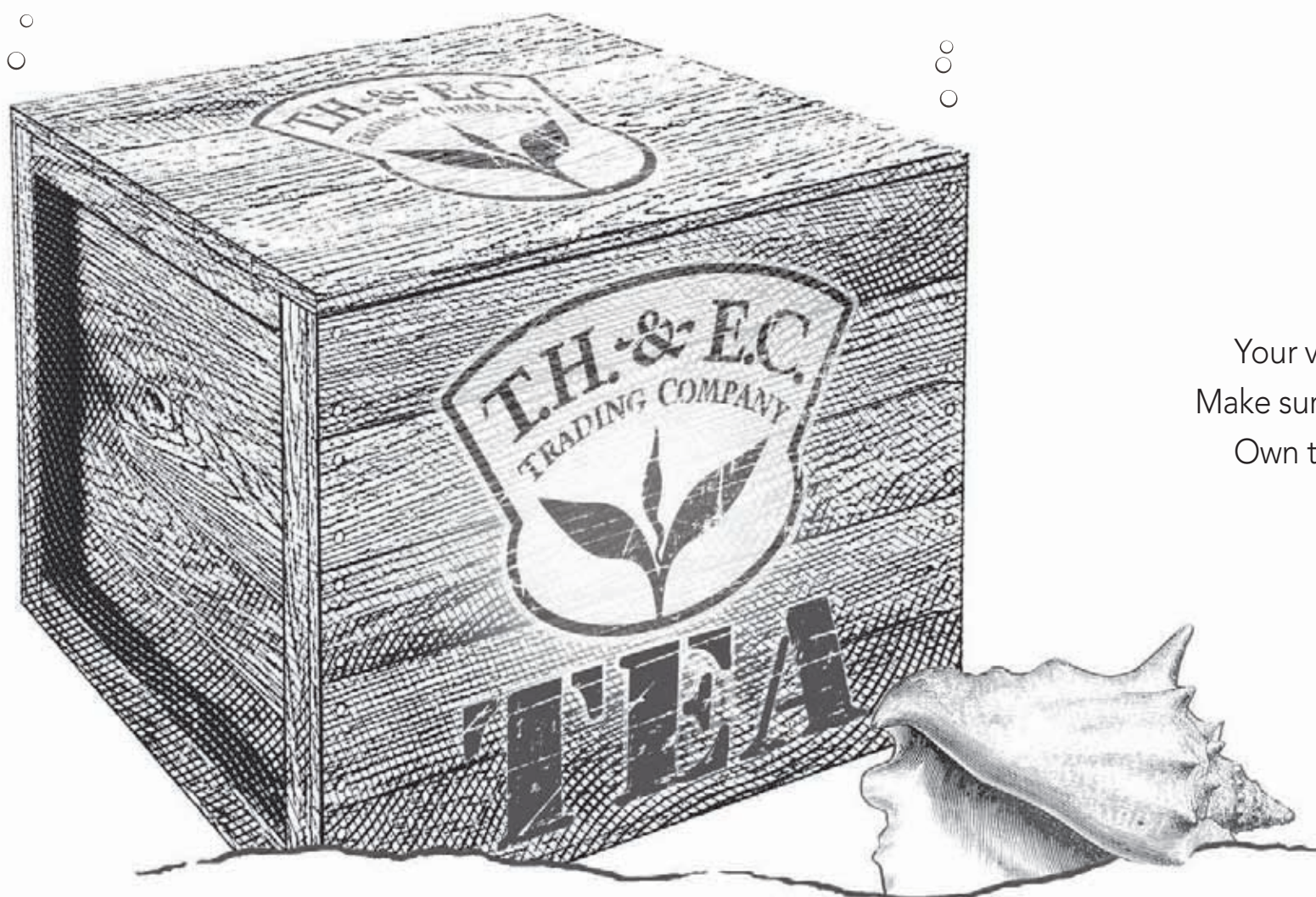
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